The Inter Ocean

Curiosity Shop

For the year 1883

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THE INTER OCEAN

CURIOSITY SHOP

FOR THE YEAR 1883.

EDITED BY

WILLIAM P. JONES, A. M.

SEVENTH EDITION.

CHICAGO:
THE INTER OCEAN PUBLISHING COMPANY,
MADISON AND DEARBORN STREETS.
1891.

PREFACE

So well known now is this little annual cyclopedia of facts in agriculture, manufactures, commerce, politics, literature, science and the arts, that this sixth volume of OUR CURIOSITY SHOP needs no preface, except to make due acknowledgments to the many who have aided the editor with information, and to explain to such of its readers as are not yet fully advised of this fact, that these pages constitute but a part of the several columns of questions and answers published every week in the DAILY, SEMI-WEEKLY and WEEKLY editions of THE INTER OCEAN. To have all such answers for the year, one must be a regular subscriber to, and reader of, the paper. Hundreds of disputes, raised in political gatherings, in debating societies, in Sunday schools, in social and sporting circles, at the village postoffice when waiting for the mail, on railway cars, in club rooms, around pioneer camp-fires, and in all kinds of places are referred to THE INTER OCEAN for amicable settlement. When none of the several thousand books on the shelves of THE INTER OCEAN and the Chicago Public Library give response to such questions, original sources of information are appealed to; and, again therefore, the grateful acknowledgments of the editor of OUR CURIOSITY SHOP are very heartily made to the Heads of the several executive departments at Washington and many of their chiefs of bureaus, to State and city officials, to his obliging associates of THE INTER OCEAN staff, and to that daily companion and efficient assistant, his daughter.

Every answer given here is in response to at least one person enough interested to call it forth. Not one started up at the editor's own bidding, but each of them might use the speech put into the mouth of King Philip of Pokanoket, when summoned to meet the General Court of New Plymouth: "You sent for me, and I am here." So, being here in response to popular call, the editor hopes this volume will have as cordial a welcome as the public has accorded to its predecessor of last year, of which, already, the second edition is nearly exhausted, and to the still earlier volumes of 1878 to 1882, inclusive. It is now a matter of regret that the volumes of 1878 and 1879

were not stereotyped, as all succeeding volumes have been; since that fact renders it impossible for the Publishers to supply the repeated calls for the entire series of six volumes. Readers will take note that the first two are out of print, but all the others will be supplied as fast as called for.

THE EDITOR.

OUR CURIOSITY SHOP.

NATURE'S STORM SIGNALS.

Recent questions and answers in Our Curiosity Shop about the aurora borealis and the Government Signal Service have moved S. H. Ruple, M., M. D., of Oquawka, Ill., to give the result of his observations as follows:

Falling weather follows the aurora borealis, because the lower stratum of the atmosphere at such a time is sufficiently rarified for the manifestation of aqueous vapor, as is indicated by the evolution or liberation of so great a quantity of electricity as is necessary to produce conspicuous and extensive "northern lights." A continuous south wind, in most localities, will in a few days cause rain, because by its warmth it rarifies the cooler and denser atmosphere of more northern or elevated localities, and reduces its capability of sustaining moisture. A continuous north wind dispels all rain signs for the time being. This is no new theory. Solomon, 3,000 years ago, put it on record in Western Asia. (Prov. xxv., 23.) And a careful observation during twenty-five years has convinced me that it is true for this age and country as well as for his. Flaky clouds, or low-running ones, from any direction but the north, denote rain or snow. Salmon, leaden, or silvery colored clouds denote falling weather; bright red, clear. When the sunset is followed by bright lances or streaks of light of various hues radiating from the point where the sun disappeared, continuing across the heavens and converging to a common point in the opposite horizon, there exists a storm-cloud in line with the sun, though it may be so distant as to be for awhile entirely hidden from view by the rotundity of the earth. If the rays of light are evenly divided north and south of the line between the observer and the radiating point, and continue so till they have faded out, the cloud is approaching. A few years since the writer, becoming interested in an exhibition of this phenomena, sat up to watch the results of his calculations. About 1 a. m. the storm (a moderate cyclone) reached the Mississippi River, about five miles north of his residence, having, according to telegraphic reports, crossed the State of Iowa in five hours and a half. When "heat lightning" is visible you may be sure that there is a storm-cloud in the same

direction, though you may neither see it nor hear the thunder. When the lightning is continuous and very brilliant the storm may be regarded as a violent one. In this event the track of the destructive elements may be from 100 to 200 miles away. Some five years ago the writer's attention was called, a little after dark, to an extraordinary display of heat lightning in the southern horizon, and he ventured the opinion that a devastating cyclone was traveling eastwardly, probably in the vicinity of St. Louis. Though residing in Oquawka, Ill., fourteen miles above Burlington, Iowa, within twenty-four hours THE INTER OCEAN, ever watchful and intelligent, was in his hands with telegraphic reports corroborating his theory and predictions. Jefferson Barracks were reported damaged by the cyclone, and across in Illinois a whole village was laid waste and several lives lost. This was, to say the least, pretty accurate guessing. If the old pioneers of Colorado, traveling at the rate of twenty-five miles a day, had to toil from five to seven days after catching their first view of the snow-cap of Pike's Peak before gaining the mountain foot hills, how far off may not one see the intensely white, dazzling, and flashing illumination capping a cloud that is from three to five miles above the earth.

LEPROSY.

LIDELL'S GROVE, Ill.

> Please state some facts regarding leprosy and the leper settlement on the Hawaiian Islands. Is the same disease prevalent among the Chinese in California? Are Caucasians liable to contract the disease?

S. GRAY.

Answer.—There is no other malady so loathsome and so dreaded among mankind as the terrible disease of leprosy. A little blotch appears, often on the face of the victim, which gradually extending covers the whole body. Scales drop from the sufferer; his limbs become frightfully swollen, his voice grows hoarse, his eyes almost burst from their sockets, as the irresistible decay saps his life's blood. While thus afflicted the victim suffers no physical inconvenience, except the gradual loss of his limbs. His body is numb and he does not feel the hand of the destroyer; his appetite is

as good as ever, and he sleeps with as much relish as he did when he was in health. But in Eastern countries that which is almost as unbearable as the disease itself is the leper's exclusion from society, even from that of his nearest relatives. In most countries leprosy operates as a divorce of husband and wife. Although it does not fill the air with contagion, yet the possible inoculation by personal contact or by handling the same objects, has led to the banishment of lepers not only from communities but from their homes. Whatever discussion may still be maintained as to the contagiousness of leprosy there exists no reasonable doubt of its transmission by heredity or licentiousness. During the past twenty years and more the Hawaiian Islands have received a large influx of Chinese coolies of the basest sort through the coolie traffic. Many of these associated in the loosest manner with the lower classes of natives, and in 1868 the authorities awakened to the fact that leprosy was spreading at an alarming rate. They determined on the Asiatic remedy of isolation. The western portion of the island of Molokai was selected for this purpose, and here to-day are found over 2,000 lepers shut out from all hope of ever seeing their friends, unless the latter become similarly afflicted. Three times a week a steamer visits the island, carrying provisions and mail, and the latest victims. Among these sufferers is William Ragsdale, the first Governor of the colony. In California a few of the Chinese have been afflicted with the disease, but it is not considered prevalent among them. In Salem, Mass., there is a pitiable case. Charles Derby was living in the Hawaiian Islands, when a slight blotch on his left temple revealed to the experienced islanders the fact that they had among them another leper. To escape banishment, Mr. Derby sailed for San Francisco; but was offered no refuse there, that city following the example of Honolulu. He then went to Salem, where they knew nothing of the disease, and there remained until discovered by two medical students from the Hawaiian Islands. His swollen and decaying face presents a frightful appearance. What is to be done with him is a question which the Salem authorities have not yet decided upon.

THE MILITARY ROAD, ARKANSAS.

ORION, Miss.

By whom and for what purpose was the road known as the Military Road, extending west of Memphis, Tenn., laid out? Where does it terminate?

J. F. Mc.

Answer.—When the Creeks and Cherokees were being transferred to lands west of the Mississippi, under the command of General Jackson, this military road was constructed to facilitate the movement. The road terminates at Little Rock, Ark.

AURORA BOREALIS NOT A MODERN DISCOVERY.

Lowell, Mich.

I am informed, on what appears to be good authority, that the aurora borealis has been seen for only about two hundred years, and that we have no record of its previous appearance. Is such the case?

W. A. D.

Answer.—The aurora borealis is not a phenomenon peculiar to modern times. The ancients used to call it chasmata, bolides and trabes, names which expressed the different colors of the lights. The scarlet aurora was looked upon by the superstitious barbarians as an omen of direful slaughter; so it is not unusual for descriptions of bloody battles to contain allusions to northern lights. In the annuls of Cloon-mac-noise it is recorded that in 688 A. D., accompanying a terrible battle between Leinster and Munster, Ireland, a purple aurora lit the northern skies, foretelling the slaughter. To the Latins and Greeks of Southern Europe the phenomenon rarely appeared, and therefore their writings are almost, if not entirely, silent concerning it, yet it was not unknown to them.

WHERE WAS EDEN.

Virgil City, Mo.

In what part of the world was the Garden of Eden located?

C. A. Sharp.

Answer.—This is still a matter of dispute among Biblical scholars of the highest reputation. Some have endeavored to locate it by means of the fruits and mineral productions named in the description given in the second chapter of Genesis, verses 8-17. But the main question in the opinion of most investigators is, What are the four rivers mentioned? The weight of tradition and scholarly study inclines to an agreement that the Tigris and Euphrates, which, after flowing in a southeasterly direction, unite and empty into the Persian Gulf, are the third and fourth rivers mentioned in the sacred word. But those who agree so far differ widely as to what rivers should be regarded as the Pison and Gihon. Some affirm that the River Pison is the Ganges, and the Gihon the sacred river of Egypt: others that the Garden of Eden was located on the high table-lands of Armenia, from which rise the Tigris and Euphrates. By choosing two rivers which flow into the Caspian Sea, or by giving the name Gihon to one river, and the name Pison to the sea, and extending the boundaries of Eden so as to take in these waters and the head-waters of the Euphrates and Tigris, they consider that they have solved the mystery that veils the cradle of our race. The fact that all the European races of the Aryan family, and also the Semitic races, trace back their origin to this region gives color to this solution. A few scholars of some distinction have argued that the Adamic paradise was in the vicinity of the mountains of the Moon in Africa, regarding the Nile as the Pison, and the Niger as the Gihon, and reconciling it with the views of former scholars by affirming that the Assyrian rivers at that time had their source in the mountains of the Moon, but flowed underneath the ground to their apparent source in the continent of Asia. Others locate Eden in the vicinity of the ancient city of Babylon, considering the doubtful rivers as the two channels by which the united Tigris and Euphrates empty into the Persian Gulf. But two things have not been explained by any of these theories. The four rivers flow from one river, and the River Pison "compasseth the whole land of Havilah." Until these questions are solved the location of the Garden of Eden will continue to remain a mystery.

THE GLACIAL PERIOD.

Hebron, Neb.

Please give some information in regard to what geologists term the ice or glacial period. What evidence have they that such a period ever existed?

JAMES KNOX.

Answer.—The loose soil which covers so large a part of the surface of the northern continents to a depth varying from 30 to 100 feet, over which lie the vegetable deposits of later ages, is considered by geologists the effect of glaciers that in the quaternary, or latest geological age, slowly moved southward across the country. Upon examination it is found that the erratic boulders scattered over the Western prairies and other northern regions are unlike the native rock of the same region, being entirely foreign to the localities where they now appear. Sometimes the nativity of the rock is traced hundreds of miles north of where it now rests showing that some powerful agency has carried it southward. Again, if the native rock be uncovered and closely examined, it will be observed to be polished and grooved with parallel marks, running north and south, as if chiseled out by some coarse and heavy instrument. These marks are attributed to sharp, hard rocks projecting through the lower surfaces of the moving glaciers. That glaciers do produce such markings is proven by examination of the rocks which the moving ice fields of Switzerland and other glacial regions have worn and are marking to-day; also, the general appearance of the loose, unstratified, heterogeneous deposit is similar to that of the moraines that the modern glaciers leave as they slowly melt away. Geologists are generally agreed that long before the advent of man parts of the northern hemisphere were elevated several thousand feet higher than they are at present, causing the cold of the arctic zone to extend far southward into the present temperate regions, and that a vast glacier rising in the vicinity of Hudson Bay covered our whole continent north of the 40th parallel. In New York and other Eastern States the rocks are scratched from a northwesterly direction, in Ohio from a northerly, and in Iowa from a northeasterly direction, showing in each State the direction of the origin of the glacier. Afterward there followed a subsidence to a few hundred feet below the existing level, followed by a gradual elevation to the situation of the present era. These elevations and subsidences are evidenced by stratification and fossil remains.

MAYORS OF NEW YORK.

CHICAGO, Ill.

How long has New York City enjoyed a city charter? How many mayors has it had, and who have held this office since the villainous Oakey Hall, under whom Boss Tweed flourished?

E. D. WALKER.

Answer.—The lower portion of Manhattan Island was incorporated as a city under the original Dutch regime, in 1652. Charles II. of England, claiming all the country from the French possessions south to Florida and west to the Pacific as belonging to the English crown, granted a charter covering New York to his brother, the Duke of York, who suddenly appeared before New Amsterdam and took unopposed possession in August, 1664. The name of the city was changed to New York. The Dutch recovered the place in August, 1673, and changed its name to New Orange. The next year it was restored by treaty to the English, and ever since it has kept the name of the city of New York. Since the office of mayor was created there have been seventy-two mayors, of whom the first one elected by the people was Cornelius W. Lawrence. Since Oakey Hall's administration the following persons have held this office: Wm. F. Havemeyer, Wm. H. Wickham, Smith Ely, Edward Cooper, Wm. R. Grace, and the present Mayor, Franklin Edson.

TENDENCY OF DUTIES TO INCREASE.

DOW CITY, Iowa.

When were the present tariff duties passed? Was it not when Congress was Democratic? Are the duties now greater or less than formerly?

Answer.—The first United States tariff law on imported goods was approved July 4, 1798. A small tax was then imposed, according to the suggestion of Alexander Hamilton, Secretary of the Treasury, upon sugar, coffee, tea, salt, manufactured iron, glass and wool, silk goods, and several articles of minor importance. While the rate of duty has fluctuated, the general tendency has been toward an increase. This is shown by the

different enactments from 1832 to the present time. In the latter year the duty on sugar was made 2½ cents per pound; in 1841, 20 per cent; in 1842, 2½ cents per pound; in 1846, 30 per cent; in 1857, 24 per cent; in March, 1861, ¾ cent per pound; in August, 1861, 2 cents per pound; in December, 1861, 2½ cents per pound; in 1862, 3 cents per pound; while the present rate ranges, according to grade, from 57½ to 61¾ per cent. In 1832 the duty on woolen manufactures was 50 per cent; in 1841, 20 per cent ad valorem; in 1842, 40 per cent; in 1857, 24 per cent; in March, 1861, 25 per cent and 12 cents per pound; in 1862, 30 per cent and 18 cents per pound; in 1864, 40 per cent and 24 cents per pound; in 1867, 35 per cent and 50 cents per pound, while the present duty upon woolen imports ranges, according to value, between 41 and 80 per cent. The same gradual increase is observable in silks, which in 1832 were admitted on an ad valorem duty of 10 per cent; in 1841, 20 per cent; in 1842, $2.50 per pound, changing in the same year to 25 per cent. In 1857 it was 19 per cent; in March, 1861, 30 per cent; in August, 1861, 30 per cent; in 1864, 60 per cent, and in 1881, 58 to 70 per cent. With the exception of a few years when Andrew Jackson was President, the different Congresses, Democratic as well as Republican, have sustained the duties upon the imports of this country. While the Republicans are mainly responsible for whatever is good or bad in our present tariff laws, Democratic Representatives from manufacturing districts have of late years, as a rule, given cheerful aid to the maintenance of a protective tariff.

WHAT IS A CARAT.

CHICAGO.

Is a carat a measure of weight or fineness?

J. A. YOUNG.

Answer.—It is used by jewelers to express both. A carat weighs 4 grains, or the 120th part of an ounce, troy. In determining the fineness of a precious metal 24 carats is considered the standard of purity; hence an 18-carat gold ring would be a ring containing 18 parts in 24 of pure gold.

INSTITUTIONS FOR FEEBLE-MINDED.

HOWARD CITY, Mich.

Do any of the States support asylums for weak-minded or imbecile persons?

C. J. BURTCH.

Answer.—The State of Ohio supports such an institution at Columbus, and the State of Illinois at Lincoln. Several other States have similar asylums.

DUTY ON GUNS.

LOWELL, Ind.

Please give the amount of duty on imported guns and gun material.

F. CASTLE.

Answer.—The rate of duty on guns is 35 per cent; gun barrels, wholly iron, 35 per cent; gun blocks, wooden, rough-hewn, or sawed only, 20 per cent; gun locks, steel, 45 per cent; plugs and nipples, for guns of iron and steel, 45 per cent.

HENRY JAMES, SENIOR AND JUNIOR.

DENVER, Ind.

Will you please mention the titles of the works of Henry James, concerning whom an article recently appeared in THE SEMI-WEEKLY INTER OCEAN.

R. F. OPLINGER.

Answer.—Henry James, concerning whose death an interesting article recently appeared in this paper, was the author of "Moralism and Christianity;" "Lectures and Miscellanies;" "The Church of Christ not an Ecclesiasticism;" "The Nature of Evil;" "Christianity, the Logic of Creation;" "Substance and Shadow;" "The Secret of Swedenborg," and "Reminiscences of Carlyle." He was a clergyman and not a writer of

romance; but his son, Henry James, Jr., is a novelist, and has written the following popular works in this line: “Watch and Ward;” “The American;” “Daisy Miller;” “An International Episode;” “The Diary of a Man of Fifty;” “Washington Square;” “A Bundle of Letters,” and other works of fiction; also, “Transatlantic Sketches,” a volume of travel; “Hawthorne,” one of the series entitled “English Men of Letters,” and “French Poets and Novelists,” a book in the nature of a criticism.

THE LANGUAGE OF GEMS.

ALDEN, Iowa.

Please give the language of gems and precious stones.

C. L. F.

Answer.—The language of the various precious stones is as follows:

Moss Agate—Health, prosperity, and long life.

Amethyst—Prevents violent passions.

Bloodstone—Courage, wisdom, and firmness in affection.

Chrysolite—Frees from evil passions and sadness.

Emerald—Insures true love, discovers false.

Diamond—Innocence, faith, and virgin purity, friends.

Garnet—Constancy and fidelity in every engagement.

Opal—Sharpens the sight and faith of the possessor.

Pearl—Purity; gives clearness to physical and mental sight.

Ruby—Corrects evils resulting from mistaken friendship.

Sapphire—Repentance; frees from enchantment.

Sardonyx—Insures conjugal felicity.

Topaz—Fidelity and friendship; prevents bad dreams.

Turquoise—Insures prosperity in love.

PHRENOLOGY.

Mt. Ayr, Iowa.

Give a short history of phrenology, mentioning in particular its more prominent advocates.

E. E. Davis.

Answer.—The history of phrenology is embodied in the lives of its expounders. Although the prominent thinkers of mediæval Europe acknowledged many of its principles, it was not until 1796 that phrenology found an able and persistent advocate. Franz Joseph Gall, who in 1758 was born in Baden, began in his childhood to study the human face and head, and connect the various dispositions of men with certain prominences noticeable in the shape of their skulls. He studied medicine at various colleges, receiving his degree at Vienna. Eleven years after his graduation he delivered a lecture in that city, expounding his views on the subject which had been his constant study. It was not well received, and his subsequent writings and lectures were subjected to considerable censure and ridicule. They were, indeed, to such an extent unpopular that in 1805 the Austrian Government interdicted them, and he was compelled to refrain from further advancing his views in that country. With Kasper Spurzheim, a talented young man, who had embraced his doctrines while attending the school of medicine in Vienna, Dr. Gall changed his abode to Paris. In that city, with the aid of his pupil, he succeeded in making a considerable impression. He afterward became a citizen of France, and died in 1828, near Paris, leaving several works valuable to the student of phrenology. In the meantime Dr. Spurzheim visited England. His lectures were listened to with considerable interest and many in that country adopted his views. In 1832 he came to the United States; but soon after his first lecture, which had created quite a sensation, he died in Boston. His efforts in England and Scotland were continued by George Combe, a lawyer, who wrote and lectured in those countries, and who also visited the United States. But he to whom most credit is due for extending the tenets of phrenology in this country is Oscar Squire Fowler, who was born at Cohocton, N. Y., Oct. 11, 1809, was educated at Amherst College, and has spent most of his life in advocating his views. In 1876 he made his home at Boston, although much of his time was spent in lecturing in various parts of the land. Although one

of the fundamental principles of phrenology is that the mind is material and inseparable from the body, yet many who deny such a conclusion accept some of its inferences.

THE CAPITOL OF NEW YORK.

VALPARAISO, Ind.

How much has the State of New York expended on its State House? What will be the total cost of the building?

J. M.

Answer.—In 1880 a report presented to the State Legislature of New York in reference to the State House declared that $13,000,000 had already been expended and that the ultimate cost of the building would be fully $20,000,000. With all this lavish expenditure the State House is said to be inadequate; its lower rooms are dark and unwholesome; the acoustics of the Senate Chamber render it difficult to hear a debate; and considerable complaint is made because the building, which covers three acres, is three-fifths halls and corridors.

SILVER POLISH.

CHICAGO, Ill.

What chemical used in boiling water will polish German silver.

A SUBSCRIBER.

Answer.—To clean and polish silver, silver-plate, and alloys, the following method is often employed: To 1 quart of water is added 1 ounce of carbonate of potash and ¼ pound of whiting. This is heated, and the silver immersed. When the liquid has boiled for twenty minutes it is removed from the fire and permitted to cool. Each piece is then taken out and polished with soft leather.

THE FAMOUS BURLEIGH.

COLFAX, Ind.

Give me a short history of Lord Burleigh.

SAMUEL SMITH.

Answer.—William Cecil Burleigh, who, Hume declares, was the "most vigilant, active and prudent Minister ever known in England," was born in Lincolnshire in 1520. He studied law and graduated at Cambridge. When only 28 years old, he became Secretary of State, but at the accession of the Catholic Queen Mary he resigned. Although he was a stanch supporter of the Protestant cause, he was one of the few who was not persecuted. When Queen Elizabeth in 1558 succeeded her sister, Burleigh again assumed control of the state and became virtually the Prime Minister. For forty years he retained this office, until his death. To his ability much of the credit of Elizabeth's wise and prosperous reign is due. He was a man in whom "the Virgin Queen" could place entire confidence. He was rewarded in 1571 with a barony and in the following year was made Lord Treasurer. His rule has been severely criticised in some particulars, and especially as regards his treatment of Mary, Queen of Scots; but his integrity and statesmanship have never been called in question by well-informed, impartial historians.

STATISTICS OF RELIGIOUS SECTS.

CORNING, Iowa.

Please give the names of the various religious denominations in the United States and their respective membership.

J. B. G.

Answer.—The denominational statistics of the census if compiled are not available. The Rand-McNally Index of the World gives the following data for Jan. 1, 1881, which may be considered a fair estimate:

Roman Catholic	6,174,202
Baptist	2,133,044
Methodist	1,680,779
M. E. South	828,013
Lutheran	684,570

Presbyterian	573,377
Christian	567,448
Congregational	383,685
Protestant Episcopal	323,876
United Brethren	155,437
Reformed Church in U. S.	154,742
United Evangelical	144,000
Presbyterian South	119,970
Protestant Methodist	118,170
Cumberland Presbyterian	111,855
Mormon	110,377
Evangelical Association	99,607
The Brethren	90,000
United Presbyterian	80,236
Reformed Church in America	78,917
Freewill Baptists	76,706
Friends	67,643
Second Adventist	63,500
Anti-Mission Baptist	40,000
Universalist	37,945
Church of God	20,224
Wesleyan Methodist	17,847
Moravian	16,112
Seventh Day Adventist	14,733
Jews	13,683
Free Methodist	12,120
Adventist	11,100
Reformed Episcopal	10,459
Seventh Day Baptist	8,606
Reformed Presbyterian	6,020
New Jerusalem	4,734
Primitive Methodist	3,370
New Mennonite	2,990
American Communities	2,838

Shaker	2,400
Independent Methodist	2,100
Six Principle Baptist	2,075

THE ITALIAN POET TASSO.

CHARLESTON, Ill.

Will you please give something of the life and writings of Torquato Tasso?

H. B. GLASSCO.

Answer.—Torquato Tasso, the unfortunate Italian poet, was born in 1544. With the intention of practicing law he studied at Naples, Rome, and afterward at Bergamo. The wonderful popularity of his first poem, "Rinaldo," written when only 18 years old, led him to abandon jurisprudence and devote himself entirely to literary pursuits. This production was a lively epic composed of twelve cantos, full of the romance of mediæval times. Soon after he began to labor on his "Gerusalemme Liberata," or Jerusalem liberated, his chief work, which he completed in 1575. He was for a time in great favor at court and in the Vatican, and the Pope bestowed many favors upon him, and King Alfonso II. gave him a pension. The Duke of Ferrara became his especial patron, and treated him as a member of his household, until Tasso conceived an uncontrollable affection for the Duke's daughter, which she did not reciprocate, while the Duke was offended. In despair he yielded to melancholy, which soon grew into a species of insanity, so that it became necessary to remove him to the home of his sister. Here he partially recovered, but he would not be satisfied until again admitted to the Duke of Ferrara's household, where his malady returned, and the Duke, in 1579, removed him to an insane asylum. There he remained seven years, while all Italy was singing his praises. After his release he resided at Mantua, and then at Naples. In 1594, the Pope, Clement VIII., invited him to come to Rome and be crowned; but before he could go to receive the promised honors, he died, April 25, 1595. Two of his dramatic poems "Aminta" and "Torrismondo," were received with great favor; but that which contributed most to his fame was the "Gerusalemme Liberata," translated into the English by Edward Fairfax as early as 1600

and by J. K. James as late as 1865. Tasso takes rank among Italian poets next after Dante.

THE GUITEAU JURY.

DUNLAP, Iowa.

Give the names of the jurors in the Guiteau trial.

JOHN KEITGES.

Answer.—After three days' labor the following jury was selected for the Guiteau trial: John P. Harlin, Fred W. Brandenburg, Charles G. Stewart, Henry J. Bright, Thomas H. Langley, Michael Sheehan, Samuel F. Hobbs, G. W. Gates, Ralph Wormley, William H. Browner, T. Heinlein, and Joseph Prather.

THE ERIE AND MICHIGAN CANAL.

FAIRMONT, Ind.

Is there a prospect of a canal connecting Lakes Erie and Michigan? What would be the length of the canal? What would be the distance around the lakes between the mouths of the proposed canals?

C. T. COX.

Answer.—There is no prospect of an early union of Lake Erie and Lake Michigan by a canal. The length of such waterway would be about 200 miles. The distance around the lakes, from the eastern mouth of the proposed canal to the western mouth is about 700 miles.

A RETIRED CONGRESSMAN.

MINNEAPOLIS, Minn.

Who represented the Ninth District of Ohio in Congress in 1864 and 1865? Please give a brief sketch of his life.

A Reader.

Answer.—Warren P. Noble, who represented the Ninth District of Ohio in Congress from 1861 to 1865, was born in Pennsylvania, June 14, 1821. He received a common school education, and in his youth moved to Ohio, where he studied law. He began to practice at Tiffin, where his abilities were soon recognized, and he became a member of the Legislature of his State, serving in that capacity from 1856 to 1860. He was elected as a Democrat to the Thirty-seventh Congress in 1860, re-elected in 1862, serving in both Congresses on the Committee on Patents. Being defeated by the Republican nominee in 1864, and this party having grown powerful by the success of its wise and patriotic policy before another biennial election came around, Mr. Noble retired permanently from politics.

SAMUEL J. RANDALL.

Bloomington, Ill.

Send us a few facts in regard to ex-Speaker Randall, one of the big chiefs in the Democratic camp.

S. Moore.

Answer.—Samuel J. Randall is undoubtedly one of the leading spirits in his party. He is a shrewd, sagacious politician rather than a great statesman, but in statesmanship he is one of the prominent figures on the Democratic side of the House. He is shrewd enough to know that a Democrat of out-and-out free-trade professions would have no encouragement to aspire to any office in the gift of Pennsylvania, but besides this it is only fair to grant him credit for knowing that it would be ruinous to the enormous mining, manufacturing, and farming interests of his State for this country to practice free trade. So he has been instrumental in keeping a considerable following of Democrats who will vote with him against violent reductions in the present tariff. Mr. Randall is a Philadelphian by birth. He was born Oct. 10, 1828; received a fair academic education; was for a time engaged in mercantile business; was for four years a member of the City Council; then a member of the State Senate for a year; was elected to the Thirty-eighth Congress, and has held membership in the House ever since. In the election of 1880 he carried his district by 13,661 votes, against 9,880 for B. L.

Berry, Republican, and he was re-elected last November by a still larger majority. He has sat on several of the most important committees in the House; was Speaker for the last session of the Forty-fourth Congress, for the Forty-fifth and the Forty-sixth Congresses, and has a fair prospect of being Speaker of the next Congress.

CAN A JEW BE A GERMAN?

ROCK FALLS, Ill.

Is it possible for a Jew to be a German, or a German a Jew? And how is it in other countries?

L. E. C. ROE.

Answer.—A German may be a Jew, or a Jew a German, Englishman, Frenchman, Italian, American, or of any nationality under the sun. As a Jew his nationality embraces the world; in many respects he still observes the laws of Moses, and by marriage and other peculiar institutions he maintains his race distinctions and national feelings. At the same time he is now in most Christian states a citizen of the land he happens to be born in, and in most such lands is permitted to enjoy all the rights of other citizens, as is the case with American Jews. It was not always so. It is only since the establishment of the German Empire, in 1871, that the Jew has enjoyed full civil equality in Germany. France granted it in 1790, and confirmed this grant in the constitution of 1795. In all but a few petty, contemptible particulars, since 1858 English Jews have enjoyed all the privileges of other British subjects. In Russia and some other European countries the Jew is still denied the rights of citizenship.

DUTIES ON FARM PRODUCTS AND COAL.

REST, Kas.

Give the present import duty on the various kinds of grain, also potatoes, butter, cheese, and coal, and oblige several readers.

JOHN F. COULTER.

Answer.—The following are the import duties on some of the principal farm products and coal:

Wheat, seed or other	20 cts. per bu. of 60 lbs.
Wheat flour	20 per cent
Corn	10 cts. per bu. of 56 lbs.
Corn meal	10 per cent
Barley, 48 lbs. to bu.	15 cts. per bu.
Barley, patent	20 per cent
Barley, pearl or hulled	1 ct. per lb.
Barley, pulverized	20 per cent
Oats	10 cts. per bu. of 32 lbs.
Oatmeal	½ ct. per lb.
Rye	15 cts. per bu. of 56 lbs.
Rye flour	10 per cent
Rye shorts	10 per cent

The import duty on potatoes, seed or otherwise, is 14 cents per bushel; on butter, 4 cents per pound; on cheese of all kinds, 4 cents per pound; on salt in bulk, 8 cents per 100 pounds; in bags, sacks, barrels, or other packages or in brown earthenware jars, 12 cents per 100 pounds; on bituminous coal, 75 cents per ton of 28 bushels of 80 pounds each; on dust coal, 40 cents per ton; on cannel coal, 75 cents per ton.

ST. HELENA.

RACCOON, Ill.

What are the area and present population of the island of St. Helena? What is its history? Was the banishment of Napoleon just?

SUBSCRIBER.

Answer.—The island of St. Helena, whose name always recalls the gloomy downfall of Napoleon I., contains an area of about forty-seven miles. It supports a population of 6,241 souls. It was discovered in 1501 by Juan de Nova Castella, a bold Portugese navigator, who gave it the name St. Helena, because he first saw it on the day sacred to that saint in the Romish calendar. In the following century the Dutch took possession and retained it until England seized it in 1673. When Napoleon Bonaparte was first banished to this island and held here as a political prisoner under British surveillance, the population was but about 800,200 of whom were soldiers and 300 slaves. The importance to a maratime nation like Great Britain of St. Helena, lying as it does in the path of European, South African, Australian, and India and China trade, developed as years passed: its value as a naval station and its other strategic advantages have become more and more apparent, and now it is looked upon as one of the strong keys of English power in the South Atlantic.

HOW SLAVERY AFFECTED CONGRESSIONAL APPORTIONMENTS.

HENRIETTA, Neb.

Were slaveholders entitled to extra votes for the slaves which they possessed?

INQUIRER.

Answer.—In Congressional apportionments before the war, five negroes were counted as equal to three whites. Of course the slaves were not permitted to vote, but the voting power of the whites was plainly magnified over that of an equal number of whites in the free States. For example, the first Congressional apportionment allowed one representative for every 30,000 inhabitants; but in the South 21,000 whites owning 15,000 slaves counted the same as 30,000 whites in the North where there were no slaves, or 15,000 whites holding 25,000 slaves were granted the same representation in Congress and the electoral college as double the number of Northern whites.

JEFFERSON AND JEFFERSONIANISM.

BELLE PLAINE, Iowa.

Please give a brief biography of Thomas Jefferson.

A SON OF VULCAN.

Answer.—"Thomas Jefferson, author of the Declaration of American Independence, of the statute of Virginia for religious freedom, and father of the University of Virginia," is the inscription upon Jefferson's tombstone. He was born April 2, 1743, in the county of Albemarle, in the interior of Virginia, then a desolate forest. His diligence and study was encouraged by his parents, who placed him under the care of a talented Scottish clergyman. When he was 17 he entered William and Mary College, and after graduation studied law. In 1759 he was chosen to represent his county in the House of Burgesses, where he continued with but little interruption until the days of the revolution. Like George Washington, disappointed in his first love, he married a widow, in 1772. Three years later he was sent as a delegate to the Second Continental Congress. As Chairman of the committee to draft the Declaration of Independence, he is said to have written the whole of that document, which, with a few minor amendments, was adopted by Congress and sent to the King of England. In October he resigned and retired to his farm, but only again to be forced into civil life by his election to the State Legislature. During the war he was not only busy in originating and advocating measures to aid the cause of liberty but also he began a thorough revision of the statutes of Virginia. From 1779 to 1781 he served as Governor. After a short term in the House of Burgesses he was sent to the Confederate Congress, which, in 1784, thought fit to appoint him as one of the three commissioners to negotiate treaties with European nations. Upon Franklin's return Jefferson was made Minister Plenipotentiary to the court of Louis XVI. He watched with eager interest the progress of the French Revolution, and when given a leave of absence in 1789 returned filled with democratic ideas from the new republic. Upon his landing he was immediately tendered by Washington a position in his Cabinet as Secretary of State. Soon it became evident to Jefferson that among the President's advisers there existed a radical difference of opinion on nearly every important subject. Hamilton was regarded by the Secretary of State as a man in favor of a constitutional monarchy, and the latter's ideas of centralization were construed to mean the destruction of the existing Constitution and the formation of a government like that of England. The

Secretary of the Treasury, on the other hand, believed Jefferson to be infused with the socialistic democracy of France, and one whose principles if put in practice would overthrow the Constitution and produce anarchy. To Jefferson the financial policy of Hamilton was very aggravating. The recommendations of the Treasurer to Congress he believed to be in the interest of the speculators and the moneyed classes. On New Year's Day, 1794, he resigned his office, greatly to the annoyance of Washington, who was reluctantly compelled to acquiesce, and returned to his farm. The position occupied by the first President was a peculiarly embarrassing one. He had in his Cabinet Jefferson and Randolph, the leaders of the Republican, or Anti-Federal party, and Hamilton and Knox prominent Federalists. With such associations the administration as a whole was comparatively little criticised, although Hamilton and Jefferson were the targets for the denunciations of their respective opponents. In 1800 Jefferson and Burr each received 73 electoral votes to Adams' 65, which threw the election into the House. According to the decision of that body Jefferson was inaugurated March 4, 1801. His frugal administration increased the popularity of his party, which continued to remain in power twenty-four years. After having served two terms he again retired to his farm, a poor man, considerably burdened with debt. Congress purchased his library, which their committee valued at $23,000, although its cost had been nearly double that sum. Mr. Bacon, who had charge of the removal, says that there were sixteen wagon loads, each wagon being required to carry at least 3,000 pounds. The remainder of his life he spent in endeavoring to introduce schools and colleges, and in general, the New England system of local government into his native State. After witnessing the establishment of the University of Virginia, he died July 4, 1826, upon the same day that John Adams passed away. In politics Jefferson was considered by the Federalists as a theorist. Speaking of his administration, Gouverneur Morris says: "There is just now so much philosophy among our rulers that we must not be surprised at the charge of pusillanimity." In religion he was very bitter against the Calvinists, and held Unitarian views.

WHAT IS MICA—WHERE OBTAINED?

AURORA, Neb.

What is mica, and where is it found?

B. O. B.

Answer.—Mica consists of a silicate of alumina, combined, according to species, with small proportions of potash, soda, lithia, oxide of iron, oxide of manganese, etc. The most common and serviceable variety is known as potash mica. It is a constituent of granite, gneiss, mica slate, and several other kindred rocks. It is found both disseminated and in veins. It is very widely distributed, especially in composition with other minerals; but there are comparatively few localities where it is known to exist in such quantities and form as to be mined with profit. Its most valuable form is that of muscovite, in which it appears in translucent lamina or plates. The larger and clearer these plates the greater the value of the mine or quarry. In Siberia they have been found more than three feet across, and they have been obtained of great size in Sweden and Norway. This is also the case at Acworth, Grafton, and Alstead, N. H., and mica has been found large enough for economic use in Canada. Mica is used largely for the doors of stoves and the sides of lanterns. It is employed in some countries as a substitute for window glass, and its toughness recommends it for this purpose on board vessels of war. It has also been used for spectacles. When ground it makes a cheap bronzing powder. There are some mica factories in North Carolina, near Mitchell County mica mines. In the state of a fine powder it is used to give a brilliant appearance to walls, and as a sand for drying ink on manuscripts. Lithia mica contains a small proportion of lithia, which gives it in many cases a fine rose or peachblow color, so that it is used for ornamental purposes.

WHY THE GREAT DIPPER SPINS AROUND THE POLE.

COLDWATER, Mich.

Please explain the apparent revolution of the Dipper about the Polar Star.

J. C. A.

Answer.—The Great Dipper only appears to revolve, owing to the revolution of the earth. Of course, it makes an apparent revolution every

twenty-four hours, the same as the sun. It is visible throughout the entire night because it is within what is called the circle of perpetual apparition, or that part of the heavens which is always in sight to the observer. This circle enlarges as one travels from the equator, where it is nothing, to the pole, where it takes in the whole northern hemisphere.

THE OLD UNITED STATES BANK.

CRESTON, Iowa.

Please give the location and explain the government of the first and second banks of the United States.

M. M. MCKEE.

Answer.—The act establishing the old United States Bank, although opposed by the Secretary of State, Thomas Jefferson, and by Edmund Randolph, the Attorney General, on the ground of its unconstitutionality, was approved by President Washington, July 25, 1791. The bank was organized at Philadelphia. The different clauses declared that the capital should be $10,000,000, which should be divided into 25,000 shares of $400 each; that any person, copartnership or body politic might subscribe for any number of shares not exceeding 1,000—only the United States could subscribe for more than this number of shares; that, with the exception of the United States, the subscriptions should be payable one-fourth in gold and silver, and the remaining three-fourths in certain 6 per cent bonds of the United States; that the subscribers should be incorporated under the name of "The President, Directors, and company of the Bank of the United States," and the organization should continue until March 4, 1811; that the bank could hold property of all kinds, inclusive of its capital, to the amount of $15,000,000; that twenty-five directors should be chosen, who in turn should choose from their number a President; that as soon as $400,000 in gold and silver was received on subscription the bank could organize, after giving a notice of its intention. The general effect of this institution was very salutary. The credit of the United States became firmly established. The bank notes stood at par with gold and silver. The large deposits made the money available for the use of the Treasury, and the State bank currency, which had flooded the country, with no prospects of redemption,

was greatly reduced. But with all its recognized advantages the act to re-charter was defeated in 1811, by the casting vote of the Vice President, George Clinton. Its loss, however, was immediately felt in the sudden and rapid increase of the currency of the State banks. To ward off an impending crisis, the second bank was established by an act approved by President Madison, April 10, 1816, at Philadelphia. A capital of $35,000,000 was required, which was to be equally divided into 350,000 shares, of which the United States took 70,000. The charter extended to March 3, 1836. It was prohibited from lending on account of the United States more than $500,000, or to any prince or foreign power any sum whatever, without the sanction of law first obtained. The bank was also prohibited from issuing bills of less denomination than $5. In time, to facilitate business, branch offices were established in every State. In December, 1829, however, the bank met strenuous opposition in the message of President Jackson, who argued, like Jefferson, against the constitutionality of its charter. When Congress, in 1832, passed a bill to re-charter the institution, Jackson imposed his veto, and soon after removed from the bank the United States' deposits. The bank corporation, however, continued to exist, hoping that succeeding elections would change the complexion of affairs before their charter expired; but in this they were disappointed. In 1836 the charter terminated, and a few months afterward the business interests of the country were overwhelmed in a most disastrous financial revulsion.

JAMES FENIMORE COOPER.

PERRYVILLE, Ind.

Give a short biography of James Fenimore Cooper.

C. A. MOODY.

Answer.—J. Fenimore Cooper, the pioneer of American novelists, was born in Burlington, N. J., Sept. 15, 1789. Reared in the wild country surrounding Otsego Lake, he early became acquainted with the natural scenery which he afterward so vividly described. His father, who was a member of Congress, sent him when but 13 to Yale College, where he remained two years. At the age of 16 he joined the United States navy, and made two extended cruises, which gave him all the information he desired

concerning the sea. Resigning, he married, and settled at Westchester, N. Y., where he began to write his novels. The first, "Precaution," appeared in 1819, and from that time he continued to write until his death, in 1851. In 1826 he visited Europe, returning in 1833. The novels of Cooper are considered remarkable for their descriptions; but in the general finish of his stories he has many superiors. His histories, while they are fascinating in interest, are not considered altogether reliable. His principal works are "The Pioneers," "The Spy," "The Pilot," "The Prairie," "Naval History of the United States," and "The Pathfinder."

MACKINAC.

BRIMFIELD, Ind.

Please give a short history of Mackinac Island.

D. D. POITNER.

Answer.—The island of Mackinac, famed in Indian legends and the early French and English history of the West, was first visited by white men in 1634, when John Nicollet and a few Hurons and French voyageurs came to Green Bay to make a treaty with the Indians of that region. In 1670 that devout Jesuit missionary, Jean Marquette, lived on this island for about two years while building a chapel and dwelling on a point opposite on the site of the present Mackinac City. While here he wrote the following description: "Missili-Mackinac is an island, famous in these regions. It is of more than a league in diameter, and elevated in some places into such high cliffs as to be seen more than twelve leagues off. It is situated just in the strait forming the communication between Lakes Huron and Illinois (Michigan). It is the key and, as it were, the gate for all the tribes from the south." "This place is the most noted in these regions for the abundance of its fisheries; for, according to the Indian saying, this is the home of the fishes." The history of this gem of the lakes is intertwined with that of the old Mackinac town. This ancient village was for many centuries the headquarters of the Ottawa, Objibwa, and other Indian nations, and when Marquette succeeded in winning their friendship and in constructing his chapel, it became the great trading post of the French-Canadians. Soon a fort was constructed, and the white foreigners lived here and traded in peace. But when in 1759 Quebec was

taken by the English, Mackinac fell to the conquerors. These new masters were very unpopular with the suspicious inhabitants, who soon found an opportunity to avenge their previous wrongs and defeats by a complete massacre of the garrison. In order to retain a post in that locality and prevent a repetition of such slaughter, the English constructed in 1780 a fort on the island, which in 1793 was surrendered to the United States. In the war of 1812 it was surprised before its garrison was aware of the declaration of war and surrendered to the English besiegers. Upon the close of the struggle it was returned to the jurisdiction of the United States. For many years the island was the outfitting and furnishing place of John Jacob Astors' Indian traffic, under the name of the Northwestern Fur Company, but when that gentleman sold out in 1834 to Ramsey Crooks, of New York, the trade of the post gradually decreased. The island is one of the most beautiful localities, in its natural scenery and surroundings, of which our country can boast. The clear water, the imposing rocks, and the old fort, all add luster to its many charms. One of its chief natural attractions is Arch Rock, which, projecting from the precipice on the northeastern side of the island, forms a natural bridge 140 feet in height. The bridge, the Indians say, was constructed by the giant fairies, who formerly made the island their abode, but the unpoetical scientist declares that at one time the water was much higher than in this age, and that its continuous action wore away the calcareous rock, and left this arch.

METALS AND THEIR USES.

Wall Lake, Iowa.

How many kinds of metals are there? For what are they used; where found?

Laura.

Answer.—There is a difference of opinion among practical chemists as to the number of existing metals. Professor Youmans affirms that there are at least fifty simple metals, nearly one-half of which are of little importance. Other scientists make the number considerably less. The greater number of metals are rarely or never found in nature in a simple state. They exist in compound forms, and are useful only in such conditions. For example,

sodium, the basis of our common salt, cannot be exposed to any moisture, and therefore in its simple state is comparatively useless. Aluminum, as it is found in the ordinary clay, or the alum of commerce, is of great utility, but when separated from its associated elements its use is confined almost exclusively to the laboratory. Of the more important metals iron is the king. In its production Great Britain leads the world. From her furnaces and mills in 1879 were taken 5,995,337 tons of cast and pig iron, and 1,344,297 tons of steel, a ton consisting of 2,240 lbs. During the same year the United States produced 2,741,853 tons of iron, and 1,440,121 tons of steel; Germany, 2,161,192 tons of iron and 800,000 tons of steel, and France, 1,344,759 tons of iron and 561,691 tons of steel. Of the production in the United States, Pennsylvania furnaces yielded about one-half, and those of Ohio about one-seventh. Copper has been in use from early times. Often among the bones of primitive man are found utensils beaten out of this malleable metal. At present it is mined extensively in Wales, Germany, Australia, Upper Michigan, Northern Wisconsin and Minnesota, and to a small degree in various other localities. Tin is found either as rock-tin, in veins with rock and other ores, or as stream-tin in alluvial deposits. The principal mines are in Cornwall, Germany, Hungary, Bohemia, Mexico and China. Not only is it used in the manufacture of tin-plate, but also in the composition of various valuable alloys. Zinc, in the form of a carbonate or selicate, is obtained from mines in Silesia and Belgium, and also in small quantities in Wales, France, and this country. Like tin, it is used in the composition of various alloys, as well as in the ordinary form of zinc plate. Until a recent date, the value of nickel was not known. The Germans, who, out of derision, gave it its name, were accustomed to cast it aside as a spurious or base copper. The mines of Germany and Wales produce nearly the entire amount, although a little has been obtained from mines in Pennsylvania. Its use is mainly confined to its alloys, such as German silver, white metal, and a few minor coins. Platinum, which, owing to its high fusive point and its lack of affinity for acids is peculiarly adapted for the manufacture of chemical vessels, is found in Brazil, and also in Russia. In the production of gold the United States leads all other countries. The yield of our gold mines in 1881 was valued at $36,500,000, while the total yield from 1845 to 1880 amounted to $1,523,678,301. Between the years 1493 and 1875 Austria produced in gold $889,963,800, New Granada $596,501,675, and Russia $590,629,944. The silver of the world for the last

four centuries has been produced mainly in Mexico, Peru, and Bolivia. Since the discovery of America Mexican mines have yielded over $2,600,280,659; Peruvian, $1,065,357,084; and Bolivian, $1,286,999,947. The mines of the United States have yielded since their first discovery about $540,000,000. Mercury is obtained either in the fluid state, inclosed in the rocky receptacles of the earth, or is derived by roasting its sulphate. In Southern California and Mexico, and also in Austria and Spain, productive mines are worked. It is valuable in the construction of thermometers, barometers, pendulums, etc., manufactures, and also in refining metals by amalgamation.

A SHORT HISTORY OF SUFFRAGE.

WOODLAWN, Mo.

Please give a brief history of the right of suffrage in this country.

READER.

Answer.—The history of suffrage has been a record of progress and extension. The most limited form is observed in the first election of the Virginia colony in 1607, and the most extensive to-day is in Wyoming Territory. By the charter granted to the Virginia Company the members of a council of settlers, chosen by a higher council resident in England, were privileged to choose annually a President from their own number. In accordance with this the first right of suffrage that existed in any permanent American colony was exercised by six members of the council, who, in May, 1607, chose Edward Maria Wingfield as the first President. In 1619 the different towns of Virginia elected, by general suffrage, twenty-two burgesses, who, assembling at Jamestown, constituted the first legislative body convened in America. In the following year, a few hundred miles north, the Plymouth Fathers gathered on the deck of the Mayflower, and exercised a still more extended right of suffrage in the choice of John Carver as the first Governor of the colony. These privileges continued, with only a few changes in Virginia, until the American revolution, excepting that eighteen years after the election of Carver, in Massachusetts, their mass assemblies were deemed too large, and a representative government was

established. Although democratic in principle, a few laws passed by the New England colonists restricted the privilege of suffrage. No person who had not become a freeman by taking the oath of allegiance was permitted to vote. No man, according to a law of 1631, was admitted to the freedom of the body politic who was not a member of some of the churches within the limits of the same. No Quaker was permitted to become a freeman. The two latter restrictions, however, were soon removed. The power of the people was greatly increased through the results of the revolution, yet in several of the original thirteen States the right of suffrage was restricted to property-holders or rate-payers, and otherwise limited for periods extending in some cases through one or more decades of the present century. The tendency was constantly to the wide limits of manhood suffrage, which was then prevailing rule, but only as regards white citizens, until the fifteenth amendment in March, 1870, extended the same right to colored citizens. The present movement toward the extension of the right to women has been successful in Wyoming Territory and to a certain extent in Massachusetts, which permits women to vote for members of the Board of Education. The agitation, also, of the educational qualification of electors has resulted in late years in a slight limitation of the right of suffrage in a few of the States, notably Massachusetts.

ELIZA COOK.

OHIO.

Please give a short sketch of Eliza Cook, the English poetess.

MRS. RANKIN.

Answer.—Eliza Cook, who is now residing in the village of Merton in Surrey, England, was born in Southwark in 1817. In early life she established a considerable reputation through the poems which she contributed to several of the leading magazines of London. In 1840 these poems were collected and with others published in one volume, since which time she has issued several editions of her lyrics that are read with as much interest in our country as in England. In 1849 she published a magazine entitled *Eliza Cook's Journal*, which was quite successful for many years.

Although the effects of age are beginning to be noticeable, she still contributes to various magazines.

A HISTORY OF OUR FLAG.

MILTON, Ind.

Please give a history of our National flag.

HARRY WOODARD.

Answer.—In June, 1777, a committee having been appointed by Congress to confer with General Washington concerning a design for a National flag, reported in favor of a flag containing thirteen stripes, alternately red and white, and a blue field adorned with thirteen white stars. This was adopted June 14, and the design was carried to the upholstering shop of Mrs. Ross, No. 239 Arch street, Philadelphia, where the first National flag was made. The original design required six-pointed stars, but, upon Mrs. Ross' suggestion that five-pointed stars would be more symmetrical, the pattern was changed. This lady was afterward given the position of manufacturer of government flags, which occupation upon her death was retained by her children. The stars and stripes were first unfurled at the battle of Saratoga upon the occasion of the surrender of Burgoyne. By an act of Congress, Jan. 13, 1794, the design was changed so as to incorporate fifteen stripes and fifteen stars, and one star was to be added for every subsequent State admitted. This, however, was repealed in 1818, when the original number of stripes were established, the stars continuing to increase as new States were admitted. In designing a flag the field should be one-third the length and cover the width of seven stripes. Of the colors, red represents courage, white, integrity, and blue steadfastness, faith and love.

INDIA, BROWN, AND YELLOW INKS.

BLACKBERRY STATION, Ill.

Please give a recipe for making India ink, also recipes for making yellow and brown inks.

ELMER WEYANT.

Answer.—Pure India ink, or sepia, is made only in China, but a good imitation and common substitute is made as follows: Ivory black, ground to an impalpable powder, is made into a paste with weak gum arabic water, perfumed with a few drops of essence of musk and half as much essence of ambergris. This is pressed into cakes, ready for use. Brown ink may be made with a strong decoction of catechu. The shade can be varied by cautiously adding a little weak solution of bichromate of potash. A yellow ink may be made with a strong decoction of yellow dyeing ingredient with alum and gum arabic.

ONE OF OUR NEW BRIGADIER GENERAL.

CHICAGO.

Please give a short sketch of General Mackenzie, lately appointed Brigadier General in the regular army.

M. J. FOREMAN.

Answer.—Ranal S. Mackenzie was born in New York in August, 1840. Graduating from West Point in 1862, he was made Second Lieutenant of Engineers. He immediately entered active service in the Ninth Corps, and was wounded at the second battle of Bull Run. When Lee, in 1863, advanced into Maryland, Mackenzie was very busily employed in constructing bridges for the Union forces which followed in the rear of the rebel army. He took part in the various battles of the Army of the Potomac in Maryland and in West Virginia, and in May, 1864, had charge of a company before Richmond. He passed through the battle of the Wilderness, and in June was wounded before Petersburg. For his gallantry he was appointed Brigadier General of Volunteers. Resuming the command of his company, he continued his efforts against Petersburg. At the battle of Five Forks he commanded a division of cavalry with so much skill that he was brevetted Major General. After the close of the war he retained the command of a company in his old corps. In March, 1867, he was promoted to the Colonelcy, and in 1870 he was transferred to the cavalry and sent to the Mexican frontier. In quelling the depredations on the Texas border and in putting down the Indian insurrections in New Mexico and Arizona he has since displayed considerable military ability. Previous to his present

promotion he had charge of the army in New Mexico, Santa Fe being his headquarters.

SOUND AND SENSE.

WYOMING, Ill.

Can sound be produced with no ear to hear?

WILLIAM E. WHITE.

Answer.—The word sound is used in different senses. In the sense defined in the first definition given by Webster and Worcester, the answer to your question is "no;" but in the sense of his second definition, it is "yes." This second definition, as given in the last edition of his Unabridged Dictionary, is as follows: "Sound—The occasion of sound: the impulse or vibration which would occasion sound to a percipient if present with unimpaired organs." This use of the word is strikingly illustrated in the expression "inaudible sounds," i.e., such as can only be heard by the help of instruments.

GENERAL ROBERT E. LEE.

MONTICELLO, Ill.

Please give a biographical sketch of the late rebel General, Robert E. Lee.

JACOB A. RHOADS.

Answer.—The Commander-in-chief of the rebel forces was born at Westmoreland, Va., Jan. 19, 1807. At the age of 18 he entered West Point, from which he graduated, the second in his class, in 1829. Receiving an appointment of Second Lieutenant in the Corps of Engineers, he spent his time at various places, engaged in the government surveys, until the breaking out of the Mexican war. During the greater portion of the war he served under General Scott, who considered him a very capable officer. For his excellent services he was brevetted major, then lieutenant colonel, and soon afterwards he was made colonel. At Chapultepec, he was wounded, but not seriously enough to prevent his entering the City of Mexico. After

the war he was engaged on the Atlantic coast until his appointment in 1852 to the superintendency of the Military Academy. In 1855 he was made Lieutenant Colonel of the Second Cavalry, and was transferred to the Texas border. While on leave of absence in Washington in 1859, he was placed in charge of the troops which quelled the raid at Harper's Ferry. In March, 1861, he was made colonel, but when he learned of Virginia's secession he resigned and accepted an appointment in the insurrectionary forces of his native State. Repairing to Richmond he was made commander-in-chief of the forces of Virginia, with the title of Major General. Soon after, by an act of the Confederate Congress, he was made third in rank of the entire rebel forces, Samuel Cooper and A. S. Johnston being his superiors. Because of his inactivity before Rosecrans he was transferred in December to North and South Carolina, where he remained until March, 1862, when he returned to accept the position of commander-in-chief of all the Confederate forces. In June he defeated McClellan and began his northward march, routing the forces of Pope and invading the State of Maryland. The bloody battle of Antietam was claimed as a victory by both sides, but Lee thought best immediately to retire into Virginia. Until his next invasion and defeat at Gettysburg in July, 1863, he remained on the defensive. His subsequent retreat, his generalship in the battle of the Wilderness and other engagements following it disclosed great tact and prudence. The ability which he displayed in the defense of Richmond excites the admiration of every impartial reader of history, and does great credit to his military genius. This genius was more than matched at last by that of General Grant, sustained by the greater resources of the North, and he was compelled to surrender his sword at Appomattox Court House. Subsequently he became President of Washington and Lee College, located at Lexington, Va., where he died Oct. 12, 1870.

VARIATIONS OF THE COMPASS.

KENSETT, Iowa.

It is said that the companions of Christopher Columbus were greatly alarmed when the variations of the compass was first remarked. Please explain why the needle of a compass points

north, and also give the amount of its variation for different places.

C. E. Locke.

Answer.—Why the magnetic needle points northward is not positively determined. There are several theories but none of them explain all the phenomena of the needle. That which perplexes scientists most is that in every place the needle is subject to variations. By observations at Paris it was found that in 1681 the magnetic needle varied 2 deg. 30 min. to the west, in 1865 18 deg. 44 min. to the west. At London between 1580 and 1692 the needle varied from 10 deg. 15 min. E. to 6 deg. W. In Dakota Territory the average variation is 12 deg. 30 min. east, in Minnesota 11 deg. east, while in Montana it is 20 deg. east. S. V. Clevenger, United States Deputy Surveyor, says in a work on government surveys: "The needle does not point due north, except in a few localities, and at no place does it continue to point with a given angular distance from the north, for any stated length of time. It changes secularly, annually, diurnally, and hourly, and is further subject to fluctuations reducible to no method of tabulation. In the vicinity of iron in any shape, or magnetic sands, the needle is deflected toward the material attracting it. This perturbation is known as local attraction. The author has known the needle to vary 5 deg. in a distance of one mile, and 1 deg. 30 min. during two hours when stationed at one place." The variation in the magnetic needle of Columbus' compass was probably caused by some local attraction of which he knew nothing.

DISCOURAGEMENTS TO ANTARCTIC EXPLORATIONS.

Palestine, Ind.

Why is the north pole the object of more research than the south pole?

Subscriber.

Answer.—Soon after the discovery of America European navigators began to search the arctic zone for a passage to Asiatic countries which would be less dangerous and circuitous than that usually traveled. Although the object of polar expeditions has changed somewhat, yet one of the

reasons which actuated them influences the explorers of the present time. The nearness of this pole has rendered it of greater interest than its southern counterpart. Expeditions are fitted out more easily for the shorter voyage. Relief can be procured with less delay. Other reasons are that from the closer neighborhood of the continents, and from the action of the Gulf Stream on the one side and the Japan current on the other, and from the fact that the earth is in perihelion during the winter season of the Northern hemisphere, and in aphelion during the winter of the Southern hemisphere, the Arctic Sea is more free from ice, which in the Antarctic region is an impregnable barrier in the way of discovery.

WAGES IN ENGLAND AND AMERICA.

OSKALOOSA, Iowa.

Give a comparison of the wages of the United States with those of England.

O. P. L.

Answer.—The following is a comparison of the wages paid per week in Chicago and Great Britain to various artisans:

	Chicago.	Great Britain.
Bakers	$8.00 to $12.00	$6.50 to $6.60
Blacksmiths	9.00 to 12.00	7.04 to 8.12
Bookbinders	9.00 to 20.00	6.50 to 7.83
Bricklayers	6.00 to 10.50	7.58 to 9.63
Cabinetmakers	7.00 to 15.00	7.70 to 8.48
Carpenters	7.50 to 12.00	7.33 to 8.25
Farm laborers		3.40 to 4.25
Laborers, porters, etc	5.50 to 9.00	4.50 to 5.00
Painters	6.00 to 12.00	7.25 to 8.16
Plasterers	9.00 to 15.00	7.68 to 10.13
Plumbers	12.00 to 20.00	7.13 to 8.46

Printers	12.00 to 18.00	7.52 to 7.75
Shoemakers	9.00 to 18.00	7.35
Tailors	6.00 to 18.00	5.00 to 7.30
Tinsmiths	9.00 to 12.00	6.00 to 7.30

THE BANKERS' CLEARING HOUSE, LONDON.

DAVENPORT, Iowa.

Tell us something of the purpose of the great Clearing House of London, and the amount of business done through it.

J. BROWN.

Answer.—The Bankers' Clearing House, London, is the medium through which bankers collect the checks and bills in their hands against other banks. Instead of presenting these checks and bills at each bank to which they are addressed, and receiving cash and notes in payment, clearing bankers settle the whole amount delivered during the day at this establishment in Postoffice Court, Lombard street, by receiving or paying the difference in the totals for or against them by a single check on the Bank of England. Every bank in London and the country is represented by clearing bankers, and as their agents send through the Clearing House all drafts payable in the city and in the country, the amount passing through this establishment every year is enormous. The total amount for the year ending April 30, 1882, was £6,382,654,000, or nearly $32,000,000,000. The total clearings of the Bankers' Clearing House, Chicago, in the year ending Dec. 31, 1882, amounted to $2,366,526,185. This represented only the transactions of banks doing business in Chicago. It is estimated that the new rule as to settlement applied during the past year has reduced the total clearings nearly 25 per cent below what they would have been under the old rule. London is the center of exchange for the world, and the volume of its bank clearings must necessarily be enormously greater than that of any other city. The totals of bills, checks, and drafts passed through the London Clearing House, between 1869 and 1881 inclusive, foot up £68,010,643,000, or over three hundred and forty billion dollars. The rise and fall in trade not only in England, but in large degree the world over is mirrored in the annual records of these clearings for the period mentioned.

Whereas in 1869 the total clearings were but 3,626,396,000 pounds sterling, they increased each year until 1873, when they amounted to £6,070,948,000. Then, in consequence of the widespread commercial depression the total trade transactions fell off, and the London bank clearings fell to £5,936,772,000 in 1874, £5,685,793,000 in 1875, and £4,963,480,000 in 1876, the lowest point touched. Not until 1880 did the clearings rise to nearly six billions again. In 1881, for the first time, did they reach and pass the total in 1873, indicating general business prosperity throughout the world.

CHICAGO AND MILWAUKEE COMPARED.

SHOSHONE AGENCY, W. T.

How does Milwaukee compare with Chicago in the amount of grain handled in one year?

WM. H. ROME.

Answer.—The following are the statistics of receipts and shipments at Milwaukee for 1882:

	Receipts, bu.		Shipments, bu.
Wheat	7,816,471	Wheat	1,788,479
Oats	2,581,808	Oats	1,600,916
Barley	4,653,192	Barley	2,927,273
Rye	491,006	Rye	440,369
Corn	2,037,680	Corn	1,454,144
Flour (brls)	3,340,854	Flour, (brls)	4,248,050
Total in bu	32,613,994	Total in bu	27,327,405

The statistics of Chicago during the same period are:

	Receipts, bu.		Shipments, bu.
Wheat	22,326,680	Wheat	19,905,319
Oats	26,975,137	Oats	23,975,177
Barley	2,066,636	Barley	4,130,069
Rye	2,052,214	Rye	1,928,874
Corn	49,224,522	Corn	49,264,167

Flour (brls)	4,378,864	Flour (brls)	3,995,532
Total in bu	122,350,074	Total in bu	117,182,590

AMERICAN AND ENGLISH SHIP-BUILDING.

VAN WERT, Ohio.

How does American ship-building compare with the ship-building of Great Britain?

J. W. NICODEMUS.

Answer.—During the year 1880 there were constructed in the United States for ocean traffic 412 sailing vessels, having a tonnage of 53,610, and 166 steam vessels, having a tonnage of 40,617. In addition to this, for the service of the lakes and rivers, were constructed forty-eight sailing vessels, with a tonnage of 5,447 and 182 steamers, with a tonnage of 38,237. In the same period Great Britain constructed 353 sailing vessels, with a tonnage of 57,534, and 474 steamers, with a tonnage of 346,361. The total number of American vessels plying the ocean was, at that time, 17,932, with a tonnage of 2,803,923, while Great Britain boasted of 25,185 vessels and a tonnage of 6,574,513. Including the shipping upon the inland lakes and rivers, the total shipping of the United States was 21,547 vessels, having a tonnage of 3,577,816. The reason for this enormous difference between the two countries is due partly to the greater cost of labor and material in the United States; partly to many more ways of employing capital profitably in the United States than there are in other countries; partly to the subsidies paid by the British Government to encourage the establishment and maintenance of British ocean lines of transportation; partly to the vastness of the British Empire and the exemption of British vessels and British goods carried in their vessels from heavy port dues and duties in trading to British ports; and partly from the American law forbidding the granting of the American flag to vessels built in other countries, even when owned by American citizens, and forbidding the restoration of our flag to American-built vessels after they have once gone under other colors, whatever the cause. American-built vessels compare in all other respects, except cost, favorably with the same classes of British vessels, and in many particulars American builders have done much to improve all classes of sea-going craft.

CELEBRATED PAINTINGS.

RAVANNA, Mo.

What and where are some of the most celebrated paintings?

A READER.

Answer.—By general agreement among art critics, Michael Angelo and Raphael stand at the head of the line of master painters. Conspicuous among the great paintings of the former are "The Last Judgment," "The Conversion of St. Paul," and "The Crucifixion of St. Peter;" and among those of the latter, "The Dispute Concerning the Sacrament," the "Madonna di Foligno," and the "Madonna del Pesce, or Virgin of the Fish." The "Last Judgment" is a large fresco painting, sixty feet high by thirty feet wide, occupying the wall opposite the entrance of the Sistine Chapel, in the Vatican Palace at Rome. Over 300 figures are represented in "the most violent attitudes and most admired disorder." "The Conversion of St. Paul" is another large fresco painting in the Vatican. "The Crucifixion of Peter," also in the Vatican, is one of the last from the hands of Angelo. "The Dispute Concerning the Sacrament" is a fresco representing, above, a convocation of the saints around the Almighty, the Savior, and the Virgin, enveloped in heavenly glory, while beneath the ceremony of the consecration of the sacrament is depicted. This is found in the Camera della Segnatura of the Vatican, Rome. "The Madonna di Foligno," in the Vatican gallery, derives its name from the city of Foligno, which is represented in the back-ground. The "Madonna del Pesce," now in the gallery at Madrid, Spain, represents the Virgin and Child enthroned, with St. Jerome on one side and on the other an archangel with the young Tobit, who carries a fish, from which circumstance the name is derived. "The Madonna di San Sisto" is considered by many critics the best of Raphael's works. It is located in the gallery of Dresden, Germany, and represents the Madonna standing upon the clouds surrounded with glory, holding in her arms the eternal Son. Saint Sixtus and Saint Barbara kneel at the sides. It was originally painted on wood, but has been transferred to canvas. The painting of "The Last Supper," by Leonardo da Vinci, is recognized as one of the masterpieces. It was originally painted by order of the Duke of Milan on the walls of the refectory in the Dominican Convent of the Madonna delle Grazie. The

picture is now in a state of decay, but several very fine copies have been made; one of them, at the Royal Academy, London, is considered almost, if not quite, as good as the original. Rubens' paintings of the "Descent from the Cross" and "Elevation of the Cross," at Antwerp, rank high as masterpieces. The "Adoration of the Trinity," by Albert Durer, at Vienna, and his two pictures containing life-size figures of Peter and John, Mark and Paul, presented to the Council of Nuremberg, Germany, are also very famous. All of the above and many others, the productions of painters barely less noted, are classed as works of the great masters; and artists and amateurs are constantly going on pilgrimages to the temples and art galleries which are so favored as to enshrine them.

THE SCOTTISH POET, WM. KNOX.

HALSTEAD, Kan.

Please give a short biographical sketch of William Knox.

LINNIE REED.

Answer.—William Knox, a Scottish poet, familiar to the readers of "Scott's Diary," was born at Roxburgh in 1789. Very little has been recorded concerning his life, which terminated at the comparatively early age of 36. He was very industrious, and in addition to his published volumes contributed to the *Literary Gazette* and to various other magazines. In 1818 he published a collection of poems under the title of "The Lonely Heath," and in the succeeding year wrote "Mariomne," "A Visit to Dublin," "Songs of Israel," and "The Harp of Zion."

THE PLANETS IN FEBRUARY.

WYANETT, Ill.

In or near what constellations are the planets at present?

C. A. H.

Answer.—During the month of February, 1883, Mercury will be a morning star after the 10th, and will be found in Capricornus until near the end of the month, when it will enter Aquarius. Venus will also be a morning

star while in Sagittarius. Mars can be observed near the sun in Capricornus; Jupiter nearly stationary between Taurus and Gemini, and Saturn nearly stationary between Aries and Taurus.

JOHN PHŒNIX.

ABINGDON, Ill.

Will you please give a short sketch of "John Phœnix," the humorous California writer of twenty years ago.

C. SNYDER.

Answer.—This noted humorist was an officer in the regular army. His real name was George Henry Derby. He was born in Massachusetts; was appointed to the military academy from that State, and graduated a second lieutenant of ordnance in 1846; same year was transferred to the Topographical Engineer Corps, a branch of the army since abolished. Lieutenant Derby was brevetted for gallantry at Cerro Gordo, Mexico, being wounded in the action. He was the author, over the nom de plume of John Phœnix, of "Phœnixiana" ('56), and the "Squibob Papers." Many of his most popular productions were written while he was on the staff of the commanding general of the Military Department of the Pacific, engaged on the improvement of the harbor of San Diego, Cal., which accounts for his being referred to as a Californian writer. Captain Derby died May 15, 1861, in New York City, aged only 38.

ORIGIN OF THE WHIG PARTY.

DURAND, Ill.

Why is J. Quincy Adams classed with the Whig Presidents when the Whig party was not organized until 1836.

E. S. CAPRON.

Answer.—The National Republicans, to whom J. Quincy Adams belonged, dropped that name and took the name of Whigs in 1832. Adams, who was one of the Whig leaders from the first, is usually classed as the first of the Whig Presidents, because the National policy he represented and

maintained when President was substantially the policy advocated by the Whigs of 1832. In 1834 there was a State convention held in New York City, which gave organized form to the Whig party in that State, and this organization became National in 1836, when Wm. H. Harrison was first nominated by the Whigs for the Presidency. A still higher degree of organization was effected at the first delegate National convention of the Whig party, held in Harrisburg, Pa., Dec. 4, 1839, when Harrison was nominated for the great campaign of 1840, in which he was elected.

EARLY AMERICAN COINAGE.

DES MOINES, Iowa.

Name the earliest American coins.

E. WILSON.

Answer.—The earliest coinage that can be called American, in the sense of Anglo-American, was ordered by the original Virginia Company, only five years after the founding of Jamestown. The coin were minted at Somers Islands, now known as the Bermudas. For a long while the standard currency of Virginia was tobacco, as in many of the early settlements of the Northwest it was beaver skins, and other pelts reckoned as worth such a fraction of a beaver skin or so many beaver skins. The accounts of the fur traders and pioneers in their dealings with the Indians were kept in beaver skins instead of coin until some years after the opening of this century, and in some parts of the Dominion of Canada they are still kept so. In 1645 the Assembly of the Virginia Colony, after a preamble reciting that, "It had maturely weighed and considered how advantageous a quoine would be to this colony, and the great wants and miseries which do daily happen unto it by the sole dependency upon tobacco," provided for the issue of copper coins of the denominations of twopence, threepence, sixpence, and ninepence; but this law was never carried into effect, so the first colonial coinage of this country was that struck off by Massachusetts under the order of the General Court of that colony, passed May 27, 1652, creating a "mint howse" at Boston, and providing for the mintage of "12 pence, 6 pence, and 3 pence pieces, which shall be for forme flatt, and stamped on the one side with N. E., and on the other side with XIId., VId., and IIId., according to the

value of each peece." In 1662, from this same mint appeared the famous "pine tree shillings," which were two-penny pieces. This mint was maintained for thirty-four years. In the reign of William and Mary copper coins were struck in England for New England and Carolina. Lord Baltimore had silver shillings, sixpences, and fourpences made in England to supply the demands of his province of Maryland. Vermont and Connecticut established mints in 1785 for the issue of copper coin. New Jersey followed a year later. But Congress had the establishment of a mint for the confederated States under advisement, and in this same year agreed upon a plan submitted by Thomas Jefferson, and the act went into operation on a small scale in 1787. After the adoption of the Constitution of the United States in 1789 all the State mints were closed, as the Constitution specifically places the sole power of coining money in the Federal Government.

DIFFERENCE OF TIME.

CHICAGO, Ill.

What is the difference of time between Chicago and the principal cities of the world?

E. A. JORDAN.

Answer.—The difference in time between Chicago and Washington is 42 minutes. Keeping this in mind, the reader can easily determine the difference of time between Chicago and other cities named in the following table, which shows the difference of time between Washington City and some of the chief cities of the globe, as calculated at the United States Naval Observatory, Washington:

Time Table.

At 12 o'clock noon, Saturday, at Washington it is—

12:12 p. m. Saturday at New York, U. S.
12:24 p. m. Saturday at Boston, U. S.
4:31 p. m. Saturday at Lisbon, Portugal
4:55 p. m. Saturday at Edinburgh, Scotland.

5:07 p. m. Saturday at London, England.
5:17 p. m. Saturday at Paris, France.
5:58 p. m. Saturday at Rome, Italy.
6:02 p. m. Saturday at Berlin, Prussia.
6:14 p. m. Saturday at Vienna, Austria.
6:22 p. m. Saturday at Cape Town, Africa.
7:04 p. m. Saturday at Constantinople.
11:01 p. m. Saturday at Calcutta, India.
12:54 a. m. Sunday at Pekin, China.
2:48 a. m. Sunday at Melbourne, Australia.
4:51 a. m. Sunday at Auckland, New Zealand.
8:58 a. m. Saturday at San Francisco, U. S.
9:40 a. m. Saturday at Salt Lake, U. S.
11:08 a. m. Saturday at New Orleans, U. S.
11:18 a. m. Saturday at Chicago, U. S.
12 noon Saturday at Lima, Peru.

VALUE OF RARE AMERICAN COINS.

DES MOINES, Iowa.

Is it true that coin collectors sometimes pay as high as $12 for a single American silver dollar? If so, why?

E. WILSON.

Answer.—It is true that United States silver dollars of certain issues command very high premiums. The silver dollar of 1794, on which the image of Liberty has flowing hair, is quoted at $12.50; the "flying eagle dollars" of 1838 and 1839 are quoted at $15 each; so are the dollars of 1851 and 1852 with "Liberty seated;" so is that of 1858, with the same figure; while the excessively rare silver dollars of 1804 are quoted at $200 each. The half-dollar of 1796, with a filleted head and fifteen stars, commands $15; and that of the next year, with sixteen stars, commands $16. The value depends entirely on the rarity of these coins, since while the dollar of 1804 is quoted at $200, the "spread-eagle dollar" of 1803 is worth but $1.25. The fifteen and sixteen-star dollars belong to the period when it was the law that an additional stripe should be added to the United States flag whenever a

new State was admitted. In the mintage they undertook to add a star for each State, but the flag was restored to the established rule of thirteen stripes, and the Goddess of Liberty on the dollars was relieved of the burden of carrying a star for each new State.

THE VISIBLE ZONES OF THE SUN.

BUSHNELL, Ill.

Which zone of the sun is presented to our view, the polar or equatorial?

G. W. PORTER.

Answer.—The sun's equator is almost coincident with the plane of the ecliptic, the inclination being only about seven degrees, in consequence of which the equatorial zone of the sun is continually presented to the view of terrestrial observers, and they may see every part of the sun's surface in the course of each year.

BUTTERINE.

GIRARD, Ill.

What are the ingredients used in the manufacture of butterine?

A SUBSCRIBER.

Answer.—This substitute for butter is made from tallow or lard, as the chief component, with cocoanut, olive, and palm oils to give it the necessary flavor and consistency; salt and a little annatto for coloring. If this recipe were always followed and the compound called by its right name it would not be objectionable; but manufacturers do not hesitate to add other ingredients that are unwholesome and injurious, and palm the stuff off for butter.

FINENESS OF UNITED STATES COIN.

MOUNMOUTH, Ill.

What are the proportions of pure metal in the coins of the United States?

READER.

Answer.—The gold coins are nine-tenths fine; the silver coins, nine-tenths fine; the copper-nickel coins, such as the 5-cent piece and 3-cent piece, are one-fourth nickel and three-fourths copper; the bronze coins are 95 per cent copper and 5 per cent tin and zinc. The alloy in the gold coins is silver and copper; in the silver coins, copper.

NATIONAL DESCENT OF THE PRESIDENTS.

HARTLEY, Iowa.

Please give the parentage of each of the Presidents of the United States.

W. WILLIAMS.

Answer.—The parents of Washington and Adams were of English origin; those of Jefferson, Welsh; those of Madison, Monroe, and J. Q. Adams, English; those of Jackson, Scotch-Irish; of Van Buren, Dutch; of Harrison and Tyler, English; of Polk, Scotch-Irish; of Taylor, Fillmore, and Pierce, English; of Buchanan, Irish; of Lincoln, English; of Johnson, probably English; of Grant, English; of Hayes, Scotch; of Garfield, English, though his mother was of Huguenot descent; of Arthur, Irish. It seems hardly worth while to give the names of parents on both sides, as few of our readers care particularly for the names of grandfathers and grandmothers of great men unless such ancestors were something more than ordinary.

THE ORDER OF DUMAS' WORKS.

CHICAGO, Ill.

It is said that the novels written by Alexander Dumas should be read in a particular order, each one being a continuation, as it

were, or in some respects a sequel, to those preceding it. Is this so, and if so, in what order should they be read?

INQUIRER.

Answer.—Each of the following works is in one sense complete in itself, yet they also constitute several series, so related that the reader better take them up in the following order: The "Three Guardsmen" series—"The Three Guardsmen," "Twenty Years After," "Bragelone," "The Iron Mask," "Louise Lavaliere;" the "Memoirs of a Physician" series—"The Memoirs of a Physician," "The Queen's Necklace," "Six Years Later, or The Taking of the Bastile," "The Countess De Charnay," "Andre de Travernay," "The Chevalier."

BUCHANAN'S CABINET.

CHEROKEE, Kan.

Who were Buchanan's Cabinet officers?

WILLIS SWANK.

Answer.—The Secretaries of State during the administration of James Buchanan were Lewis Cass and Jeremiah S. Black; Secretaries of the Treasury, Howell Cobb, Philip F. Thomas, and John A. Dix; Secretaries of War, John B. Floyd and Joseph Holt; Secretary of the Navy, Isaac Toucey; Secretary of the Interior, Jacob Thompson: Postmasters General, Aaron V. Brown, Joseph Holt, and Horatio King; Attorneys General, Jeremiah S. Black and Edwin M. Stanton.

GOVERNOR COLES, OF ILLINOIS.

ASKFORT, N. Y.

Please give a brief sketch of Colonel Coles.

MYRON HURLBUT.

Answer.—Edward Coles, an early Governor of Illinois, was born in Albemarle County, Va., the home of Jefferson, in December, 1786. He in his youth became prominent in our country's politics, and in 1810 was

appointed private secretary of President Madison. He served as Minister to Russia in 1817, and, returning the following year, liberated his slaves. From 1823 to 1826 he was Governor of Illinois, which position he filled with considerable executive ability. His death occurred in Philadelphia, July 7, 1868.

WHY WATER FREEZES SOFT.

SHANK, D. T.

What is the reason hard water becomes soft by freezing?

MARTIN SHANK.

Answer.—By freezing the mineral substances are precipitated and the water becomes soft, in the same manner as by boiling. For like reason filthy water will produce comparatively clear ice.

HIGHEST RANK IN U. S. ARMY.

PLATTVILLE, Ill.

What is the order of rank of generals in the United States Army? What changes have been made in the rank of the highest army officers since the war of the Revolution?

A SUBSCRIBER.

Answer.—The highest army officer in the active service of the United States is General; the next inferior, Lieutenant General; then Major General, and finally Brigadier General. Until George Washington was made Lieutenant General, in July, 1798, the highest office was Major General. After his death, in 1797, the title of the chief army officer continued to be Major General until 1864, when Grant was appointed Lieutenant General. In July, 1866, the office of General was created.

THE FATAL HOMERIAN RIDDLE.

OAKLAND, Cal.

What was the answer Homer gave to the fisherman who gave him a riddle to solve?

JENNIE SMEDLEY.

Answer.—The story is that one day Homer, meeting a number of fishermen, asked them: "Fishermen, sprung of Arcadia, have we aught?" And they answered: "What we caught we left behind. What we caught not we bear with us." Homer could not explain it. He then remembered that the oracle had said "beware of riddles." In despair he wrote his own epitaph and died within three days. This story comes from a lost work of Aristotle, so it is said, but it is decidedly fishy, and is classed with the numerous other fictions regarding the blind poet.

TABLE FOR MEASURING AN ACRE.

WILTON, Iowa.

Please give an easy rule for measuring an acre when the length of one side is known.

A SUBSCRIBER.

Answer.—To measure an acre in rectangular form is a simple question in arithmetic. One has only to divide the total number of square yards in an acre, 4,840, by the number of yards in the known side or breadth to find the unknown side in yards. By this process it appears that a rectangular strip of ground—

5 yards wide by 968 yards long is 1 acre.
10 yards wide by 484 yards long is 1 acre.
20 yards wide by 242 yards long is 1 acre.
40 yards wide by 121 yards long is 1 acre.
80 yards wide by 60½ yards long is 1 acre.
70 yards wide by 69½ yards long is 1 acre.
60 yards wide by 80⅜ yards long is 1 acre.

NUMBER OF EURO-AMERICAN CABLES.

FAIRMOUNT, Ind.

How many submarine cables connect Europe with America?

MILTON C. COX.

Answer.—There are three Anglo-American cables, with an aggregate length of 6,450 miles; also, the old French cable, which is 3,329 miles long; the direct United States cable from Ireland, 2,360 miles; the new French cables, 3,461 miles, and the Brazilian cable, extending from Portugal to Brazil.

DISCOVERY OF ELECTRIC LIGHT.

STEWARTSVILLE, Mo.

Who first produced electric light?

J. C. ADAMS.

Answer.—It is uncertain when electric light was first produced by artificial agencies. The first successful display occurred in 1810, when Sir Humphrey Davy with a battery of 2,000 elements entertained the Royal Institution by producing an electric light with an arc three inches long between carbon points.

ALTITUDES OF WESTERN CITIES.

EVERGREEN, Neb.

What are the altitudes of Buffalo, Chicago, Des Moines, St. Paul, Yankton, Omaha, and Fort Kearney?

MANY WESTERN READERS.

Answer.—The city of Buffalo, N. Y., is elevated above the sea level about 580 feet; Chicago about 690 feet. The average altitude of the State of Iowa is about 1,000 feet, varying from 445 feet at the mouth of the Des Moines River to 1,650 feet at Spirit Lake. The average elevation of Minnesota is about 1,000 feet. The eastern part of Dakota is 1,000 feet above the sea level, the central and northern parts are about 2,500 feet, while in the Black Hills the mountains reach the height of 7,000 feet. Omaha is 1,046 feet above the sea level, and Fort Kearney 1,247 feet.

DESCENDANTS OF POCAHONTAS.

SILOAM, Ark.

Name some of the descendants of Pocahontas.

A READER.

Answer.—Among them are the Randolphs and Bollands, of Virginia; John Randolph, of Roanoke, the associate of Thomas Jefferson, Madison, Monroe, John Adams, and other fathers of the Republic was the most distinguished of these.

366 REVOLUTIONS IN A YEAR.

LAKEVILLE, Ind.

How many rotations does the earth make in a year?

C. A. B.

Answer.—The earth makes 366 rotations in the 365 days composing the year. This is a necessary condition of its making one complete revolution around the sun in a year.

WHEN THE FOUR GOSPELS WERE WRITTEN.

EXIRA, Iowa.

When were the four gospels written?

J. A. HALLOCK.

Answer.—The time when each of the gospels was written is not positively known. Matthew and Luke are generally conceded to have been written between A. D. 58 and A. D. 60. Mark was written after A. D. 62. It is thought that John was written about A. D. 78; but Biblical critics are not agreed on these matters.

A RAILROAD COMPROMISE.

LOCKPORT, N.Y.

Is it true, as reported, that the Northern Pacific Railroad has secured control of the St. Paul, Minneapolis and Manitoba Railroad by the purchase of the latter's stock?

W. T. RANSOM.

Answer.—No. The two roads recently came to an agreement not to encroach on what they are pleased to call each other's territory. They also purchased of each other such branch lines as they had begun which seemed to be at variance with this understanding as to territory.

ORIGIN OF THE TEMPERANCE MOVEMENT.

MARION, Ind.

Please give a brief history of the temperance movements in this country.

SAMUEL C. ZOMBRO.

Answer.—The total abstinence societies of to-day are the outgrowth of the old temperate or moderate drinking societies of England and America. About 400 years ago an association was formed, the members of which pledged themselves not to drink more than a specified quantity of alcoholic liquors each day. A society somewhat similar was inaugurated in Germany in 1600 called "The Order of Temperance," whose members were pledged never to become intoxicated and to that end never to imbibe more than fourteen cups of wine per day. In America, also, there were moderate drinkers' organizations. In 1820 a society was formed in New Jersey, the members of which agreed never to drink more than one-half pint of rum or whisky per day. The first total abstinence movement of any importance in this country began in Saratoga County, New York, prompted by the Temperance Society of Moreau and Northumberland.

Forty-three persons signed an agreement not to drink "rum, gin, whisky, wine, or any distilled spirits or compositions of the same, or any of them, except by the advice of a physician, or in case of actual disease, also excepting wine at public dinners, under penalty of 25 cents." In 1813, The Massachusetts Society for the Suppression of Intemperance was formed,

but owing to the laxity of its rules it was not very efficient. The American Society for the Promotion of Temperance was inaugurated in Boston in February, 1826, and rapidly grew into an extensive organization, having increased in three years to 11 State associations and 1,000 local societies. About this time the name tee-total came into use, having originated from the vain attempt of a stuttering reformed Englishman to pronounce the word "total." In 1840 the Washingtonian Society was formed by six drunkards in the city of Baltimore, who resolved to avoid their cups and reform their associates. In five years its pledge had been signed by 650,000 persons, most of whom had been tipplers or downright drunkards. Other societies were soon formed; the Sons of Temperance in New York, in 1842; the Order of Templars of Honor and Temperance in 1845; and the Good Templars in 1851. Since the war many local societies have been formed, and the Murphy movement has extended all over the country.

NEW YORK ELEVATED RAILWAYS.

TAOPI, Minn.

Please give a short description of the New York elevated railroads.

M. H. MILLER.

Answer.—The demand of the people living in the outskirts of New York City for more rapid transit than that furnished by the horse cars began to be answered in 1868, when an elevated railway extending a half-mile was constructed on Greenwich street as an experiment. Three years later the West Side Elevated Railroad Company obtained a charter, but before much could be accomplished it sold its rights to the New York Elevated Railroad Company, in 1872. The new organization proceeded rapidly to erect its roads, extending from the heart of the city to the suburbs. In December, 1879, its rolling stock consisted of 131 locomotives, 292 passenger cars, and 8 service cars. The road was leased to the Manhattan Railway Company in May, 1879. The Metropolitan Elevated Railroad was first called the Gilbert Elevated Railroad, in honor of its projector, Dr. Rufus H. Gilbert. Although the company obtained its charter in 1872, work was not commenced until March, 1876. In two years it expended $10.-300,000 in

constructing its lines. In 1879 the road with its rolling stock, consisting of fifty-six locomotives, 180 passenger cars, and two freight cars, was leased to the Manhattan Elevated Railroad Company, which now has a complete monopoly of the elevated railroads of New York. The tracks of the Metropolitan are supported on two rows of columns connected with each other at the top by strong lattice-girders. The rails weigh fifty-six pounds per yard, and rest upon yellow-pine cross-ties, 6 x 7 inches by 8⅜ feet long, separated two feet apart. The engines weigh fifteen tons, and are capable of a speed of forty miles an hour. The stations are about one-half mile apart. The New York Elevated Railroad consists of a single row of columns, supporting a lighter tramway than the Metropolitan. Although at first this system of railways met with considerable opposition, the people of New York now recognize that its convenience far outbalances its unsightliness, noise, and other disagreeable concomitants.

PAUL PRY.

CHICAGO, Ill.

Who was the author of Paul Pry and who was the original of the character?

INQUIRER.

Answer.—The author was John Poole, an English dramatist, born in 1785. He was remarkably successful in the production of light drama, including some roaring farces, of which the most conspicuous was "Paul Pry;" "Hamlet Travestie," with burlesque annotations; "Deaf as a Post;" "Turning the Tables," and "The Wife's Stratagem," adapted from Shirley. It was long believed that Thomas Hill, the eccentric editor of the *Dramatic Mirror*, was the original of Poole's Paul Pry, but Poole himself contradicts this notion in a biographical sketch of himself that appeared a few years before his death, which occurred in London, Feb. 5, 1872. In this sketch he says: "The character of Paul Pry was suggested by the following anecdote, related to me several years ago by a beloved friend: An idle old lady, living in a narrow street, had passed so much of her time in watching the affairs of her neighbors that she at length knew the sound of each particular knocker within hearing, and could tell to which house it belonged. It happened that

she fell ill, and was for several days confined to her bed. Unable to observe in person what was going on outside, she stationed her maid at the window as her substitute for the performance of that task. But Betty soon grew weary of the occupation; she became careless in her reports, impatient and tetchy when reprimanded for her negligence. 'Betty, what are you thinking about? Don't you hear a double knock at No. 9? Who is it?' 'The first floor lodger, ma'am.' 'Betty! Betty! I declare I must give you warning. Why don't you tell me what that knock is at No. 24?' 'Why, Lord, ma'am, it is only the baker with pies.' '*Pies!* Betty? What *can* they want with pies at No. 24? They had pies yesterday!' Of this very point I have availed myself. Let me add that Paul Pry was never intended as the representative of any one individual, but of a class. Like the melancholy of Jacques, he 'is compounded of many samples,' and I could mention five or six who were unconscious contributors to the character. That it should have been so often, though erroneously, supposed to have been drawn after some particular person is perhaps complimentary to the general truth of the delineation. With respect to the play generally, I may say that it is original; it is original in structure, plot, character, and dialogue—such as they are. The only imitation I am aware of is to be found in part of the business in which Mrs. Subtle is engaged; while writing those scenes I had strongly in my recollection Collin d'Harleville's 'Vieux Celibataire.' But even the little I have adopted is considerably altered and modified by the necessity of adapting it to the exigencies of a different plot."

THE VOTE LAST NOVEMBER.

BELOIT, Wis.

What was the number of votes cast for the different parties in each of the States in the November election?

W. W. LLOYD.

Answer.—The following table, though liable to a few changes, is substantially correct:

	Rep.	Dem.	Gbk.	Scat'g.
California	67,173	90,695		
Colorado	27,552	29,897		

Connecticut	54,853	59,014	697	[1]1,034
Delaware	10,098	12,053		
Florida	20,139	24,067		[5]3,553
Illinois	254,551	249,067	15,520	[1]16,344
Indiana	210,234	220,918	13,520	
Iowa	149,051	112,180	30,817	
Kansas	75,158	83,237	20,933	
Louisiana	33,953	49,892		
Maryland	74,515	80,725	1,833	
Massachusetts	119,997	133,946		[1]2,137
Michigan	149,697	154,259	5,854	[1]1,114
Minnesota	92,802	46,653	3,781	[1]1,545
Mississippi	20,553	48,159		[5]9,729
Missouri	128,239	198,620	33,407	
Nebraska	43,495	28,562	16,991	
Nevada	6,462	7,720		
New Hampshire	41,111	36,091		
New Jersey	97,869	99,962	6,063	[1]943
New York	342,464	535,318	11,974	[1]25,783
North Carolina		111,763		[2]111,320
Pennsylvania	315,589	355,791	23,996	[3]43,743
South Carolina		67,158	17,719	
Tennessee	91,693	119,297	9,538	[4]4,632
Texas	27,625	164,087	41,126	[5]12,160
Virginia	4,342	94,184		[6]99,992
Wisconsin	94,606	103,630	2,496	[1]13,800
Total	2,553,821	3,315,955	256,265	

FOOTNOTES:

[1] Prohibition.

[2] Liberal.

[3] Independent Republican.

[4] Independent Democrat.

[5] Independent.

[6] Readjuster.

To obtain a correct estimate of the Prohibition vote there should be added to the above amounts the Republican vote of Kansas, 4,398 votes cast in favor of a prohibition amendment in North Carolina, and 5,196 votes for prohibition candidates in Pennsylvania, which would swell the number to 141,328.

NATIVITIES OF CHICAGOANS AND NEW YORKERS.

ROCKFORD, Ill.

Which has the larger ratio of foreign population, Chicago or New York, and of what elements is the foreign population of these cities composed?

AN OLD SUBSCRIBER.

Answer.—The foreign population of New York City, according to the last census, constituted a little over 38 per cent of the whole; the foreign population of Chicago was 40 per cent of the whole. Of the foreign population of New York 198,595 were natives of Ireland, 153,482 of Germany, 23,767 of England, 8,683 of Scotland, and 929 of Wales, 12,223 of Italy, 9,910 of France, 9,020 of Poland. 8,093 of Bohemia, 7,024 of British America, 4,743 of Austria, 4,551 of Russia, 4,545 of Switzerland, 4,101 of Hungary, 3,194 of Sweden, 1,860 of Holland, 1,644 of Cuba, 87 of Africa, 119 of Asia, 175 of Australia, 556 of Belgium, 747 of China. 1,096 of Denmark, 69 of Greece, 7 of Greenland, 20 of Japan, 100, of Luxemburg, 132 of Mexico, 893 of Norway, 66 of Portugal, 59 of Sandwich Islands, 427 of South American Islands, 667 of Spain, 77 of Turkey, 814 of West Indies, exclusive of Cuba; 17 of Central America, 35 of Atlantic Islands, 62 of Europe, nationality not given; 93 born at sea. Of the foreign population of Chicago, 44,411 were natives of Ireland, 32,919 of Prussia, 29,249 of other German States, 13,265 of Canada, 13,045 of England, 12,930 of Sweden, 11,887 of Bohemia, 9,783 of Norway, 5,536 of Poland,

4,152 of Scotland, 2,626 of Bavaria, 2,556 of Denmark, 2,145 of Baden, 2,045 of Holland, 1,356 of Austria, 1,590 of France, 1,919 of Hanover, 1,357 of Italy, 1,923 of Mechlenburg, 1,612 of Saxony, 1,459 of Switzerland, 1,408 of Wurtemburg, 484 of Belgium, 408 of Hamburg, 739 of Hessen, 300 of Hungary, 358 of Luxemburg, 235 of New Brunswick, 243 of Nova Scotia, 722 of Wales, 921 of Russia, 110 of Nassau, 258 of China, 107 of Australasia, 48 born at sea, 41 of South America, 61 of Spain, 59 of West Indies, 87 of Newfoundland, 81 of Oldenburg, 44 of Brunswick, 44 of Great Britain, what part not stated; 330 of countries not specified.

SLAVERY IN CUBA.

GRAPELAND, Texas.

What is the condition of slavery in Cuba, and in what time will emancipation be complete?

SUBSCRIBER.

Answer.—According to a Cuban law, passed by the Spanish Cortes in 1870, all persons who should be born after June 23, 1870, and all who should attain the age of 60, should be free after June 23, 1870. This enactment, however, was evaded to a considerable extent. The plantations were supplied not only with negro but also with Chinese coolies, who were subjected to even greater servitude. In November, 1879, a new bill was passed by the Spanish Cortes, which provided that all slaves from 55 upward should become free; that slaves from 50 to 55 should be liberated Sept. 17, 1880; from 45 to 50, September, 1882; from 40 to 45, in 1884; from 35 to 40, in 1886; from 30 to 35, in 1888, and those under 30 in 1890. The bill also provided that the sum of 100,000 piastres should be set apart annually for defraying the expenses of the emancipation, the owner to receive 350 piastres for each slave. This bill has gone into effect and is being generally observed, although there is still some complaint of its violation.

WASHINGTON TERRITORY.

MANSON, Iowa.

Please give a few facts concerning the climate, soil, and products of Washington Territory.

W. CLEVELAND.

Answer.—The Cascade range of mountains extends north and south through Washington Territory, dividing it into two unequal parts, which differ somewhat as to their climate and soil. West of the mountains the climate is very moderate. The inhabitants do not suffer either from extreme heat or extreme cold, the annual range of the thermometer being from zero to 85 degrees. The rainy season lasts three months in winter, during which the inhabitants suffer no great discomfort. The soil on the river bottoms is a very rich alluvium. The uplands have a clay loam, but considerable tracts are sandy soil. About Puget Sound forests of fir and cedar extend up to the summits of the mountains, while in the river bottoms may be found the vine-maple, alder, and crab tree. Grain of all kinds, nutritious grasses, hops, fruit, and vegetables grow abundantly. East of the Cascades the climate is a little drier, and the summer and winter heat a little more extreme. The soil is whiter than that of the Mississippi Valley, being highly charged with alkaline deposits. Herding now is the chief occupation of the settlers, though it is expected that when the Northern Pacific Railway is completed agriculture will become more prominent. Fruitful orchards, surrounded by fields of wheat, oats, barley, and rye are not at all uncommon.

SACRAMENTO AND SAN JOAQUIN VALLEYS.

EDGINGTON, Ill.

Please give a description of the Sacramento and San Joaquin Valleys of California.

A READER.

Answer.—Between the Coast Ranges and the Sierra Nevada lie the beautiful valleys of the Sacramento and San Joaquin, named from the rivers which drain them. The climate of the country is very uniform, the mean summer temperature of San Francisco, on the bay into which these rivers empty, being 60 degrees, and that of winter 51 degrees. The rainy season

commences in November and continues until April, during which period, however, but little inconvenience is occasioned. The dry season is such that crops readily mature and may be harvested, threshed, and sent to market without being placed under shelter. The soil is very productive, and, unless the rain fails in its season, yields abundantly. The grasses are numerous and nutritious. Wheat, oats, corn, and other cereals are grown quite extensively. But in many portions of the valley the most lucrative business is the cultivation of orchards and vineyards. Grapes, apples, pears, plums, and in the southern part apricots, oranges, and other tropical fruits grow in abundance. On the verdant slopes of the mountains sheep-grazing is carried on on a large scale. Although these valleys offer many inducements to settlers, land may still be obtained in some places at moderate prices.

EX-GOVERNOR THROOP, OF NEW YORK.

BUCKLIN, Mo.

Please give a sketch of the late ex-Governor Throop, of New York.

F. M. BEERS.

Answer.—Enos Thompson Throop, at one time very prominent in politics, was born at Johnstown, N. Y., Aug. 21, 1784. Choosing law as his profession, he was admitted to the bar in 1806 and began practice at Auburn. He early established an enviable reputation, and in 1814 was chosen to represent his district in Congress. He was afterward appointed by Governor Yates Circuit Judge of the Seventh District. In 1828 he was elected Lieutenant Governor, along with Governor Van Buren, and when the latter accepted a position in Jackson's Cabinet he succeeded him. In 1830 he was re-elected, but in 1832 declined a third term. He soon after removed to Michigan, where he again became prominent in political affairs. As age, however, came upon him his health failed and he returned again to his native State. He died in his 91st year at Willow Brook, N.Y., on the shore of Owasco Lake.

CLOCKS AND NOON-MARKS.

DANVERS, Ill.

How many correct noon-marks can be made during a year?

H. M. VALENTINE.

Answer.—Four correct "noon-marks" are made in a year, on the following days: Dec. 24, April 15, June 14, and Sept. 1. Owing to the inclination of the earth's axis and its unequal movement in its orbit, solar days vary in their length. The average solar day corresponds to the twenty-four hours of our clocks, which keep what is called mean time. If a clock were so constructed as to give the real solar time for all periods of the year, it would be observed that sometimes when the solar clock pointed at noon, the ordinary clock, keeping mean time, would be pointing at figures between 11:45 and 12, or at other times between 12 and 12:15. Four times each year, however, upon the days mentioned, the two clocks would coincide, and the shadow of a dial, or noon-mark, would point due south at noon by the clock.

THE FATHER OF THE HUMANE SOCIETY.

BEDFORD, Iowa.

Please give a short sketch of Henry Bergh, so long the President of the American Society for the Prevention of Cruelty to Animals.

FRANK ATKINSON.

Answer.—Henry Bergh, the philanthropist, was born in New York, in 1823. He received his education at Columbia College, where he manifested a considerable love for literature. He afterward obtained some notoriety as an author by writing a drama entitled "Love's Attractions," a poem entitled "Married Off," and several tales and sketches. In 1863 he was made Secretary of the United States Legation to Russia, and subsequently Vice Consul. Returning to this country, he founded the American Society for the Prevention of Cruelty to Animals, which was incorporated in 1866. This association has grown into considerable magnitude, having branches in most of the States and receiving the support of the best citizens. The society endeavors to prevent cruelty to all kinds of animals by securing the passage

and enforcement of laws to accomplish that object. It also takes into consideration things which pertain to the health of the people, such as purity of meat, milk, etc. As a minor illustration of its good work, a few years ago sportsmen were accustomed to shoot pigeons at shooting matches; but by an effort of the Humane Society glass balls have been substituted. Mr. Bergh continues to preside over the association.

WEATHER SIGNS.

AURORA, Ill.

Now that Vennor and the Signal Service, or "Old Probabilities," are engrossing so much of the public attention, we are in danger of forgetting the old weather proverbs. Cannot Our Curiosity Shop call to mind a few of these, and let its readers test them alongside of the prognostications of Tice, Vennor & Co.

CONSTANT READER.

Answer.—The editor of Our Curiosity Shop is neither a prophet nor the son of a prophet. The best he can do to meet this demand is to give the following quotations from a lecture on "Weather Prognostics", delivered by Mr. William Marriott, before the Meteorological Society of England:

When round the moon there is a brugh (halo),
The weather will be cold and rough.

When the sun goes pale to bed,
'Twill rain to-morrow, it is said.

When the clouds are upon the hills,
They come down by the mills.

Mackerel sky and mares' tails
Make lofty ships carry low sails.

When the wind veers against the sun,
Trust it not, for back it will run.

When the wind is in the south,
It is in the rain's mouth.

When the mist creeps up the hill,
Fisher, out and try your skill.

If larks fly high and sing long, expect fine weather.

When sea-birds fly out early and far to seaward, moderate winds and fair weather may be expected.

If rooks go far abroad, it will be fine.

Cranes soaring along and quietly in the air foreshow fair weather.

If kites fly high, fine weather is at hand.

Wild geese, wild geese, ganging out to sea,
Good weather it will be.

When owls whoop much at night, expect fair weather.

Bats or flying mice, coming out of their holes quickly after sunset, and sporting themselves in the open air, premonstrate fair and calm weather.

Chickweed expands its leaves boldly and fully when fine weather is to follow.

White mist in winter indicates frost.

When fires burn faster than usual and with a blue flame, frosty weather may be expected.

In winter, when the sound of the breakers on the shore is unusually distinct, frost is indicated.

Clear moon,

Frost soon.

In winter, when the moon's horns are sharp and well-defined, frost is expected.

If the wind is northeast three days without rain
Eight days will pass before south wind again.

If wind follow sun's course, expect fair weather.

All the above prognostics, it may be remarked, are in strict accordance with scientific observation.

FIRST MICHIGAN STATE ELECTION.

GREENVILLE, Wis.

When did the first State election occur in Michigan?

J. H. STANLEY.

Answer.—In the year 1835 Michigan adopted a State constitution and chose Stevens T. Mason, the Territorial Governor, as its first State Governor. It then demanded of Congress a recognition as a State and the rights of representation. This request Congress agreed to grant, providing the petitioning State would accept the boundary line claimed by Ohio. Not until January, 1837, would Michigan accept such terms, and then only on condition that it should receive, in lieu of the disputed strip on the south, the territory on Lake Superior now known as the Upper Peninsula of Michigan. Immediately after this the State was formally admitted. By special permission the State was allowed to cast three electoral votes in the Presidential contest of 1836-7. In the same year in which it was admitted, Mr. Mason was re-elected to the position of Governor, which office he continued to hold until 1839.

THE LONGEST THROWS, LEAPS, AND RUNS.

CAMBRIDGE, Iowa.

What is the longest throw on record with a base ball? What is the longest single standing jump? What is the fastest time ever made by man running 100 yards? What is the fastest mile ever made by a horse?

A. Aplin.

Answer.—The longest throw with a base ball for the year 1882 was 132 yards 1 foot, made by E. N. Williamson, the third baseman of the Chicago league nine. The longest standing jump with artificial aid was made by G. W. Hamilton, at Romeo, Mich., Oct. 3, 1879. With 22 pound weights he jumped 14 feet 5½ inches. The longest standing jump without artificial aid was performed by J. J. Tickle, Sept. 2, 1871, at Manchester, England, who cleared 10 feet 5 inches. The fastest run of 100 yards was made by George Seward, an American, at Hammersmith, England, Sept. 30, 1844, who accomplished the feat in 9¼ seconds. The fastest recorded time ever made by a horse for one mile was 1 minute 39¾ seconds, which was accomplished by Ten Broeck, a running horse, at Louisville, Ky., May 24, 1877. The fastest mile in heat racing was performed by Ada Glenn, in 1 minute 41¼ seconds, running, at Sheepshead Bay, L. I., Sept. 21, 1880.

BOLIVAR, THE LIBERATOR.

Orange Grove, Miss.

Give a short historical sketch or the life of General Bolivar.

Frank.

Answer.—Bolivar y Ponte, surnamed The Liberator, was a South American patriot, who in July, 1783, was born in Caracas, a town in the then Spanish province of Venezuela. His father, having obtained considerable wealth, like many of the early adventurers, sent his son to Madrid to pursue the study of law. When Venezuela in 1810 endeavored to throw off the yoke of Spanish oppression, Bolivar joined the cause of the patriots and began service under Miranda. Soon his own ability eclipsed that of his senior officer and he was given a separate command. Defeating the Spaniards in August, 1813, he entered Caracas at the head of his victorious army in triumph. He was immediately appointed dictator; but his enjoyment of that office was suddenly terminated by the reappearance of the Spaniards, who in 1814 defeated and drove him from the province. His defeat, however, did not discourage him. In 1817 he led the patriots in a battle against Morillo and again found himself a conqueror. Venezuela chose him to be her President, and in 1819 New Granada did him like

honor, the two States uniting to form Colombia. In 1823 his love for liberty and hatred of Spain caused him to lend assistance to the revolting Peruvians. The latter were successful, and as a reward for the excellent service of the Liberator, Bolivia, named in his honor, was erected into a separate State, and Bolivar was made its President for life. For a few years he remained President of both Colombia and Bolivia. He died in December, 1830.

ENGLISH SOVEREIGNS.

HUNTINGDON, Pa.

Who have been sovereigns of England since the reign of King John?

W. S. C.

Answer.—The following, beginning with John, the grantor of Magna Charta, have been sovereigns of England:

John—Sixth son of Henry II.

Henry III.—Eldest son of John.

Edward I.—Eldest son of Henry III.

Edward II.—Eldest surviving son of Edward I.

Edward III.—Eldest son of Edward II.

Richard II.—Son of the Black Prince, eldest son of Edward III.

Henry IV.—Son of John of Gaunt, fourth son of Edward III.

Henry V.—Eldest son of Henry IV.

Henry VI.—Only son of Henry V.

Edward IV.—Grandson of Richard, son of Edmund, son of Edward III.

Edward V.—Eldest son of Edward IV.

Richard III.—Younger brother of Edward IV.

Henry VII.—Son of Edmund, eldest son of Owen Tudor by Katharine, widow of Henry V.

Henry VIII.-Only surviving son of Henry VII.

Edward VI.—Son of Henry VIII. by Jane Seymour.

Mary I.—Daughter of Henry VIII. by Katherine of Arragon.

Elizabeth—Daughter of Henry VIII. by Anne Boleyn.

James I.—Son of Mary Queen of Scots, granddaughter of James IV. and Margaret, daughter of Henry VII.

Charles I.—Only surviving son of James I.

Commonwealth— { Oliver Cromwell. / Richard Cromwell.

Charles II.—Eldest son of Charles I.

James II.—Second son of Charles I.

William III. and Mary II. { Son of William Prince of Orange by Mary, daughter of Charles I. / Eldest daughter of James II.

Anne—Second daughter of James II.

George I.—Grandson of Elizabeth, daughter of James I.

George II.—Only son of George I.

George III.—Grandson of George II.

George IV.—Eldest son of George III.

William IV.—Third son of George III.

Victoria—Daughter of Edward, fourth son of George III.

WHO MADE MAXIMILIAN EMPEROR OF MEXICO?

TAYLOR, Ill.

What part did France take in placing Maximilian on the throne of Mexico?

M. M. ALDIL.

Answer.—Taking advantage of the war which occupied the attention of the United States, Napoleon III., planned the conquest of Mexico. With but little difficulty his army succeeded in this enterprise and occupied the City of Mexico in 1863. He soon discovered the barren nature of his conquest and the certainty of final failure. To rid himself of the consequences of what had proved a most costly enterprise, before he should be forced to a humiliating abandonment of the country, he tempted Maximilian, Archduke of Austria, to accent the crown of Mexico. To give eclat to the affair and the color of popular approval, he ordered an election. This was dominated by French troops and Napoleon's Mexican accomplices, and the result was an apparent popular vote to adopt an imperial form of government and invite Maximilian to accept the throne. In 1864 he was received with festivities and other marks of distinction planned by the French and their Mexican supporters. The Mexican patriots, however, still maintained an organization. When driven out of the capital President Juarez retired to San Luis Potosi, then to Monterey, and finally to Chihuahua, and with his Cabinet still maintained the form of a central, national head of the republic. The French availed of the excuse that Maximilian was in possession of the government to return to France, and leave him to his own resources. The guerrilla bands of patriots which had kept up the harassment of the imperial troops with more or less persistency from the first, gathered strength, and at last, deserted by Napoleon, attacked on all sides by the rallying militia of the republic, the unhappy Emperor undertook to escape from the country, was captured, and finally executed at Queretaro, June 19, 1867. The French were wholly responsible for placing Maximilian in Mexico and for abandoning him to his unhappy fate.

TRADES UNIONS.

JACKSONVILLE, Ill.

Please give us information as to the origin, object, and extent of trades unions.

W. A. LEWIS.

Answer.—The various trade societies are the outgrowth of the old English guilds, which originated in the beginning of the eleventh century, and had

for their prime object the relief or support of infirm guild-brothers, the burial of the dead with proper religious services, etc. In time, however, these organizations became better classified and more exclusive. One guild was confined to the merchants, another to the woolen manufacturers, another to the cutlery manufacturers, etc.: the objects, at the same time, becoming more comprehensive. In order to secure skilled workmen and prevent competition with the inexperienced, the craftsmen secured the passage of apprenticeship laws. In the case of woolen and several other trades apprentices were required to serve manufacturers seven years. Employers and employes were then united in these efforts, but, finally, as the manufacturing industries became more profitable and improved, and machinery was introduced, the rich masters withdrew from the craftguilds, and began to hire children and men who had not served a complete apprenticeship. This action on the part of the employers caused the first "trade society" to be formed, in 1796, called the Institution, which had for its object the protection of its members against the encroachments of capitalists, and to secure the passage of stricter apprenticeship laws. Since that time the trades unions have increased in number and membership, until they include nearly all the craftsmen of England, and from protective associations they have grown into societies for the general improvement of the laboring classes. To its efforts mainly are due the passage of the eight-hour law of Great Britain and the statute granting the Saturday half-holiday. In the United States similar organizations are found, to which, especially in large cities, nearly all the workmen belong.

THE RED SEA.

CHICAGO, Ill.

Is it generally believed by Bible scholars that the Red Sea was so called because of the destruction of Pharaoh and the Egyptian army?

ANN HALLIDAY.

Answer.—The drowning of Pharaoh and his host in the Red Sea had nothing to do with its name. It takes this from a peculiar reddish color remarked at certain seasons of the year in parts of this sea, due to marine

plants, or to reddish animalculæ, called by sailors "whale feed," which float on it like a scum; or to the reefs of red coral which abound in many parts of it; or, possibly, to the fact that its upper coast was one of the boundaries of Edom, "the red." No Biblical scholar of any repute has ever asserted that the sea took its name from the overthrow of Pharaoh.

DESCRIPTION OF A CREAMERY.

FORT DODGE, Iowa.

> The farmers of this section of the country need to know what a good creamery is. Tell us what the inside of a really good creamery looks like.
>
> MANY READERS.

Answer.—A Chicago inquirer says: "Oblige butter and cheese consumers with a description of a first-class creamery. Some of us have a very vague notion of such an establishment.—E. D. Smith." Another inquiry comes from Neligh, Neb. So some care has been taken to obtain a description of a thoroughly well-constructed factory of this kind. This is the more important as the dairy business of the West is growing with wonderful rapidity, and nothing has done more to develop this industry than the recent introduction of creameries. The term creamery was formerly applied to an establishment fitted up expressly for the purpose of manufacturing butter, but now the name is given to factories where both butter and cheese are made. Milk is brought in spring wagons from dairy-farms for a distance of six miles or less, and cream is gathered anywhere within a radius of fifteen miles to be manufactured into butter and cheese. This product thus handled in larger quantities, in a scientific manner, with effective labor-saving machinery and proper surroundings, makes it possible to obtain the best results, and such product is always marketable at prices much higher than dairy butter. The factory of the Aurora Creamery Company, built at Aurora, Ill., about a year ago is generally regarded as a model establishment, and will furnish an example for this description. To operate a creamery successfully two things are absolutely necessary, viz., a good spring of living water of low temperature, say 50 to 54 deg., and good drainage; without these features there is no prospect of permanent success in the undertaking. The factory

named has a spring located about 200 feet off which discharges, both winter and summer, 750 gallons of pure water per hour, temperature 52 deg., with 5 feet 9 inches fall, while drainage is supplied by a 2-foot square stone sewer which empties into the river, through which a slough is drained, and into which there is a 5-foot fall from the factory. The main building is of brick with a 12-inch wall: size, 32 × 70, 20 feet high; right wing, 20 × 24; left wing, 18 × 24, and rear extension, 18 × 26. The room in which the cheese is manufactured is 30 × 40. It contains a fine upright 9-horse-power engine, a Wir's self-agitating rotary cheese vat with a capacity for 12,000 pounds of milk and a gang cheese press. The butter room, 30 × 30 feet, contains one churn with a capacity of 400 gallons, and one with a capacity of 150 gallons, a power butter worker, sink with steam pipes to scald, and revolving brush for washing cans, 3 cream vats 300 gallons each, a receiving vat into which the milk is strained, and from which it is drawn into deep pails, or sets, which are placed in three cemented water vats of capacity sufficient to cool 20,000 pounds of milk daily. The left wing of the factory contains a 16-horse power boiler, which furnishes steam to run the machinery and heat the building; a seventy-barrel water tank, which is placed over the boiler; a Davidson steam pump and coal bin which will store fifty tons of coal. An improvement which, it is claimed, is found in no other factory, is an elevated "whey vat" placed over the boiler-room, into which the whey is raised by a rotary pump, and from which the farmers draw their supply of whey to be carried into the country. When all that is wanted has been drawn out a gate is opened, and the balance is run into the river, after which the tank is scalded out and kept sweet and clean. This is a vast improvement over the pestilence breeding arrangement which is sunk in the ground, and is located near the butter and cheese rooms of most other factories. The right wing of the factory contains a driveway, a receiving-room, weighing platform, and stairway to office. The extension holds 150 tons of ice, and contains a refrigerator with a capacity of 30,000 pounds of butter. In the second story is a neat office, store-rooms, and curing room, to which the cheese are raised by an elevator. The lower floors are made of 2 × 6 joists, dressed and matched and imbedded in cement; under which is a four-inch coating of grout, so that there is no possible chance for the milk to leak through the floor and produce the sickening stench which is so common in many factories. Special attention has been given to ventilation in every part of the building and the whole establishment has the

appearance in neatness of a tidy farmhouse kitchen. The sum of $10,000 was expended in real estate, buildings, and fixtures of this factory, but a good creamery with a comfortable outfit of medium capacity could be put up for much less money. The machinery for churning and working the butter is as simple as it is ingenious. The churn is a great square chest revolving on an axis running through its longest diameter; the butter-workers are fluted wooden cones running around a circular disk inclined at an angle to the horizon, so that the buttermilk runs off as fast as it is expressed. The apparatus for stirring the cheese curd and pressing the cheese, and a score of other nicely contrived instruments, operate with the uniformity and precision of clock work.

SPEED OF RAILWAY TRAINS.

WAUKEGAN, Ill.

How does the speed of railroad trains in this country compare with that of trains in Europe?

C. D. ADAMS.

Answer.—The fastest recorded railroad speed in the United States is given in the New York Clipper Almanac, as follows: The train which left West Philadelphia for Jersey City over the Pennsylvania Railroad at 7:35 a. m., Sept. 4, 1879 (Edward Osborn, engineer), made 1 mile in 50¼ seconds; 3 miles in 2 m. 36¼ sec., and 5 miles in 4 m. 50 sec. A train on the Lake Shore and Michigan Southern Railroad made the run from Hamburg to Buffalo, N. Y., 10 miles, in 8 minutes. The locomotive Hamilton Davis and six cars, on the New York Central Railroad in 1855, made 14 miles in 11 minutes. A new Fontaine engine and two coaches, carrying W. H. Vanderbilt and party, ran from Amherstburg to St. Thomas, Can., over the Canada Southern Railroad, 111 miles, in 98 minutes—no stop. Probably the fastest run ever made for any considerable distance in England was that of the special train carrying the Duke of Wellington from Paddington to Slough, 18 miles, in 15 minutes. But these are exceptional runs; what is of more importance is to compare regular time-table speed. The London *Engineer* says, commenting on a series of articles on this subject which have appeared in the German journal, *Die Verkehrszeitung*, in the *American*

Railroad Gazette, and in other papers, "it appears that railroad speeds in Great Britain, on the Continent, and in the United States are much slower than most people suppose. If we take for instance, the run from London to Edinburgh, a distance of 397 miles via York, this is made in 9 hours by great Northern trains, the average speed being 44.1 miles per hour. From Euston the distance is 401 miles, and London and Northwestern trains make the run in 10 hours, or 40.1 miles an hour. By the Midland Railway the distance is 404 miles, and the time 10 h. 5 min., or very nearly the same speed. Some of the fastest trains in the world are those run between Leeds and London. From King's Cross the distance by the Great Northern is 186½ miles. From St. Pancras by the Midland is 196 miles. The fastest train on the Great Northern makes the run in 4 h. 5 min., or an average speed of 45.4 miles an hour. The Midland trains traverse the distance in 4 h. 30 min., giving an average velocity of 43.5 miles an hour. The fastest train in the world is the Flying Dutchman, broad gauge, which makes the run to Swindon at 53½ miles an hour. The Great Northern trains run from London to York, 188 miles, at 48 miles an hour, and at least one train runs to Peterborough at 51 miles an hour. The run from London to Grantham has been made repeatedly at 51 miles an hour. On the United States railways the quickest run appears to be that made between Jersey City and Philadelphia, 89 miles, made at the rate of 47⅔ miles an hour. There is not in the world a train timed to run 60 miles an hour, although it is, of course, certain that that velocity is often exceeded. If a speed of 60 miles an hour could be maintained continually between London and Edinburgh, the journey would occupy only 6 hours and 36 minutes; and allowing for three stops of 10 minutes each on the route, the time would be under 7¼ hours, instead of 10 hours. So far as the machinery of a railway is concerned—by which we mean the road, the rolling stock, and the signals—there is nothing to prevent an average speed of 60 miles an hour being maintained. That it is not attained is certain."

THE UNITED STATES CIVIL LIST.

OSKALOOSA, Iowa.

What officers are included under the civil service?

L. A. H.

Answer.—The civil officers of the United States are those employed by the several departments. In 1876, in reply to an inquiry made by order of Congress, the following official statement was made: Department of State, 430; Treasury, 12,482; War Department, 1,489; Navy Department, 131; Postoffice Department, 44,897; Interior, 2,475; Department of Justice, 528. Total number of civil officers, 62,427.

GREAT FIRES.

JOLIET, Ill.

Which was the greatest fire, that of London, Moscow, or Chicago?

AN INQUIRER.

Answer.—The great fire of London, which occurred in 1666, destroyed about two-thirds of the city; but there is no estimate of the value of the property. The burning of Moscow, in September, 1812, destroyed property which has been valued at $150,000,000. The great Chicago fire of 1871 consumed $192,000,000 worth of property. The area burnt over in the Chicago fire was greater than that covered by either the London or Moscow fire.

PRESIDENT JACKSON'S DOUBLE MARRIAGE.

OWENSVILLE, Ark.

Who was the first husband of Andrew Jackson's wife, and what was the cause of the separation?

SUBSCRIBER.

Answer.—Mrs. Jackson was formerly the wife of Mr. Lewis Robards, of Kentucky. While Mr. Robards and his wife were residing at the home of Mrs. Donelson, the mother of Mrs. Robards, Andrew Jackson became a boarder, and consequently quite intimate with the family. In time, Mr. Robards became intensely jealous of his wife, which culminated in his charging her with adultery and suing for divorce. This charge, however, was neither proven nor generally believed. Through the influence of Jackson,

the Legislature in 1791 passed an act legalizing the separation of Mr. and Mrs. Robards, but the legal divorce from the courts was not obtained until 1793. After the act of the Legislature, Jackson married Mrs. Robards, supposing that she was lawfully divorced; but after the decision of the court, in order to remove everything questionable, he was remarried.

THE BUNKER HILL FLAG.

CHICAGO, Ill.

What flag, if any, did the provincials use in the battle of Bunker Hill, June 17, 1775? What was the first flag used by the revolutionary army?

H. J. H.

Answer.—Reference to that standard work, "The Origin and Progress of the Flag of the United States of America," by George Henry Preble, U. S. N., and other sources of information, shows that it is uncertain what flag, if any, was displayed by the Americans at Bunker Hill, in the famous fight of June 17, 1775. The flag raised on Prospect Hill by General Putnam, a month later, July 18, 1775, was red, with the motto, *Qui Transtulit Sustinet* , (who transplanted still sustains) on one side, and "An Appeal to Heaven" on the other. This latter motto was emblazoned on the white flag with a green pine tree carried by the privateers commissioned by Massachusetts, soon after this. The first cruisers commissioned by Washington also bore "the pine tree flag." Before the battle of Bunker Hill, indeed, immediately after the battle of Lexington, on the 19th of the preceding April, the provincial troops of Connecticut carried a standard bearing the arms of that colony and the Latin motto above cited. As General Putnam and his Connecticut troops took a prominent part in the battle of Bunker Hill, it is presumable that this flag was displayed in that action, and by parity of reasoning it may be inferred that the colonial flags of Massachusetts and New Hampshire were carried into the action by the militia of those colonies. Precisely what these were it is almost or quite impossible to determine with certainty. Indeed, there seem to have been several different flags. The "union-flags" so frequently mentioned in the accounts left us of the revolutionary movements of 1774 and the early part of 1775 were, in most instances, the English red ensign,

with such mottoes as “Liberty and Union,” “Liberty and Property,” or simply “Liberty.” Peculiar devices were employed by the patriots of different neighborhoods. Not until Jan. 2, 1776, was the first common standard raised. This was the “Great Union,” as it was christened, adopted by General Washington, and first displayed at his headquarters in Cambridge, Mass., on the date above given. It consisted of thirteen stripes, alternately white and red, with the crosses of St. George and St. Andrew in the union where the stars now glitter.

ORIGIN OF PORTERHOUSE STEAK.

CHICAGO, Ill.

Can Our Curiosity Shop tell us why steaks cut from the small end of the sirloin are called porterhouse steaks?

EPICURE.

Answer.—Colonel Thomas F. De Voe, a New York butcher, author of “The Market Book,” “The Market Assistant,” and other works of similar nature, gives the following account of this now popular cut of beef: Martin Morrison kept a favorite porterhouse at No. 327 Pearl street, New York, near the old Walton House. It was a popular resort with many of the New York pilots, because here they were always sure of a pot of ale or porter and “a hot bite,” including one or two substantial dishes. On one occasion, in 1814, Morrison had enjoyed an unusual number of calls for steaks, and when an old pilot, who dropped in at a late hour, called for something substantial to eat, he was forced to cut from a sirloin roasting piece which he had got for the next day’s family dinner. The old pilot relished his steak amazingly and called for another. This disposed of, “he squared himself in front of his host and vociferated, ‘Look ye here, messmate, arter this I want my steaks off the roasting piece! Do you hear that? So mind your weather eye, old boy!’” The old pilot’s companions soon learned to appreciate these cuts, and it was not long before they were all insisting on having them. Accordingly, Morrison’s butcher, Thomas Gibbons, of the Fly Market, asked him why he had ceased to order the large sirloin steaks. Morrison explained that he had found that cuts from the small end of the sirloin of the beef suited his single customers best, both in size and quality, and directed

that thereafter, instead of sending him the sirloin roasts uncut, he have them cut into chops or steaks, as he should direct. Gibbons' daily order, "Cut steaks for the porterhouse," soon gave these the name of "porterhouse steaks," by which they became known all through the Fly Market, particularly as this excellent cut rapidly became popular in all the public houses of the city. The name is now familiar to housekeepers on both sides of the Atlantic, at least wherever the English language is spoken.

SOLDIERS' HOMESTEADS.

CEDAR FALLS, Iowa.

> Is a soldier who served more than three years in the army during the late rebellion, and who almost immediately afterwards took up a homestead claim of 120 acres of land, whereon he is now living, entitled to enter forty acres more in another place?
>
> A. N. WILSON.

Answer.—The following letter from Commissioner McFarland, in answer to a similar inquiry from Mr. A. H. Field, of Indian River, Mich., answers this question officially. Observe that the answer turns upon the important fact that Mr. Field entered his homestead of only eighty acres after the passage of the act approved June 22, 1874, hence the Commissioner holds that he is not entitled to the benefits of the act, whereas if he had made final proof of his claim before June 22, 1874, he would be entitled to an additional eighty acres.

> "WASHINGTON, D. C., Feb. 14, 1883.—A. H. Field, Esq., Indian River, Mich.—Sir: I am in receipt of your letter of the 31st ult., in which you state that you served four years in the army during the late civil war, and that in 1878 you made a homestead entry of eighty acres—all that you could get in that locality—and have lived on the same ever since, and made final proof. You ask if you are not entitled to an additional entry of eighty acres. In reply, I have to state that *you are not*. The homestead act of June 8, 1872, provides that any soldier who served for ninety days in the army during the war of the

rebellion, and was honorably discharged, who may have *heretofore* entered under the homestead laws a less quantity than 160 acres, shall be permitted to enter a sufficient quantity of land, which, added to that embraced in the original entry, shall not exceed 160 acres. Such provision was carried into the Revised Statutes of the United States (Sec. 2306), which statutes were approved June 22, 1874, and since that date if such a soldier elects to enter a less amount of land than 160 acres, he must abide by his election. Very respectfully,

"A. C. McFarland, Commissioner."

Mr. Field writes to The Inter Ocean, inclosing this letter from the Commissioner of the General Land Office, and complaining that this law inflicts a hardship on him and other soldiers in the late war, who, like himself, deferred their entries until after the passage of the above act. He says: "It seems that it is unfortunate for me, as an old soldier, that I did not locate my land previous to June, 1874. I ought to be entitled to eighty acres of land more as well as any other class of soldiers." Whether this complaint is or is not well founded, the fact remains that the law is as above stated.

FINDING ONE'S POSITION AT SEA.

Plymouth, Wis.

By what method do sailors at sea determine their exact position?

Dobs.

Answer.—The mariner determines his latitude by observing the meridian altitude of a celestial star whose declination or distance from the equator is known. In the northern hemisphere for an approximate answer the pole star is generally taken, the altitude of which is nearly the latitude of the place. If an observer were standing upon the equator and looking to the north he would see the pole star on the horizon, with no altitude. If he should move three degrees north the pole star would have an altitude corresponding. At Chicago it is above the horizon about 41 degrees 50 minutes, corresponding to the latitude of this city. Owing to the apparent revolution of the pole star

about a central axis, which is the true pole of the heavens, the accurate latitude can only be obtained by observing its least and greatest altitude and taking one-half their sum. The longitude of any place computed from Greenwich, Washington, or other prime meridian, is easily determined by observing the Greenwich or Washington time when the sun passes the zenith meridian. In other words, knowing the difference in time between Greenwich and the place of observation, the longitude of the place may be readily computed. A difference of time amounting to one hour represents 15 degrees of longitude east or west, as the case may be. The difference in time between Chicago and Washington is forty-three minutes, which makes the longitude of Chicago 10 degrees 45 minutes, reckoning from the legal prime meridian of the United States, which is that of Washington. Every ship carries a marine chronometer, which is a time-keeper of the most careful construction, whose accuracy has been tested with the utmost precision—which is plainly a matter of the utmost importance to a vessel when it is remembered that an error of four seconds of time represents about one and one-tenth statute miles, enough to wreck a ship on a lee shore when the captain, following the chronometer, supposed himself at a safe distance from the shoal or shore.

YEARS FOR PRESIDENTIAL ELECTION.

STREATOR, Ill.

Is there any easy rule for finding the years on which Presidential elections have been held or are to be held?

A. C.

Answer.—Every year divisible by four, without exception, is the year for the election of President and Vice President of the United States.

U. S. BONDED DEBT—WHEN PAYABLE.

BARTON, Wis.

When and in what sums does the bonded debt of the United States fall due?

W. MUNGER.

Answer.—Several of the later issues of bonds are payable at the pleasure of the government, but the following cannot be redeemed except by purchase in the market until specified dates. Four per cents payable July 1, 1907, $738,829,600; 4½ per cents payable Sept. 1, 1891, $250,000,000; Pacific Railway 6's payable Sept. 1, 1895, $3,002,000; Pacific Railway 6's payable Sept. 1, 1896, $8,000,000; Pacific Railway 6's payable Sept 1, 1897, $9,712,000; Pacific Railway 6's payable Sept. 1, 1898, $29,383,000; Pacific Railway 6's payable Sept. 1, 1899, $14,526,512.

THE SIGNS OF THE ZODIAC.

GENEVA, N. Y.

Who first devised the signs of the zodiac, and for what purpose?

CHAS. W. SMITH.

Answer.—Representations of the zodiacal signs are found among the ancient writings of the Hindoos, Persians, and Chinese, and among the carvings on the ruins of Egyptian temples. There is such a degree of similarity in the characters that a common origin must be supposed. The signs of the zodiac embrace the twelve important constellations, which, owing to the motions of the earth, appear to revolve through the heavens within a belt extending nine degrees on each side of the sun's apparent annual path, and within or near which all the planets revolve. Since the sun appears successively in each of these twelve constellations during the year, the zodiac was divided into twelve equal parts, corresponding to the months. These signs and their subdivisions were used in measuring time and as the basis of astronomical and astrological calculations and predictions. Astronomers now, for convenience, use the same signs, giving to each constellation an extent of thirty degrees, although the constellations vary in size. These signs are Aries representing the ram; Taurus, the bull; Gemini, the twins; Cancer, the crab; Leo, the lion; Virgo, the virgin; Libra, the balance; Scorpio, the scorpion; Sagittarius, the archer; Capricornus, the goat; Aquarius, the water-bearer; and Pisces, the fishes. On the 20th of March the sun enters Aries, and at midnight Virgo, the opposite

constellation, will be overhead. During the month of April the sun will pass into Taurus, and at midnight Libra will be overhead. The early astronomers were astrologers, and claimed to be able to predict the future careers of individuals and nations by observing the positions and movements of the planets, and condition of the weather, at the most important periods of men's lives. A man born when the sun was in the constellation Scorpio was believed to be naturally bent toward excessive indulgence of the animal passions; one born when the sun was in Aries was destined to be a great scholar or ruler; one born when the sun was in Pisces was predestined to grovel or be a servant, and so on. All this is regarded now as exploded superstition, except by fortune-tellers and their dupes.

AREAS OF ENGLAND, SCOTLAND, AND IRELAND.

HOUGHTON, Mich.

What are the areas of England, Ireland, Scotland, and Wales? Also, what is the area of the county of Cornwall?

W. J. UREN.

Answer.—England has an area of 50,914 square miles, or 32,584,735 acres; Ireland, 32,524 square miles, or 20,815,460 acres; Scotland, 30,462 square miles, or 19,496,132 acres; Wales, 7,397 square miles, or 4,734,486 acres. The county of Cornwall contains 1,390 square miles, or an acreage of 869,898.

TO SELECT HOUDAN FOWLS.

CLINTON, Iowa.

By what marks can I tell Houdan fowls I am about to purchase a pair, if they are what they are represented to be—of pure breed.

J. ALLEN.

Answer.—Houdans stand and walk erectly; the males weigh from eight to nine pounds; the hens from five to seven pounds. They are lumpy in shape, are evenly speckled white and brown, with large comb, crest, and beard.

Refuse any that have not pink-white feet, black and white plumage, and good crests.

THE FIRST CABLE MESSAGE.

FAIRPOINT, Minn.

What was the first message sent on the Atlantic cable?

FRANK PALMER.

Answer.—The first message on the Atlantic cable of 1858, which soon proved a failure, was a congratulatory dispatch from Queen Victoria to President Buchanan. The first message on the successful cable completed in 1866 was the announcement of the treaty of peace between Prussia and Austria.

PRINCE NAPOLEON.

AURORA, Ill.

Will Our Curiosity Shop tell us what relation the Prince Jerome Bonaparte, lately arrested in France for issuing an insurrectionary proclamation, bears to Napoleon I. and oblige many readers?

T.

Answer.—Jerome Bonaparte, the father of this Prince Jerome, was the youngest brother of Napoleon I. In 1803, when he was only 18 years of age, he married Miss Elizabeth Patterson, of Baltimore. This act was displeasing to Napoleon, who passed a decree annulling the marriage on the ground that his brother was not of age and the bans were not published in France. Soon after the return of Jerome to his native country he was made King of Westphalia, and at the suggestion of Napoleon, married Catherine, daughter of the King of Wurtemburg. Of this marriage three children were born—Jerome Napoleon, in 1814, who died in 1847; Napoleon Joseph Charles Paul, the subject of this sketch, in 1822, who afterward took his elder brother's name, and the Princess Mathilde. The Prince first came into prominence by his denunciation of the government of Louis Philippe and

his sympathy with the revolutionists, which caused his banishment in 1845. But, in 1848, he returned and participated in the revolution. In 1852 he took his seat in the Senate and Council of State, receiving the title of Prince and being declared by decree of the Senate the heir of his cousin, Napoleon III., in case the latter should die without issue. He took part in the Crimean war, commanding a reserve force at Alma and at Inkerman. Before the close of the war he was recalled, ostensibly on account of his health, and soon entered upon the duties of several important civil offices. In 1859 he was married to Princess Clothilde, daughter of the late Victor Emanuel, King of Italy, by whom he has three children. In 1861 he visited the United States, and, with his suite and the French Minister, accompanied the Army of the Potomac, pushing as far South as Richmond. After his return he sympathized to a certain extent with the democratic feeling arising in France. For this seeming absurdity he was given the name Plon-Plon. In 1876 he was returned to the French Assembly from Corsica, but in the year following he was rejected. On the death of the Prince Imperial, as the son of Napoleon III. is called, in Zululand, in 1879, Jerome became the head of the Bonaparte family. He was not popular with a majority of the leading Bonapartists, many of whom refused to acknowledge him as their chief, and urged the proclamation of the elder of Jerome's two sons as the heir of Napoleon III. Of late, however, there has been a reconciliation between the ex-Empress Eugenie and Jerome, and the Bonapartists generally seem disposed to acquiesce; so that, in case of the Bonaparte's coming to the front once more, his title of Prince may become something more than an empty sound.

THE CORN CROP ESTIMATES FOR 1882.

DUNLAP, Iowa.

How much corn was produced in 1882? Are there any reliable statistics on the subject?

W. H. DEDRICK.

Answer.—According to the report of the Department of Agriculture the corn crop of 1882 amounted to 1,624,917,800 bushels. These figures have been questioned, but they are based on the estimates of about 1,500

agricultural observers and reporters employed by the bureau, and they are generally conceded to be a fair estimate. Of course, all our crop statistics are only estimates.

CEDAR COUNTY, NEBRASKA.

MELON, Iowa.

Please give a short description of Cedar County Nebraska.

SUBSCRIBER.

Answer.—This county lies on the northern boundary of the State, being washed by the Missouri River and drained by the several branches of the Bow and Beaver Creeks. In many portions the land is very rich and yields abundantly wheat, corn, and other cereals. In 1879 the corn crop of Cedar County amounted to 2,826,259 bushels, or 40 bushels per acre, which was the largest yield of any county in the State. Orchards of choice fruit trees have been set out and thrive well. The climate is like that of Southern Dakota and Northwestern Iowa, very warm in summer and cold in winter, which latter, from the dryness of the climate, is rendered more endurable than a higher temperature in some of the more Eastern States. The population in 1880 was 2,899. St. Helena, the county seat, is a thriving little town of 300 inhabitants.

THE SITE OF EDEN.

WESTFIELD, Wis.

In Our Curiosity Shop of Jan. 11, C. A. Sharp asks for the location of the Garden of Eden. The Bible tells us that "a river went out of Eden to water the garden, and from thence it was parted and became into four heads." It then proceeds to give them in the order of distance above the mouth of the Euphrates. But one of these rivers is now known by its original name, and that is the Euphrates. Let us, therefore, go down that and see if we can find the other three tributary to it that will agree with the narrative. The first is a large stream from the north. We at once recognize it as the Hiddekel. This is the third river, and its head is far to the north, as is also that of the Euphrates. The text says, "it goeth toward the east of Assyria." The

marginal reading, I think, will be found to explain this. It says "it goeth east to Assyria," and the great Assyrian Empire was upon it. As we go down these united rivers we find a considerable stream from the northeast, the head of which is in the mountains toward the Caspian Sea. If this is the second river, the Gihon, the text says it "compasseth the whole land of Ethiopia." This expression has doubtless led to much confusion, as the mind has been turned to Ethiopia, in Africa, and which seemed irreconcilable with the text. But turn to the passage and we find the marginal reading to be Cush, and Cush, or Cutha, was a country east of the Hiddekel, through which this stream flows. We turn again to the narrative and it says the first river is the Pison, and that it compasseth the land of Havilah, where there is gold and precious stones. After leaving the mouth of the second river, the Gihon, we find a stream having its head in the mountains east of the Persian Gulf, and also a place called Havilah. The country abounds in precious stones and valuable minerals, and this, with the other three rivers, seems to fill the conditions of the text. We will now hastily review the above to see more clearly its coincidence with the account as given by Moses 2,500 years afterward, in the second chapter of Genesis. A river went out of Eden to water the garden, and from thence it was parted into four heads. The name of the first is Pison, etc.; this we find in the stream coming from Persia, which fulfills its conditions. The second is the Gihon; it too coming from the land of Cush agrees with the text. The third, the Hiddekel, all admit to be the modern Tigris and its connections with Assyria agree well with the record. The fourth is the Euphrates, which flows as of old. But was there a place called Eden from which these streams flowed? Turn to Isa. xxxvii., 12, in the blasphemous letter sent to King Hezekiah by the commander of the Assyrian army, and among the nations he has destroyed is Eden, which from its connections with the other nations is supposed to have been near the junction of the third and fourth rivers. And in the list of nations trading with Tyre we find Eden connected with the nations in the same vicinity. See Ezekiel xxiii., 23. Here then, at no great distance above the Persian Gulf, near 30 degrees north latitude, in a mild climate on a noble river, we may look for the home of the progenitors of our race.

E. H. FISHER.

OVER 2,700 COUNTIES.

TOPEKA, Kan.

I have just read a statement in a newspaper that there are 2,400 counties in the United States, which is doubted. We therefore ask THE INTER OCEAN to give us the facts.

R. E. HINCKLEY.

Answer.—This is an understatement, since in 1880, according to the census, there were 2,671 counties in the United States, including the fifty-nine in Louisiana, locally called parishes. Here is the full list of States and Territories:

States.	No. of Counties
Alabama	66
Arkansas	75
California	53
Colorado	32
Connecticut	8
Delaware	3
Florida	45
Georgia	137
Illinois	102
Indiana	92
Iowa	99
Kansas	113
Kentucky	117
Louisiana	59
Maine	16
Maryland	24
Massachusetts	14
Michigan	82
Minnesota	86
Mississippi	75
Missouri	117
Nebraska	80

Nevada	17
New Hampshire	10
New Jersey	21
New York	60
North Carolina	94
Ohio	88
Oregon	26
Pennsylvania	67
Rhode Island	5
South Carolina	33
Tennessee	94
Texas	232
Vermont	14
Virginia	99
West Virginia	54
Wisconsin	63
	2,472
Territories.	
Arizona	7
Dakota	94
Idaho	13
Montana	11
New Mexico	14
Utah	27
Washington	25
Wyoming	7
Dis. of Columbia	1
Total	2,671

There have been a number of new counties organized since the census year, particularly in Dakota, Nebraska, Kansas, Texas, and other States and Territories where the settlement of the country is proceeding most rapidly. There are now about 2,730 counties in the United States.

CARDINAL WOLSEY.

Colfax, Ind.

Please give a short biography of Cardinal Wolsey.

SAMUEL SMITH.

Answer.—Thomas Wolsey, the wily, skillful statesman and ambitious Cardinal, whose life was so intimately associated with that of the profligate king, Henry VIII., studied theology at Oxford, and in 1500, at the age of 29, took holy orders and became the rector at Lymington. He was introduced into the royal court of Henry VII. as chaplain, in which office he obtained the confidence of the king, and was often consulted in important state affairs. His successful diplomacy at the court of the Emperor Maximilian secured for him, as a reward, the deanery of Lincoln. When Henry VIII. ascended the throne he employed Wolsey as his almoner. With the talents of a skillful diplomat, the ambitious priest obtained an influence over this monarch even greater than he had previously held over his royal father. In 1514 he was appointed Archbishop of York, and in the following year became Lord Chancellor of England. The Pope was not unmindful of his able supporter, who in the same year that he became Chancellor was clothed in the resplendent robes of a cardinal. Four years after he became legate. In the height of his power he was the virtual sovereign of the kingdom, and in addition he exercised throughout England and its dependencies, and to some extent beyond these boundaries, nearly all the prerogatives of the sovereign pontiff. His income was scarcely surpassed by that of the king himself. Princes and even monarchs were among the suppliants for his favor and influential offices. He aspired to sit on the papal throne, and twice it seemed as if he would realize this aspiration, but he was defeated through the intrigues and power of Charles V., whose elevation to the imperial throne, left vacant by the death of the Emperor Maximilian, he had opposed in behalf of Henry VIII. His almost regal power continued until Henry desired to put away his wife, Catharine, aunt of Charles V., when Wolsey's dilatoriness in securing the divorce exasperated the king, and upon his refusing to sanction Henry's marriage with Anne Boleyn, he was soon dismissed in disgrace. He was stripped of all his honors and estates, but was suffered to retain his episcopal see of Winchester until the following year, 1530, when a conspiracy against the king's life having been discovered,

Wolsey was arrested us an abettor. He was on his way to London to undergo trial on a charge of treason, when he fell ill and died Nov. 29, 1530, at the Monastery of Leicester. Among his last words were the following addressed to the Lord Lieutenant of the Tower: "Master Kyngston, if I had served my God as diligently as I have done the king, He would not have given me over in my gray hairs." As paraphrased by Shakespeare, these last words of the fallen Cardinal are now immortal.

ALASKA.

ROCK ISLAND, Ill.

How does Alaska compare in size with New York State or Illinois; and what are its principal natural characteristics?

A. N. BROWN.

Answer.—Alaska, according to the report of Ivan Petroff, special agent of the census of 1880, contains 531,400 square miles. This is as large as all New England, together with New York, Pennsylvania, New Jersey, Delaware, and the following seven grand States west of the Alleghanies: Ohio, Indiana, Illinois, Michigan, Wisconsin, Kentucky, and Tennessee. It is a vast region, 2,200 miles in length from east to west (measuring to the farthest of the Aleutian Islands), and 1,400 miles broad. It has a remarkable coast line of 25,000 miles in extent, which is about two and a half times as much as the sea coast of all the rest of the United States. The islands of Alaska alone, according to the estimate quoted by Dr. Jackson, comprise an area of over 31,000 miles, or twice as much as the total area of Maine. The highest mountains in the United States are in Alaska: Mount Fairweather, 15,500; Mount Crillon, 15,900: Mount Cook, 16,000, and Mount St. Elias, 19,500. It is remarkable for the number and stupendous proportions of its glaciers. Says Dr. Jackson: "From Bute Inlet to Unimak Pass nearly every gulch has its glacier, some of which are vastly greater and grander than any glacier in the Alps." Hot and mineral springs abound. The Yukon River is one of the largest in the United States, being for the first 1,000 miles from one to five miles wide with five mouths, forming a delta seventy miles across. According to Mr. Robert Campbell, of the Hudson's Bay Fur

Company, including its chief tributary, the Pelly, it is navigable at certain seasons for nearly 3,000 miles.

Nearly all the sealskins used in the markets of the world come from two little islands belonging to Alaska. The skins of the sea otter are also very valuable, and there are many choice land fur-bearing animals. The waters are wonderfully rich in fish. Besides cod, "Alaska can supply the world," says Dr. Jackson, "with salmon, herring, and halibut of the best quality." It is also "the great reserve lumber region of the United States." There are "thousands of square miles of yellow cedar, white spruce, hemlock, and balsam fir that densely cover the southeastern section of Alaska." Gold and silver mines of considerable importance have been opened, and there are indications that the Territory is rich not only in the precious metals, but in other minerals, especially in iron, copper, and coal. In the interior the climate along the Yukon is not unlike that of Dakota. At Fort Yukon the thermometer often rises above 100 degrees in summer, and indicates from 50 degrees to 70 degrees below zero in winter. Along the immense southern coast and islands the climate is moist and warm. At Sitka, according to records kept for forty-five years, the mean spring temperature is 41.2 degrees; summer, 54.6 degrees; autumn, 44.9 degrees; winter, 32.5 degrees; for the whole year, 43.3 degrees. "The surprising fact is brought to light," adds Dr. Jackson, who takes the above figures from the Alaska Coast Pilot, "that the winter climate of Southern Alaska for forty-five years past has been the average winter climate of Kentucky and West Virginia, and the average summer climate of Minnesota." The mild climate of this region is due to the warm Japan current of the Pacific, the Kuro-Siwo. Generally of Alaska, Mr. William H. Dale, of the Smithsonian Institution, says: "I come back convinced, from personal inspection, that Alaska is a far better country than much of Great Britain and Norway, and even part of Prussia." The total population in 1880 is given at 33,426, of whom 430 were white, 1,756 Creole or mixed races, and the rest Indians—Innuits, 17,617; Aleuts, 2,145; Thlinkets, 6,763; Hyda, 788, distributed as follows: The whites and creoles are nearly all in Southeastern Alaska, the Aleutian Islands, and Kadiak, which is the division including the south coast of the Alaska Peninsula down to Zakharof Bay, with the adjacent islands, the Kadiah group, the coast and islands of Cook's Inlet, the Kenai Peninsula, the coast of Prince William's Sound, and valleys of rivers running into the waters of these coasts. Since the census was taken the white population has been greatly

increased by the influx of gold miners and speculators. This Territory is still without a regularly constituted civil government. The laws of the United States "relating to customs, lumber, and navigation" are extended over it, and the Collector and Deputy Collectors have authority to arrest persons violating these laws and send them to Oregon or California to be tried in United States courts. Otherwise the government is mainly a provisional one, organized by the people and enforced by general consent. It is high time that this state of things was ended.

THE AGE OF BENEDICT ARNOLD.

OGDENSBURG, N. Y.

What was the true age of Benedict Arnold? No doubt you are aware that authors do not agree as to the time of the birth of General Arnold. Will you please give us light?

R. W. J.

Answer.—It is true that authors differ as to the age of Benedict Arnold. Appleton's Cyclopedia says he was born Jan. 3, 1740. Lossing's Cyclopedia of History gives the time as Jan. 3, 1741, and other authorities do not agree. We prefer to adopt the facts given by the Hon. Isaac N. Arnold, of this city, who has just written and published what there is good reason to believe is the most carefully prepared and impartial history of the American arch traitor of Revolutionary times that has ever appeared. This historian fixes Arnold's birth on Jan. 14, 1741, and his death on June 14, 1801, in London.

METROPOLITAN POLICE.

WARSAW, Ind.

In what respect do metropolitan police differ from city police?

A. B.

Answer.—Metropolitan police are appointed and supported by the State or central government, while city police receive their appointments from the city magistrates. The city of London is guarded by 11,667 metropolitan policemen and 842 city policemen. At one time the city of New York was

protected by metropolitan police, but for various reasons, one of which was because it restricted the free exercise of the spoils system so common with city governments, the act authorizing the appointment of such police was repealed.

WAS CHRIST BORN IN B. C. 4.

CHICAGO, Ill.

Is it certain that Christ was born four years before the Christian era?

CHICAGO.

Answer.—All investigations prove conclusively that it is impossible to determine to the satisfaction of chronologists in general either the day, month, or year of Christ's birth. It is almost universally admitted that this event preceded the commencement of the Christian era as now reckoned. St. Clement, the earliest of the "church fathers," fixes it on Nov. 18 in the twenty-eighth year of the Emperor Augustus, a little more than two years before the beginning of our era. Since the death of Herod the Great, according to Josephus, must have occurred before Easter of B. C. 4, modern scholars are generally agreed that Christ's birth could not have been later than B. C. 4; and there is strong reason to believe that it was in B. C. 6 or 7. See McClintock and Strong's "Cyclopedia of Biblical Literature," under "Jesus Christ." As to the day and month of Christ's birth the differences are still more difficult to overcome. Modern investigation is strongly against Christmas, or any day in mid-winter, as unseasonable either for the shepherds to be watching their flocks in the fields, or for the congregating of the people from all parts of the kingdom to be registered and taxed, which was the occasion of Mary and Joseph's being at Bethlehem. These two arguments are used, along with others, by the Biblical scholars who hold severally to the opinions that the nativity was not earlier in the year than March, and, one party says, in March, another in April or May, another in June, and still others in July or August.

GROWTH OF ENGLISH INTEMPERANCE.

RANTOUL, Ill.

Is it true that drunkenness continues to increase in England, notwithstanding the wonderful success of English and American temperance reformers and the large number of total abstainers enrolled by the Salvation Army?

A TEETOTALER.

Answer.—Whatever the explanation, and whether or not it constitutes an additional argument for the temperance movement, it is declared to be a fact that the number of persons charged with drunkenness in 1881 was 1,622 more than the number charged in 1880, being 174,481 to 172,859. Furthermore, according to the excise reports there was 7½ per cent more beer drunk in 1881 than in 1880, the total quantity being 970,785,564 gallons in a population of 26,000,000, or about 31 gallons for each man, woman, and child. The increase in the population during the decade of 1871-1881 was 3,256,020, which is about 1.43 per cent a year, while the increase in drunkenness was nearly 1 per cent in the last year.

TEMPERANCE IN COMMON SCHOOLS.

CHICAGO, Ill.

What is the text of the bill recently proposed in the Illinois state Legislature to require teachers to give instruction in temperance? Who introduced it? What are the arguments used in its favor?

A TEACHER.

Answer.—The following is the bill introduced Jan. 31 in the General Assembly of this State, by the Hon. Jesse D. Jennings, of Fayette County: "Be it enacted," etc., "that they (the directors) shall direct that elementary instruction be given in physiology and hygiene, which shall give special prominence to the effects of alcoholic drinks, stimulants and narcotics upon the human system. The certificate of qualification held by any person who desires to teach shall show that satisfactory examination has been passed upon the effect of alcoholic drinks, stimulants, and narcotics upon the human system." The advocates of the bill maintain that, in view of the

admitted evils of intemperance, and particularly the moral and physical injuries to individuals and society resulting from the use of alcoholic drinks, stimulants, and narcotics, it is of the highest practical importance that the youth of the public schools be properly instructed as to the effects of these insanity engendering poisons. They say that since the State, for purposes of revenue, and also professedly with the desire of preventing abuses, has authorized men and women to publicly offer these poisons for sale, it is morally bound to warn the youth of the land not to use them except as medicine, or in the arts, as other poisons are sometimes used. They hold that those who admit the iniquities of intemperance, but are opposed to sumptuary legislation, cannot reasonably oppose this recourse to educational remedies for these appalling evils. If the law requires road commissioners, when repairing the highways, to hang out danger lights wherever they open cess-pools and sewers, or make other perilous chasms in the road, the advocates of this bill argue that it is the duty of the State licensing the opening of liquor shops to throw enough light on the traffic to prevent young people from falling into drunkenness in the dark.

CANADIAN DENOMINATIONAL STATISTICS.

CHICAGO, Ill.

Herewith I hand you the denominational statistics of Canada, as given in the government returns for 1881. Those recently given in Our Curiosity Shop, on the authority of Rand, McNally & Co.'s Atlas of the World, are out of date:

Roman Catholics	1,791,982
Methodists	742,981
Presbyterians	676,155
Church of England	574,818
Baptists	275,291
Congregationalists	26,900
All other denominations	236,683
Total	4,324,810

K.

TWO INDIANA TEMPERANCE RESOLUTIONS.

OREGON, Ill.

Please give us the temperance planks in the platforms of the Indiana Democracy and Indiana Republicans, as adopted in their conventions of last summer.

A PROHIBITIONIST.

Answer.—The Indiana Democracy met in convention last August: after wrestling with the few prohibition delegates for a brief moment, they adopted the following resolution:

"The Democratic party is now, as it has always been, opposed to all sumptuary legislation, and it is especially opposed to the proposed amendment to the constitution of Indiana known as the prohibitory amendment, and we are in favor of the submission of the proposed amendment, as well as other proposed amendments, to the people, according to the provisions of the constitution for its own amendment: and the people have the right to oppose or favor the adoption of any or all the amendments at all stages of their consideration, and any submission of constitutional amendment to a vote of the people should be at a time and under circumstances most favorable to a full vote, and therefore should be at a general election." The Republicans, several days later, on Aug. 9, adopted this resolution: "The Republican party resolves that reposing trust in the people as the fountain of power, we demand that the pending amendments to the constitution shall be agreed to and submitted by the next Legislature to the voters of the State for their decision thereon. These amendments were not partisan in their origin, and are not so in character, and should not be made so in voting upon them. Recognising the fact that the people are divided in sentiment in regard to the propriety of their adoption or rejection, and cherishing the right of private judgment, we favor the submission of these amendments to a special election, so that there may be an intelligent decision thereon, uninfluenced by partisan issues."

PASSION PLAYS.

BERLIN, Wis.

What is the origin and history of the "Passion Play," of which we hear so much lately?

F. Peck.

Answer.—This recent dramatical representation of the passion of Christ claims its origin and justification in sentiments akin to those which it is said inspired the old religious dramas, known as "Moralities," or "Miracle Plays." The first composition of this nature is ascribed to Ezekiel, a Jew, who, in the third century, adapted the story of Israel's exodus from Egypt to the Grecian stage. His object was to arouse the patriotism of his exiled and despondent countrymen and excite in them a hope for the re-establishment of their kingdom in Palestine. In the fourth century, St. Gregory Nazianzen, the Bishop of Constantinople, having noticed the effect of the Grecian drama upon the people, concluded that the readiest method of extending the church of Christ was the dramatic presentation of the sufferings of its author, which he accomplished in the drama entitled "The Passion of Christ." When the barbarians made their inroads into Southern Europe, and the church began to extend its influence northward into the lands of the Germans, Normans, and Saxons, it found great difficulty in coping with the fascination which the heathen festivals and performances exercised over the uneducated minds of the people. In order to obviate this trouble, miracle plays were introduced. Adapting the drama to the surrounding circumstances, many of the heathen characters, slightly changed, were retained. The play was supplied with humor by the artful caprices of the impersonated devil. In one representation "Judas, assisted by the devil, who sits upon the scaffold, hangs himself. When the hanging is complete both slide down to hell on a slanting rope." Soon after the Reformation the miracle plays began to decline, and now they are performed in only a few places, mostly in Southern Bavaria and the Tyrol. The passion play of Oberammergau is famed the world over, and attracts an immense concourse of visitors from all lands whenever it is presented. In 1633 the flax in that neighborhood became diseased and unfit for the spindle. To prevent the recurrence of any such calamity the Oberammergau peasants made a vow to God that every ten years they would present the sufferings of Christ upon the stage in this way. This vow was kept until the beginning of the present century, when the further performance of the play was prohibited. Thereupon the peasants appealed to King Maximilian, who granted them

permission to continue their celebrations, providing certain objectionable features were removed. This was agreed to, and in 1811 the drama, written by Pastor Weise, was first presented devoid of the devil and comic personages. The gospel story commences with Christ's triumphal entry into Jerusalem, and closes with a scene previous to the ascension. In a practical manner, the plot is developed. The money changers are driven from the temple in anger. Judas smarts under the rebuke which he received at the home of Lazarus. They meet and plan the betrayal resulting in the crucifixion. The part of Christ is impersonated by a peasant. The ignorant inhabitants still regard these plays as the most impressive and effective method of teaching the gospel and various moralities. The claim that the passion play now occupying so much of the public attention was inspired by religious motives is rejected by the public generally, and is ridiculed by the press. There is an all but unanimous feeling of opposition in England and in this country to having the passion of the Savior, the solemn tragedy of Calvary, mimicked on the stage by ordinary stage performers. This feeling led the late Mayor Grace, of New York City, to refuse to license the presentation of the play in that city, and his successor, Mayor Edson, has taken the same stand. Salmi Morse, the manager, threatens to test the legality of this interdiction. Such is the attitude of this matter at present.

RATIO OF BEEF TO LIVE WEIGHT.

ROGERS PARK, Ill.

What is the proportion of good meat in a well-fed beef animal compared with its live weight?

A CONSUMER.

Answer.—Sixty pounds of dressed beef for each 100 pounds of live weight is considered a fair average, and indicates that the animal was of good stock in first-rate marketable condition. Of course the choice cuts, consisting of the ribs, sirloin and rump steak, constitute only about half of this. So that an animal which weighs 1,000 pounds live weight will produce but about 600 pounds of dressed meat, of which the choice cuts will amount to about 310 pounds and the "coarse meat" to 290 pounds.

NAMES OF CERTAIN BLOOD RELATIVES.

Grove City, Ill.

What relation are children of first cousins? What relation is a child to its parents' first cousin?

V. T. Houston.

Answer.—The children of first cousins are second cousins. A's child is "first cousin removed" to A's first cousin, while he is second cousin to the son or daughter of A's first cousin.

FINDING LATITUDE AT SEA.

Garrison, Iowa.

Referring to the explanation of the method of determining latitude by observations on the pole star, given in a recent issue of Our Curiosity Shop, I venture to submit the following indication of the common method by which sailors ascertain their latitude at sea. It is true that latitude may be determined by means of a carefully observed altitude of the polar star, providing the apparent time of observation can be ascertained within a few minutes. This method might frequently be used at sea when the horizon is well defined if the star were of the first magnitude; but being only of the second or third it is difficult to determine the altitude with certainty. For this reason the usual method of finding the latitude at sea is by taking the altitude of the sun when on the meridian. The latitude of a place, being its distance from the equator, is measured by the arc of the meridian contained between the zenith and the equator; hence, if the distance of the sun from the zenith when on the meridian and the declination be given the latitude is easily determined.

B. F. Hussey.

AUTHORS, EDITORS, AND MANUSCRIPTS.

Mt. Hope, Kan.

Kindly explain the editorial rules governing the receipt and treatment of manuscript offered for publication, whether intended for newspapers, periodicals, or books. Suppose, too, that an author should send the manuscript of a book to a publisher on the promise that it would be returned if not accepted, how long ought it to be before he should be notified of its receipt and acceptance or rejection?

W. S. W.

Answer.—There is no definite general rule for these matters beyond the common understanding that the editor must attend first of all to the regular routine of his office, and manuscript must wait, until he has time to read it. In the case of contributions to a periodical, it is understood unless contributors specifically request the return of their contributions and inclose postage stamps for this purpose, that the editor, if he does not use them, is at liberty to consign them to the waste basket. It is not unusual for contributions to literary magazines and standard reviews to lie on the editors' tables for a month or six weeks before the verdict "accepted" or "rejected" is pronounced. A glance at a contribution, even the mere subject, indicates to the editor whether the article is likely to suffer by delay. Stories and many other contributions will keep; current news and kindred matters will not. These manuscripts must be read at once; those must wait; and how long, only the editor is in the position to determine. Even after articles are accepted the same law prevails, and the circumstances of each particular issue determine what is to be used and what "held over." It frequently happens that editorials which have cost the editor serious labor, and are actually in type, are crowded out by unexpected events which must take precedence, and are held back by a succession of such events until too stale to be used, and the writer is forced to write "kill" over against the children of his own heart and brain. Many a disgusted contributor would feel less mortified and indignant at the rejection of his offering if he could understand all the circumstances of the case. The contribution rejected to-day might have been gladly accepted had it come a day sooner. An article accepted yesterday and paid for, perhaps never appears; why, only the editor can explain. Even champagne tastes flat after it has stood a few moments; witticisms are still-born if not ushered in at the right instant. The book-publisher is subject to similar influences, but not in the same degree as the

editor of a newspaper or review. But many a book manuscript has been rejected because out of season. Many another has been rejected because the writer was impatient and the editor, rather than keep him in such a mood and unwilling to take the responsibility of publishing what he had not read with critical care, has relieved himself by returning it "with thanks." It is no slight matter for an editor to read and so digest a book, in which the publisher is asked to invest from $1,000 to $5,000, as to enable him to pronounce a favorable judgment with confidence. Of course long and carefully prepared manuscripts, especially books, are entitled to more consideration than ordinary newspaper contributions; and should never be destroyed until the authors have been courteously notified that they are not wanted, and have had ample time to send for them. In the supposed case of the above question, acknowledgment of receipt of the book manuscript should have been mailed as soon as it came to hand, unless it was received by express or as registered mail matter, and from thirty to sixty days, according to the length and nature of the book would not be too long to grant the editor or publisher before expecting a decision. Except in special cases, editors of newspapers do not receipt by mail for contributions sent to them.

RAILROAD MILEAGE.

OSHKOSH, Wis.

> Please give a few statistics in reference to railroad construction in the United States and in the more important foreign countries.

W. L. FROST.

Answer.—The number of miles of railroad in the world constructed prior to Jan. 1, 1881, was 226,442, of which sum 93,671 miles were within the United States. Germany had built 21,037 miles; Great Britain and Ireland, 17,696; France, 15,287; Russia, 13,571; Austria-Hungary, 11,471; British India, 8,615; Canada, 6,891; Italy, 4,999, and Spain, 4,264. During the year 1881 the railway mileage of this country increased to 104,813 miles, to which the year 1882 added 10,821 miles, making a grand total of 115,634 miles. To build these great highways and properly equip them about

$5,750,000,000 have been expended. Iowa during the past year took the lead, having constructed 953.37 miles, and Texas followed close after with 817 miles of new road.

A FEW AMERICAN WORTHIES.

MANSON, Iowa.

Please name five or more of the greatest of the following classes of Americans: Orators, poets, historians, inventors.

GEORGE BELL.

Answer.—Any answer to such a question is largely a matter of personal opinion. Among political orators Patrick Henry, James Otis, Henry Clay, Daniel Webster, Thomas Pike, Sergeant Smith Prentiss, John C. Calhoun stand among the most illustrious. As to pulpit orators, it would be invidious to name one without designating at least fifty who are evidently of the same rank. Our great poets have not been many. First among them have been and still are, as regards fame, William Cullen Bryant, Henry Wadsworth Longfellow, George Denison Prentice, and Nathaniel P. Willis. Whittier, T. Buchanan Read, Holmes. Lowell, Miller, Holland, Saxe, Morris, Mrs. Sigourney, are poets not soon to be forgotten. Irving, Sparks, Prescott, Bancroft, are among our most eminent historians. Fulton, inventor of the steamboat; Morse, inventor of the first practical electric telegraph; Whitney, inventor of the cotton-gin, and Howe, inventor of the first successful sewing machine, are among the first of the ten thousand American inventors who have done the world noteworthy service. Edison and several hundred other inventors, who have improved upon the inventions of their predecessors until they have doubled, trebled, and in some instances quadrupled their value to the world, are quite as worthy to be remembered.

RAILROAD LAND GRANTS.

OSHKOSH, Wis.

Give us the total amount of public lands granted by the United States to aid in the construction of railways, and oblige a subscriber.

W. L. FROST.

Answer.—The table below shows the total land grants made by the United States down to 1880, as given in "The West in 1880."

States and Corporations.	Acres Granted.	Acres Certified.
Illinois	2,595,053	2,595,053
Missouri	2,985,160	1,828,005
Iowa	6,795,527	3,940,270
Michigan	4,712,480	3,328,987
Wisconsin	4,808,486	2,672,803
Minnesota	9,992,041	6,925,351
Kansas	9,370,000	3,851,536
Pacific Railroad	159,486,766	8,831,687
Total	215,203,807	42,847,403

These grants, amounting in the aggregate to 215,203,807 acres, or over 355,000 square miles, are only about 6,000 miles less in area than all the original thirteen States of the Union taken together, and is more than 60 per cent greater than the total area of the German Empire. Fortunately for the country, a number of these grants have been forfeited; yet, as above shown, 42,847,403 acres, or more than the total area of England and Wales together, had been actually certified to the States and roads named before June 30, 1879; and many acres have been certified since that time. The exact amount down to date is not yet published. To avoid taxation, the railroads entitled to public lands delay taking their certificates until the settlement of the country and opportunity for selling make it to their interest to do so. A large amount of the land covered by the above grants will be certified to the grantees on demand.

POPULATION OF THE GLOBE.

UNIONVILLE, Iowa.

Please state in Our Curiosity Shop the estimated present population of the world. Also, the population of the United States according to the revised census of 1880.

A. J. R.

Answer.—The population of the entire globe is still far from being definitely determined. Hardly two original investigators agree. In this country the estimates of Drs. Behm and Wagner are generally accepted as the most reliable, yet their latest figures differ from those of two years before by upward of 22,000,000. Then they stated the population of the entire globe at 1,455,923,500, whereas now they state it at 1,433,887,500, distributed as follows:

Europe	327,743,400
Asia	795,591,000
Africa	205,823,200
America	100,415,400
Australia and Polynesia	4,232,000
Polar regions	82,500

One might infer from this that instead of increasing, as would be naturally expected, the human race is dying out: but closer inspection shows that the estimate of the population of China has been reduced about 55,000,000. Accepting this and all the other estimates, there seems to be an increase in other countries of about 33,000,000; part of which is due to the fact that the geographers had the benefit of the census takers in different countries in 1880 and 1881, showing the growth of five to ten years. The total population of the United States in 1880, according to the revised census, is 50,155,783.

DRINKING FROM SKULLS.

BURLINGTON, Iowa.

What is the origin of the expression "A soldier's drinking cup," as applied to a human skull?

WM. A. T.

Answer.—Thomas Middleton was a dramatic writer who flourished in the early part of the seventeenth century. In "The Witch," one of his most celebrated plays, when "the Duke" takes a bowl and is told that it is a skull, he exclaims:

"Call it a soldier's cup;
Our Duchess, I know, will pledge us, tho' the cup
Was once her father's head, which, as a trophy,
We'll keep till death."

The barbarous custom of converting the skulls of enemies into drinking cups was a common one in ancient times among the fierce tribes of Northern Europe; and was not unknown to the more civilized regions of the South. The Italian poet, Marino, makes a conclave of friends in Pandemonium quaff wine from the skull of Minerva. In his "Wonder of a Kingdom," Torrent makes Dakker say:

"Would I had ten thousand soldiers' heads,
Their skulls set all in silver, to drink healths
To his confusion who first invented war."

The old Scandinavian sagas represent as among the delights of the immortals the felicity of feasting and drinking to drunkenness from the skulls of the foes they had vanquished on earth. Mandeville goes further, and represents the Guebres as exposing the dead bodies of their parents to the fowls of the air until nothing but the skeletons remained, and preserving the skulls to be used in a spirit of devotion as drinking cups.

GENERAL WILLIAM W. AVERELL.

ETNA, Mo.

Give a short sketch of General Averell.

M. M. SHANES.

Answer.—General William W. Averell was born in the State of New York in 1830. At the age of 25 he graduated at West Point, and began his military career as Lieutenant of mounted riflemen on the Western frontier. In the rebellion he took an active part in the battles of Bull Run, Yorktown, Williamsburg, Fair Oaks, Malvern Hill, Fredericksburg, Kelly's Ford, Opequan, Fisher's Hill, and various other engagements in West Virginia,

Tennessee, and the Shenandoah Valley, at the same time being successively brevetted Major, Lieutenant Colonel, Colonel, Brigadier General, and Major General, U. S. A. In 1865 he resigned, and in the following year represented the United States as Consul General in Canada. Afterward he retired to accept the Presidency of a manufacturing company in New York.

PRINCE GORTSCHAKOFF AND THE UNION.

CHICAGO, Ill.

What was the action of the late Prince Gortschakoff during our civil war that is alluded to in the recent obituary notices of that diplomat as a reason for the gratitude of Americans?

O. N. ADAMS.

Answer.—Prince Alexander M. Gortschakoff, who was at that time the Russian Minister of Foreign Affairs, when invited, at a critical time in the history of our civil war, to associate Russia with England and France in their unfriendly attitude toward the United States, involving, among other things, a proposition to recognize the independence of the Southern Confederacy, positively declined. The following extract from one of his state papers at that juncture shows his disposition toward this country, which he quickly emphasized by dispatching a Russian fleet to New York as a proof of his friendship and sincerity; an act which greatly alarmed and disconcerted both England and France, since many of their politicians jumped to the inference that there was a secret treaty of alliance between the two countries, and that in case of a rupture Russia would openly take sides with the United States. These are the words of the dispatch alluded to, and Americans should not soon forget them:

"The North American Republic not only presents itself to us as an indispensable element of the international balance of power, but, besides that, it is a Nation toward which our most august Emperor and the whole of Russia have always had a most friendly disposition, because both countries are in the ascendant period of their development, and seemed called to a natural unity of interests and sympathies, proofs of which have already been given on both sides."

WOOD USED AS FUEL.

MOLINE, Ill.

How does the amount of wood used as fuel in Illinois compare with the quantity used in Pennsylvania, New York State, Iowa, and Kansas? State the average for each inhabitant, and tell the average price of such fuel in each of these States, so far as the market prices can be ascertained.

D. MORGAN.

Answer.—The extent to which wood is used as fuel in the United States, and the estimated value of the same, are among the subjects investigated by the present Census Bureau. The special agent in charge of this investigation estimates that there were 32,375,000 persons in the United States in 1880 using wood as fuel for domestic purposes, consuming 140,537,439 cords, valued at $306,950,040. Besides this, there were about five and a quarter million cords consumed for other purposes, making a total of nearly three hundred and twenty-two million cords, as follows:

Uses.	Cords.	Value.
Domestic use	140,537,439	$306,950,040
Railroads	1,971,813	5,126,714
Steamboats	787,862	1,872,083
In mining and amalgamating precious metal	358,074	2,874,593
Other mining operations	266,771	673,692
Manufacture of brick and tile	1,157,522	3,978,331
Manufacture of salt	540,448	421,681
Manufacture of wool	158,208	425,239
Grand total	145,778,137	$321,962,273

The amount of wood used for domestic purposes is given by States as follows:

States.	Cords.	Value.
Alabama	6,076,754	$8,727,377
Arizona	170,017	724,572
Arkansas	3,922,400	5,095,821
California	1,748,062	7,693,731

Colorado	426,719	1,638,783
Connecticut	525,639	2,371,532
Dakota	422,948	2,028,300
Delaware	177,306	751,311
District of Columbia	26,902	80,706
Florida	609,046	1,230,412
Georgia	5,910,045	8,279,245
Idaho	09,910	383,689
Illinois	5,200,104	14,136,662
Indiana	7,059,874	13,334,729
Iowa	4,090,649	14,611,280
Kansas	2,095,438	7,328,723
Kentucky	7,994,813	13,313,220
Louisiana	1,944,858	4,607,415
Maine	1,215,881	4,078,137
Maryland	1,152,910	3,170,941
Massachusetts	890,041	4,613,263
Michigan	7,838,904	13,197,240
Minnesota	1,669,568	5,873,421
Mississippi	5,090,758	7,145,116
Missouri	4,016,373	8,633,465
Montana	119,947	460,638
Nebraska	908,188	3,859,843
Nevada	155,276	972,712
New Hampshire	567,719	1,964,669
New Jersey	642,598	2,787,216
New Mexico	169,946	1,063,360
New York	11,290,975	37,599,364
North Carolina	7,434,690	9,019,569
Ohio	8,191,543	16,492,574
Oregon	482,254	1,254,511
Pennsylvania	7,361,962	15,067,651
Rhode Island	154,953	706,011
South Carolina	3,670,959	11,505,997

Tennessee	8,084,611	10,674,722
Texas	4,883,852	10,177,311
Utah	171,923	418,289
Vermont	782,338	2,509,189
Virginia	5,416,112	10,404,134
Washington	184,226	499,904
West Virginia	2,241,069	3,374,701
Wisconsin	7,206,126	11,863,739
Wyoming	40,218	224,848

From the above data we have prepared the following table showing the average number of cords consumed for domestic purposes only (stated in cords and hundredths of a cord), the average price per cord, and total consumption for each man, woman, and child in each of the States named in the above question:

States.	Cords per capita.	Value per cord.	Cost per capita.
In Pennsylvania	1.72	$2.05	$3.52
In New York	2.22	3.32	7.37
In Illinois	1.70	2.27	4.90
In Iowa	2.45	3.57	8.75
In Kansas	2.14	3.50	7.49

According to this exhibit the effect of the marvelous coal fields of Pennsylvania and Illinois on the consumption and price of wood is very apparent and significant. The above does not include the wood converted into charcoal, of which there were 74,008,972 bushels, valued at $5,276,736, consumed in the production of iron and the precious metals in the twenty largest cities of the Union; which does not cover probably half the entire amount used in this country.

LARGEST AMERICAN LOCOMOTIVES.

KEOKUK, Iowa.

What is the weight of the largest locomotive engine; and what is the number of its drive wheels?

READER.

Answer.—This question was referred to Messrs. Burnham, Parry, Williams & Co., of the Baldwin Locomotive Works, and their reply in full is subjoined:

"Replying to your favor of the 8th inst., we may say that there has been considerable activity of late in the construction of very large locomotives, the most approved railroad practice having changed materially within the past few years with respect to the weight of the engines employed. We have recently built some very heavy locomotives for the Northern Pacific Railroad, which weigh, in working order, exclusive of the tender, about 115,000 pounds. The tenders with coal and water weigh about 65,000 pounds each, additional, making the total weight of engine and tender some ninety net tons. These engines have cylinders 20x24 inches.

The Central Pacific Railroad Company have recently built in their Sacramento shops some very heavy locomotives with four pairs of driving wheels coupled and a leading four-wheeled truck, which weigh in working order, exclusive of the tender, about 123,000 pounds. The weight of the tender, with coal and water, is about 65,000 pounds, making the total net weight of the engine and tender some ninety-three net tons. These engines have cylinders nineteen inches in diameter and thirty inches stroke, and are probably at this time the heaviest engines in use in this country."

BUTTER PRODUCT OF A GOOD COW.

PEORIA, Ill.

1. What may be fairly regarded as the average annual butter product of a good class of dairy cows? 2. Is not $50 an exorbitant price to pay for an average cow?

YOUNG HOUSEKEEPER.

Answer.—Of course the butter product depends on the kind of stock, the pasturage and winter feed, the care of the cattle, and the skill and industry of the butter-maker. The following statement of Mr. Wm. Guinter, of Twin Grove, Wis., shows the average annual product of butter realized by him from six cows, together with the average value of this product: "I have kept

a strict account for one year of the income from six cows. I have sold 1,185 pounds of butter, and counting four pounds a week of cream and butter for family use of four persons, increases the total product to 1,393 pounds. The highest price received per pound was 38 cents, and the lowest was 16 cents, making an average of 26 cents. The whole amount realized, then, was $362.18, or $60.36 a cow. I have my cows come in fresh in the fall on account of making a better quality of butter and getting a better price. I keep them in good condition all winter: feed chopped corn and oats and all the clover hay they want. Feed about three quarts of chop twice a day to each cow. My cows are only the common grade. I have clover pastures, but never turn cattle in till the first or middle of May, so as to let it get a good start, and then the pasture will be good all summer. Some of my neighbors ask: 'Do you think it pays?' I do it whether it pays or not: but I think it does. You can't expect a great yield of milk from straw and dry cornstalks. What stock you keep, keep well. It will pay." 2. Obviously the value of a good milch cow depends somewhat on the locality. A cow is worth more in the immediate neighborhood of a good market than in a region remote from such a market. With the above average product of a good cow, in pounds, to guide one, every intelligent person can form a judgment as to whether it will be profitable for him, taking the price of butter and feed in his own market, to pay $50, or more or less, for a good cow.

VACCINATING IMMIGRANTS.

WASHINGTON, Ill.

> Is it true that there are government physicians who examine all immigrants from Europe and compel them to submit to revaccination before they allow them to pass certain stations? If so, by what authority is this done?

A DOUBTER.

Answer.—The best answer to these questions is contained in the reports of the supervising inspectors of the National Board of Health, under whose authority, conferred by an act of Congress, the examination, or inspection, of immigrants entering the United States and traveling therein is conducted. The report of the Supervising Inspector of the Western District, Dr. John H.

Rauch, Springfield, Ill., dated Nov. 10, 1882, shows that in this district there were 94,839 immigrants inspected between June 1 and Oct. 31, 1882, of whom 17,195, with or without their consent, were vaccinated, as the case seemed in the judgment of the assistant inspectors to call for:

Stations.	Number inspected.	Number vaccinated.
Pitts. Ft. W. & Chi. R. R.	17,347	2,539
Lake S. & M. S. R. R.	14,011	2,285
Mich. C. R. R.	22,330	6,145
Grand Trunk R. R.	9,356	1,875
Balt. & Ohio R. R.	10,688	2,348
Indianapolis	13,746	1,635
St. Louis	7,361	368
Total	94,839	17,195

Cases of small-pox found on the trains by the inspectors are removed to small-pox hospitals. There were seven such cases in October, 1882, in the Western District.

BRIDGES AND RHYTHMIC VIBRATION.

ST. PAUL., Minn.

Does music weaken metallic or other bridges? If so, please explain why.

A. M. G.

Answer.—Measured vibrations are more trying to any kind of bridges, and particularly to suspension bridges, than irregular agitation. Music alone would not strain a bridge enough to injure it materially; but a regiment of troops keeping step to music when crossing a suspension bridge would subject it to a very severe strain. Consequently it is customary to stop the music before troops reach the bridge, and let the men break step, and march more or less irregularly. The reason of all this is obvious. The structure will naturally suffer least strain when at rest. When in uniform motion the bridge acquires a momentum equal to its entire suspended weight multiplied by the velocity of the motion. It is manifest that, in the case of a heavy structure, a

uniform downward vibration, be it ever so small, would develop a momentum of many tons in the direction of a breaking strain. The same disturbing forces acting irregularly, so as to counteract one another, would be far less trying to the structure.

THE FRANCO-GERMAN WAR.

VANDALIA, Ill.

Please give us the principal dates in the Franco-Prussian War.

T. M. K.

Answer.—The Franco-Prussian war was formally declared, on the part of France, July 19, 1870. The South German States, since then incorporated with Prussia and the other North German States in what is now called the German Empire, soon took sides and the Franco-Prussian war became the Franco-German war. On Sept. 1 the Emperor Napoleon surrendered his sword at Sedan. The war was protracted through the winter by the obstinate resistance of Paris, but the German army entered the city on Feb. 28, 1871, and ratifications of the preliminary treaty of peace were exchanged March 3. The severest fighting was over, and France was virtually at the mercy of Germany at the end of the first four months.

NATIONAL DEBTS OF FRANCE AND GREAT BRITAIN.

CHICAGO, Ill.

Which is the greater, the present national debt of France or that of Great Britain?

J. C. C.

Answer.—The present national debt of France is considerably larger than the national debt of Great Britain. On Jan. 1, 1879, the former was £794,481,439, and it has increased since then. On March 31, 1881, the latter was £768,703,692.

THE LEANING TOWER OF PISA.

CHICAGO, Ill.

In what city is the great belfry spoken of as "the leaning tower?" When was it built; and was it purposely constructed to lean as it does?

S. L.

Answer.—You probably refer to what is known as "the leaning tower of Pisa," in one of the oldest and most famous cities of Italy. It is a campanile, or bell tower, commenced in 1174, by Bonannus of Pisa, and William of Innsbruck. It is cylindrical in shape, 50 feet in diameter, 179 feet high, and leans about 13 feet out of perpendicular. It is divided into eight stories, each having an exterior colonnade, or gallery. The top is reached by 330 steps. It was not purposely built to lean. The foundation settled more on one side than on the other until it reached the present inclination, which it has maintained with scarcely any perceptible increase for hundreds of years. The defect in the foundation was discovered before its completion, and the upper part of the structure was built in a manner to counteract in part the inclination; and the grand chime of bells, seven in number, of which the largest alone weighs 12,000 pounds, is mounted with reference to counteract this fault still further. This magnificent tower is justly regarded as one of the wonders of the world.

VIRGINIA STATE DEBT.

OXFORD, Iowa.

What proportion of the State debt of Virginia do the "Readjusters" intend to repudiate? What part of it was created during the late civil war? Is the State really unable to pay its creditors? Give a few of the chief features of this Virginia debt controversy.

F. G. A.

Answer.—The whole of the Virginia State debt was contracted before the war, for railroads, canals, turnpikes, and public buildings, including penal and charitable institutions. Of course any debts made in aid of the rebellion were wiped out by section 4 of the fourteenth amendment to the

Constitution of the United States. On Jan. 1, 1861, the State owed $33,248,141.63. On Jan. 1, 1870, owing to non-payment of interest during the intervening ten years, the debt had accumulated to $45,660,348. The constitutions of Virginia and West Virginia (the latter of which had been constructed out of Virginia during the war) both provided for an equitable apportionment of this joint indebtedness; but the two States have never agreed on a division. In March, 1871, the State of Virginia passed an act to set aside one-third of the debt to West Virginia, which contained about one-fifth of the population and one-third of the territory of the original State and a trifling proportion of the public improvements for which the debt was created, and to give the bondholders new bonds payable in thirty-four years with 6 per cent interest annually, and certificates promising that the payment of the remaining one-third would be provided for in accordance with such settlement as should thereafter be made with West Virginia. This left as the debt of the present State of Virginia $29,614,793 (report of Second Auditor, 1881). The State's creditors hastened to exchange old evidences of indebtedness for the new bonds, which went forward rapidly until about two-thirds of the whole were refunded, when, a majority of Readjusters having been elected to the Legislature, the process of refunding was stopped. The old bonds left outstanding by this sudden change of policy constitute what is known as the "Peeler debt." The interest coupons on the new bonds were "receivable for taxes and all dues and demands against the State," and have been honored, but the interest on the Peeler debt has been paid only in part. In 1879 the creditors proposed the exchange of the bonds then outstanding for new bonds bearing 3 per cent interest for ten years, 4 per cent for twenty years, and 5 per cent for ten years, making an average of 4 per cent. The total principal of the debt at this time was $29,367,958.06. Accordingly the "McCulloch bill" was passed, binding the State to this settlement: and bonds to the amount of $8,000,000 were issued under this law. Senator Johnston, in an article in the *North American Review* setting forth the above facts, claims that, had the law been faithfully executed, the surplus revenue of 1879, after paying interest on all the State's indebtedness and all State expenses of the government and the public schools, would have been more than $400,000, which would have gone to pay off so much of the principal.

Senator Riddleberger, in his reply to Mr. Johnston, in the *North American Review* for April, 1882, declares that instead of there being any surplus in

the State Treasury at the close of 1879, the Readjusters found, on their accession to power, Jan. 1, 1880, "a great mass of the proposed McCulloch tax-receivable certificates ready for issue. They were forced to borrow money to run the government. Half a million of money, due by defaulting treasurers, was uncollected and unsued for. Over $1,500,000 had been diverted from the schools. The charitable institutions of the State were on the verge of bankruptcy." Nevertheless, the boast of the Virginia press, that the mining, manufacturing, and agricultural resources of the State are developing more rapidly than before the war, is generally believed to be true; the crops of the six principal cereals and potatoes, tobacco, and hay in 1881 amounted to $44,280,690, and the live stock to $33,538,877; the taxable value of property, real and personal, even at the low assessment prevailing, is given at $308,455,135: facts which lead the world to believe that Virginia is perfectly able to pay her debt. Taking the total debt under the McCulloch bill at what Senator Mahone placed it at the time of the passage of the bill, the annual interest would have amounted to not quite $990,000, which, added to $565,000 for public schools and arrearages, and $765,000 for current expenses of the State Government, would make but $2,320,000. That same year the net revenue, if faithfully collected, would have amounted to $2,606,425.36, so that there would have been a remainder of $286,500 to apply as a sinking fund. Since then the Riddleberger bill has become a law, and the debt has been scaled down to about $20,000,000, instead of about $33,000,000, which is nearly what it would be had the McCulloch law been carried out. As there is no provision for the payment of the $15,239,370 set over to West Virginia, and which the latter repudiates on the ground that she has offsets to all her proportion of the original debt, it appears that the total loss to the State's creditors, adding the accrued interest on the latter amount, is over $36,000,000, or fully 80 per cent of the amount conceded by the act of 1871 to be the total sum then due them.

POINTS OF A GOOD SHOT-GUN.

FOURCHE, D. T.

What are the essentials of a good shot-gun? Name several prime quality guns.

H. M. EASTMAN.

Answer.—The following, in the opinion of skilled manufacturers and practiced sportsmen of this city, are essentials of a first-class shot-gun. The barrel should be of laminated or Damascus steel or stub-twist (the former being generally preferred), and full choke or modified choke bore. A taper bore is also highly esteemed. Length of barrel, 28 to 32 inches; bore, 10 to 12 gauge. The gun should be a breech-loader, with rebounding lock and extension rib. Pistol grip, patent fore-end are points insisted on by some, although they are hardly to be classed as essentials. The front action or bar lock is a feature of many of the best guns. Among English guns the Greener and Scott stand very high; among Belgian, Charles Daly; among American, Parker, Colt, Remington, Nichols & Lefevre, and Baker; and in the Northwest, the Abby gun, manufactured in this city, is a favorite. Good English guns range from $350 to $400. Good American guns with English barrels may be had at prices ranging from $200 to $300.

WEALTH OF THE UNITED STATES PER CAPITA.

WOODLAWN, Mo.

Please give the wealth of each State, together with the wealth per capita.

READER.

Answer.—The following statistics represent the amount of taxable property, real and personal in each State and Territory, and also the amount per capita.

	Total.	Per capita.
Maine	$235,978,716	362.09
New Hampshire	164,755,181	474.81
Vermont	86,806,755	261.24
Massachusetts	1,584,756,802	888.77
Rhode Island	252,536,673	913.23
Connecticut	327,177,385	525.41
New York	2,651,940,000	521.74
New Jersey	572,518,361	506.06
Pennsylvania	1,683,459,016	393.08

Delaware	59,951,643	408.92
Maryland	497,307,675	533.07
District of Columbia	99,401,787	845.08
Virginia	308,455,135	203.92
West Virginia	139,622,705	225.75
North Carolina	156,100,202	111.52
South Carolina	153,560,135	154.24
Georgia	239,472,599	155.82
Florida	30,938,309	114.80
Alabama	122,867,228	97.32
Mississippi	110,628,129	97.76
Louisiana	160,162,439	170.39
Texas	320,364,515	201.26
Arkansas	86,409,364	176.71
Kentucky	350,563,971	212.63
Tennessee	211,778,538	137.30
Ohio	1,534,360,508	479.77
Indiana	727,815,131	367.89
Illinois	786,616,394	255.24
Michigan	517,666,359	316.23
Wisconsin	438,971,751	333.69
Iowa	398,671,251	245.39
Minnesota	258,028,687	330.48
Missouri	532,795,801	245.72
Kansas	160,891,689	161.52
Nebraska	90,585,782	200.23
Colorado	74,471,693	383.22
Nevada	29,291,459	470.40
Oregon	52,522,084	300.52
California	584,578,036	676.05
Arizona	9,270,214	229.23
Dakota	20,321,530	150.33
Idaho	6,440,876	197.51
Montana	18,609,802	475.23

New Mexico	11,363,406	95.04
Utah	24,775,279	172.09
Washington	23,810,603	316.98
Wyoming	13,621,829	655.24
Total	$16,902,993,543	337.00

THE OLDEST HISTORIANS.

FOURCHE, D. T.

Were there historians before Berosus, Manetho, and Herodotus, whose works have come down to us in Greek, Latin, or other European languages?

H. M. EASTMAN.

Answer.—Herodotus is the oldest of the Greek historians. He was born 484 B. C. He is generally recognized as the father of history. Berosus was an educated priest of Babylon, who lived about 260 B. C., and wrote in Greek three books of Babylonian-Chaldean history, the materials for which he declares he found in the ancient archives of Babylon. Manetho was an Egyptian historian, of the priestly order, who lived in the reign of Ptolemy Soter, in the beginning of the third century B. C. He, too, obtained the materials for his works from the temple records at his command, from which he wrote two works, one on the religion and the other on the history of Egypt. Only fragments of the writings of Berosus and Manetho remain—preserved in the works of Josephus, Eusebius, and other later writers. There are historical records on the ancient monuments of Egypt, Babylon, and Assyria which date back to earlier days, but except the historical books of the Old Testament, beginning with those of Moses (who was born 1738 B. C.), and some of the writings of Confucius (born 551 B. C.), there is nothing antedating the writings of Herodotus that is regarded as history.

FORMS OF LEAD CRYSTALS.

BURLINGAME, Kan.

Why is east and west lead ore always in cubes, while it is not always so with lead found in north and south lodes?

C. A. DAMON.

Answer.—The primitive form of galena, or sulphate of lead, crystals is the cube. Whenever left free to crystallize, subject to no extraneous force or pressure, this ore takes that form. At cross veins it takes modified forms, the angles and edges of the cubes being replaced by faces, so as in many cases to form octahedral crystals. Now just why lead seems to have been more free to take its simple primitive form when crystallizing in east and west

veins or lodes than in veins running in other directions is still largely a matter of theory or conjecture. Some theorists think that the north and south magnetic currents, to which the polarity of the magnetic needle is attributed, have something to do with this phenomenon, but a great many other wise people think nobody knows.

NATIONS OF THE GLOBE.

SILVER LAKE, Ind.

How many nations are there on the globe? Has each of them a flag?

J. F. CLYMER.

Answer.—The following is a full list of the nations of the world, each of which has its own distinctive national colors or flag: The United States of America, Mexico, Nicaragua, Honduras, Guatemala, San Salvador, Costa Rica, the United States of Colombia, Ecuador, Peru, Bolivia, Chili, Argentine Confederation, Uruguay, Paraguay, Brazil, Venezuela, Hayti, and San Domingo, which are all the independent nationalities of North and South America and the West India Islands; Great Britain and her dependencies in both hemispheres, France and her dependencies in Asia, Africa, and Oceanica, the German Empire, Austro-Hungary, Russia, Italy, Spain and her dependencies in both hemispheres; Portugal and her dependencies in Asia and Africa, Switzerland, Belgium, Netherlands and her dependencies in both hemispheres, Denmark and her colonial possessions, Sweden and Norway, Greece, Roumania, Servia, Montenegro, Turkey or the Ottoman Empire, Andorra, San Marino, and Monaco; the only independent States of Africa (except those wholly savage), Liberia, Orange River Free State, Transvaal Republic, Morocco, and Abyssinia; the only independent nationalities of all Asia—Persia, Burmah, Afghanistan, Beloochistan, Siam, China, and Japan; finally the Sandwich Islands. This makes a total of fifty-seven nations universally recognized and diplomatically treated as such, although several of them, like Afghanistan and Burmah, are little more than nominally independent, and two of them—Monaco, with an area of only 5¾ square miles, or less than a Congressional township in this country, and a population less than 6,000, and San Marino,

with an area of barely 23-8/10 square miles and less than 8,000 inhabitants —are so insignificant in comparison with their great neighbors that it seems a mockery of the name to call them nations. Indian tribes, Esquimaux, tribes of Africa, Asia, and Australia, although taken into treaty relations as independent or quasi independent peoples, are never correctly spoken of as nations in the sense in which the term is used in international law.

ENTERING LAND IN DAKOTA.

HUSTON, D. T.

Nine-tenths of the persons who have inquired of me about Dakota land entries since my brief note in THE INTER OCEAN did not inclose stamps or postal cards for replies. I have answered all that did observe this plain business rule. I am no land agent, nor have I land to sell, so I ask you to publish the following notes, which will answer nearly all the questions asked me. [A person should not invite a general correspondence through a paper like THE INTER OCEAN, "whose parish is the world," unless he is prepared to employ one or two stenographic correspondence clerks. In almost every instance that we have published contributors' invitations to Farm and Home readers to write to them, these rash friends have sent us word that they were deluged with correspondence.—ED]. Of course, in the beginning all the government land in Douglas County, D. T., was subject to entry under the pre-emption and homestead or timber-culture acts. But at present there are not more than three hundred vacant quarters in the county, and, since the timber-culture act only allows one such claim in each section, these unentered quarters can be taken only under the homestead and pre-emption acts. A timber-culture claimant is required to plant ten acres of trees and protect and cultivate them for eight years. As no settlement is required, these claims are in good demand, the relinquishments selling for from $200 to $400, owing to location. Under the pre-emption law the settler pays $2 to file his claim. After he has lived upon the land six months final proof can be made by paying $1.25 per acre. Under this entry the claimant is allowed thirty-three months in which to prove up, at the end of which time, if he has not complied with this requirement, the land is again open for settlement. Under the homestead law the settler pays $14 to enter. He has then six months in which to begin his residence on the land, after which

time, if he has not complied with the law, it can be contested on the ground of abandonment. Where a settler is unable to begin his residence and settlement within the time allowed by law, he can dispose of the claim by relinquishing to the government and allowing some one else to enter. Nearly all the land throughout the central part of the county has been taken; and what government land there is remaining is mostly in the western part and around the borders of the county. Relinquishments range in price from $50 to $300, owing to location and quality of the land.

H. S. Brown.

RECORDS OF THE BRITISH CELTS.

Dunlap, Iowa.

> Had the Celts, at the time of the invasion by Julius Cæsar of what is now England and Wales, any records by which their origin could be traced?

J. H. G. Rogers.

Answer.—That they had any written records there is great reason to doubt, although there are inscriptions on certain rude stone monuments in parts of Wales, as in the southeastern counties of Munster, Ireland, consisting of long and short lines, known as Ogamic characters, the antiquity of which is not well determined. As far as deciphered, these inscriptions throw no direct light upon the origin of the Celtic race. Their spoken language, reduced to writing after the introduction of Christianity, is the only key of any importance to their origin. This language plainly marks them as an early offshoot of the Aryan family, the common Asiatic stock from which all the ruling races of Europe have descended. The descriptions left by the Romans of the aborigines of Britain at the time of the Roman conquest represent them as fierce, cruel barbarians. Neither Cæsar's Commentaries nor the writings of Tacitus and other historians of the period of the Roman domination convey evidence that the Britons had any knowledge of letters until the Roman and Greek characters were taught them. Neither do these historians preserve any oral traditions of the British bards or druids calculated to shed much light upon the early history of the Celtic race.

REPUDIATING STATES.

BEMENT, Ill.

Name the States which have repudiated their debts, in whole or in part, and tell what party was responsible for the act in every case.

J. C. MILLER.

Answer.—Virginia, W. Virginia, North Carolina, South Carolina, Georgia, Alabama, Arkansas, Florida, Mississippi, Louisiana, Tennessee, Indiana, Illinois, Michigan, and Minnesota have each of them, at one time or another, repudiated a part of their State debts. Illinois repented almost immediately in sackcloth and ashes, and settled with her creditors. Indiana has settled everything but about twenty old internal-improvement bonds, which will no doubt soon be liquidated. Minnesota has recently determined to settle with her creditors, although the railroads, in aid of which the repudiated bonds were issued, were not constructed in conformity with the law, and the bonds are badly tainted with fraud. In every case but that of Minnesota and South Carolina repudiation came in under Democratic regimes.

THE CAPITAL OF LOUISIANA.

ALDEN, Iowa.

What is the present capital of Louisiana? Some geographies say New Orleans, and others Baton Rouge. Please explain this discrepancy.

TEACHER.

Answer.—The capital of the first colonial government of Louisiana was fixed at Biloxi, in 1699. It was transferred to New Orleans in 1723. New Orleans was the capital of the Territory of Orleans, organized in 1804 out of a part of the vast Louisiana purchase. In 1812 the State of Louisiana was formed with New Orleans as the capital. In 1847 Baton Rouge was made the seat of the State government, and it remained so until after it came into possession of the Union army during the late war. A provisional government

was established at New Orleans in 1864, and the State constitution of 1868 made that city the capital; but by the new constitution of Dec. 2, 1879, the honor of being the seat of the State government was restored to Baton Rouge, where it was established in 1880.

ANGORA AND CASHMERE FLEECES.

SEDAN, Kan.

> What are the distinctive differences between the "staples" of Angora and Cashmere goats? Which staple is the more valuable? What are the present prices of the same in the markets of this country? Give a few chief facts as to these two breeds of goats.

T. S. R.

Answer.—The Angora goat takes its name from the Turkish city and village of Angora, in the interior, mountainous region of Asia Minor (about 220 miles E. S. E. of Constantinople), which exports 2,000,000 lbs of mohair annually. The animals are highly prized, and command from $250 to $1,250 for the finest males and $200 to $900 for females, there being several varieties. The Cashmere goat is named from Cashmere, a province between India proper and Thibet. The animals are most numerous in Thibet, but most of the wool—or mohair, as it is technically termed—is manufactured in Cashmere, the 16,000 or more looms of which turn out about 30,000 shawls every year, worth in London from £100 to £450. There are marked differences in the "staples" of these two species of goats. They both have two coats. In the case of the Angoras there is a coarse, short hair close to the skin, and a long, curly, outer covering of the nature of wool, very soft and silky and, in good varieties, from seven to nine inches long. This is the more bulky and valuable part of the fleece. The Cashmere goat, on the contrary, has a coarse, outer coat of different shades from gray to black and a fine undergrowth of beautifully soft, silky texture, almost downy. It is perfectly straight, of a uniformly grayish color and glossy luster, and is fully double the length of the Angora staple, the best grades measuring eighteen inches. This is combed out of the animal's coat in the spring, when it begins to be shed, and the product is so light that it has been

said that the average yield is but three ounces per goat, which would require the product of ten goats for the manufacture of a shawl a yard and a half square. It is certain, however, that the yield of the finer animals ranges from seven to nine ounces. The value of this mohair in Cashmere is from 30 to 40 cents a pound. It is not exported to this country to such a degree as to establish a market quotation. There is some of the Angora mohair imported for manufacture in our Eastern States, at prices ranging, according to quality, from 60 cents to $1 a pound. The Angora goat has been successfully introduced into the British colonies of South Africa. Cape Colony alone exported in 1878 the sum of 1,300,585 pounds, valued at £105,313, or about 32 cents a pound. It is believed that it can be raised with profit in the mountainous parts of Georgia and Alabama, and still farther north; and in the mountainous districts of California and Oregon.

AN EARLY CALIFORNIAN COIN.

CHICAGO, Ill.

Please give the origin of the $20 gold piece of 1853, marked on one side, “San Francisco;” on the other, “Moffat & Co.” Is it worth anything above its face value?

J. A. BLOSS.

Answer.—It being impossible to find any quotation of the value of the coin referred to, Messrs. Stevens & Co., well-known numismatists of this city, were asked to answer the above questions. The following is their reply: “The $20 gold piece here designated gives a good deal of trouble to curiosity hunters and coin collectors in general; very much as is the case with the silver dollar of 1878 with eight feathers in the eagle’s tail. There is no premium on either of them. There is no certain history of the Moffat & Co. pieces. They were a private coinage and issued under miner’s law; and all ’49 Californians know the potency or persuasive powers of that law. The quality or fineness of the pieces is below standard and their value much below our current $20 piece. The San Francisco mint was established in July, 1852, and very soon after that all private coinages ceased. Most of these pieces find their way into the brokers’ offices and are sold only at bullion prices.”

MOCHA COFFEE.

Mayville, D. T.

Where does Mocha coffee come from, and what makes it so much higher priced than other coffee?

Edward Palmer.

Answer.—The genuine Mocha coffee is produced in the province of Yemen, South Arabia. It takes its name from Mokha, the chief port of exportation, on the Red Sea. Very little of it, and that of inferior quality, is ever seen west of Constantinople. Mr. W. G. Palgrave, the Arabian traveler, says: "Arabia itself, Syria, and Egypt consume fully two-thirds of the annual crop, and the remainder is almost exclusively absorbed by Turkish and Armenian esophagi. Nor do these last get for their share the best or the purest. Before reaching the harbors of Alexandria, Jaffa, Beyrout, etc., for exportation beyond there, the northern bales have been sifted and resifted, grain by grain, and whatever they may have contained of the hard, rounded, half transparent, greenish-brown berry, the only one really worth roasting and pounding, has been carefully picked out by experienced fingers, and it is the less generous residue of flattened, opaque, and whitish grains which almost alone goes on the shipping. So constant is this selecting process that a gradation regular as the degrees in a map may be observed in the quality of Mokha, that is Yemen, coffee, even within the limits of Arabia itself in proportion as one approaches to or recedes from, Wadi Nejran and the neighborhood of Mecca, the first stages of the radiating mart." About 10,000 pounds of this coffee are exported annually through the port of Mokha, says another authority; but this seems to be consumed, as Mr. Palgrave says, mainly in Africa and Turkey.

The Mocha sold in the markets of Western Europe and America is from the East Indies. Some of it even never crossed the Atlantic, being produced in the West Indies or Central or South America. The really exquisite flavor of this choice, small berried coffee, together with the almost fanatical prejudice of the Turks for it, because it is raised in Arabia, and the limited production, sufficiently account for the high price it commands.

INDEX OF PERIODICAL LITERATURE.

CHICAGO, Ill.

> A party of ladies studying Shakespeare are deeply interested in the Baconian theory. We find very little concerning it in books. Can you tell us if there are any valuable magazine articles on this subject, and where they may be found? What guide is there to periodical literature?
>
> MRS. M. B. W.

Answer.—Happily we do now know where to direct not only this correspondent but other inquirers where to find a complete index of all periodical literature in the English language of any importance, whether upon the above-named subject or any other. It is in "An Index to Periodical Literature," by William Frederick Poole, LL. D., Librarian of the Chicago Public Library: published by James R. Osgood & Co., Boston. This is the only work of the kind, except Dr. Poole's first and second indexes, published the one in 1848, and the other in 1853, both of which are out of print and were mere pamphlets in comparison with this noble volume, a royal octavo of 1,442 pages. Fresh from the press, it is brought down to a very recent date. The answers to the above questions and another, from two correspondents who wish to read up on the protective tariff and free trade controversy, may serve to illustrate the advantages of this invaluable index. Under William Shakespeare there are eight and a half columns of references by title to articles in American and English reviews and magazines on Shakespeare and his works, all of which are alphabetically arranged. Running along the "A" column we come to "Authorship of" (Shakespeare), "and Lord Bacon. (Delia Bacon) Putnam, 7:1.—Frazer, 90:164. Same art, Liv. Age, 123:131.—Chamb, J., 18:87—Nat. R. 5:72—Canad. Mo. 16:76—(A. Morgan) Appleton, 21:112, 481. 23:481. 24:14—(M. B. Benton) Appleton 21:336.-Blackw, 80:616.—(C. C. Shackford) No. Am. 85:493.—(A. G. Sedgwick) No. Am. 104:276.—(N. Hawthorne) Astan. 11:43.—(E. O. Vaile) Scrib. 9:743.—(J. F. Clarke) No. Am. 132:163.—(W. H. Smith) Liv. Age, 51:481.—Harper, 34:263.—Nation, 2:402.—Scrib., 9:392." This answers Mrs. M. B. W.'s question as to where she and her Shakspearean Club are to look for periodical literature on the Baconian theory of the authorship of Shakespeare.

Now turn to "Tariff," and there are nearly two columns of titles of articles on this subject and where to find them; among them being the following, arranged under the head of "Protective Tariff."

"Protective, (J. C. Pray) Hunt, 2:119.—(H. J. Burton) Hunt, 11:254.—(M. D. L. Rodet) Hunt, 11:299.—(E. Everett) No. Am., 19:223.—(A. H. Everett) No. Am., 03:160; 32:127.—No. Am., 35:265.—(F. Bowen) No. Am., 73:90.—(H. Greeley) Am. Whig R. 2:111; 4:215; 5:201; 14:81. Ed. R., 72:321. Dem. R., 7:341; 9:329; 10:357; 14:291, 447; 19:163.—Am. Q., 10:444; 11:345.—So. R., 2:582; 6:206; 8:213.—Niles R., 17:87; 19:331; 20:306, 354; 21:121, 147; 22:2, 292; 23:40, 118; 24:99, 116.—So. Lit. Mess., 8:421."

Turning to the introduction of the book we find all the above abbreviations clearly explained, and the place of publication of each of the several periodicals referred to. For example: "Putnam, 7:1," stands for Putnam's Magazine, number 7, page 1; "Blackw. 80:616," signifies Blackwood's Magazine, number 80, page 616, and so on. Every public library in the land—city, village, college, high school, whatever its name—needs such a guide as this to periodical literature, and it is easy to see that no private library of any pretensions can do without it.

WHY 1900 WILL NOT BE A LEAP YEAR.

TIPTON, Iowa.

> Will the year 1900 be a leap year? Robinson's Arithmetic says that 1896 will be a leap year but 1900 will not be. If this is true, please explain why.

STUDENT.

Answer.—The old Roman year contained but 355 days, divided into twelve lunar months, with an intercalary month thrown in at certain intervals, as became necessary, to atone for the fact that it requires more than twelve precise lunar months to make a year. This arrangement led to great confusion, and Julius Cæsar, in the year B. C. 46, remedied the trouble in large degree by the introduction of what is known as the Julian calendar, which regarded the year as composed of 365¼ days. This was a great

improvement, but as a matter of fact the natural year contains 11 minutes 10 seconds less than 365¼ days, which difference amounts in a hundred years to 18 hours 36 minutes 40 seconds, or a little more than three-fourths of a day. As a consequence, between the year A. D. 325—when the Council of Nice established the rule for the determination of Easter Sunday—and the year 1582 there was found to be an accumulated error of ten days. Whereas the sun had crossed the equator at the vernal equinox of A. D. 325 on March 21, it crossed it in 1582, according to the Julian calendar, on March 11. Pope Gregory XIII., resolved on ending the confusion attendant upon this imperfection of the generally accepted calendar, ordained that what according to this mode of reckoning would have been Oct. 5, 1582, be reckoned as Oct. 15; and to prevent a repetition of the error he further ordained that every hundredth year should not be a leap year, excepting the year 2000 and every four hundredth year thereafter. Manifestly the omission of an entire day every four hundredth year would be too much by about one day, since, as above shown, the error in the Julian mode of reckoning amounts only to 18h. 36 min. 40 sec. in a hundred years, or about three days in four hundred years. This correction the Gregorian amendment effects by the rule above stated, which took the years 1700, 1800, and 1900 out of the list of leap years, and left the year 2,000 in that list. This leaves but the small difference of 36 min. and 40 sec. in a hundred years between the civil and natural years: which amounts to no more than twenty-two seconds a year, or about six hours in 1,000 years. In England the change from the old style of reckoning to this new style was not ordered until 1751, by which time the error that was but ten days in Gregory's time had grown to eleven days. The order took effect in England and the Colonies as regarded all official dates and reckoning, in September, 1752, when eleven days were left out of the calendar by reckoning Sept. 3 as Sept. 14. This explains apparent discrepancies between authors who wrote in the latter half of the last and the early part of this century. For example, some early biographies of Washington say that he was born Feb. 11, others that he was born Feb. 11, O. S., or Feb. 22, N. S. Some biographical sketches of John Adams, Washington's successor, declare that he was born Oct. 19, 1735, without indicating that this was according to the old reckoning, while others state that he was born Oct. 30.

LEGISLATION FOR THE PEOPLE.

DENVER, Col.

Enumerate the acts passed since the Republicans have been in power which have served to benefit the people generally, and not some corporation or monopoly only. An elderly Democrat declares that the Republican party has never passed any such laws.

C. S. HOLLEY.

Answer.—It is useless to waste words on men so ignorant or politically mendacious as "elderly Democrat." The following memorandum is for the benefit of younger and fairer minded men. First of all there is the series of acts ending in the preservation of the Union and the emancipation of 4,000,000 men who were so far from being "monopolists" or holders of corporation shares that they were slaves; as they would be to-day had the Democrats remained in power. It would take columns to enumerate the laws brought forward by Republicans and enacted since they came into power which have immensely benefited the people at large, and not "only monopolies," as you express it. Among these are the laws which have brought cheap postage and rapid postal transportation; the homestead and timber culture acts; the establishment of the only thoroughly secure national paper currency and general banking system this country has ever enjoyed; the resumption of specie payments in the face of Democratic and Greenbacker opposition; the maintenance of the public credit against rebellion in the South and the Democracy in the North, re-enforced subsequently by the Greenback party, both clamoring for total or partial repudiation; the abolition of all duties on tea and coffee; the establishment of State schools of agriculture and industrial science, endowed by government land grants; the promotion of American inventions, manufactures, and mining, until it is considered that this country leads the world in useful inventions, and the capital invested in its factories is nearly three times as great as it was in 1860, when the Republicans came into power—the number of hands employed being 2,738,885, or more than double as many; the amount paid in wages, more than two and a half times as much; the value of farms, forest, mine and other materials consumed (nearly all American) about three and a third times as much; and the value

of the product almost three times as great. As some of the consequences of the above industrial legislation, the public lands are passing into the hands of the people in homesteads and timber culture claims alone at the rate of 8,000,000 acres a year; and the twenty years from 1860 to 1880 added as many farms to the cultivated domain of the country as all its previous history. Gold, notwithstanding all the products of our fields and mines, not only stopped flowing out of the country, as it had done during all our former history, but began to pour in from other lands, millions on millions. While throughout all the vast interior of the country, notwithstanding the marvelous multiplication of farms, farm products are higher than in 1860, and nearly all manufactured goods that enter into general consumption are lower. In the same brief period the assessed taxes on real estate and personal property have mounted from $12,084,560,005 to $16,902,993,543.

EARTHQUAKES.

LAY, Col.

Please tell us the cause of earthquakes. Are they due to internal convulsions of the earth or to atmospheric disturbances?

JACOB SLONEKER.

Answer.—According to that eminent physicist, F. W. Rudler (see his contribution to the Encyclopedia Britannica on "Earthquakes"), "even at the present day, after all that has been written on the subject, but little is known as to the origin of earthquakes." The general opinion of investigators is that these agitations proceed from within outward, and are not of atmospheric or other external origin. True, Professor Alexis Perry, of Dijon, France, thought he had discovered relations between the ages of the moon and these recurrences, which seemed to sustain the theory of Zantedeschi, that the liquid nucleus of the earth responds to the moon's attraction in tides, somewhat as the ocean does: but the theory that the earth has a liquid nucleus covered with only a thin, solid crust, is losing adherents continually. The theory of vibration communicated by meteoric impact has been advanced as accounting for some earthquakes. Another theory is that earthquakes are caused in some instances by steam from water rushing into the bowels of volcanoes, or from explosions of pent-up gases, generated by

chemical decomposition of minerals. Others believe that many of these phenomena are due to magnetic disturbances, following eruptions in the sun. The prevailing opinion still is that whatever their origin, whether of one cause, or various causes, the vibrations of every earthquake can be traced to a focus within the earth, and that this lies directly beneath the point of greatest disturbance on the earth's surface. After the great shock at Naples in 1857, Mr. Mallet, aided by the Royal Society, by determining the wave paths of the shock at twenty-six different stations, was able to locate the focal depth of the earthquake at about five and a half miles; and Dr. Oldham, by observations on the wave effects of the earthquake which occurred at Cachar, India, on Jan. 10, 1869, found that the focus of disturbance must have been about thirty miles below the surface. This is very near the maximum depth at which any earthquake is likely to originate, if we accept the reasoning of that most eminent of all investigators of this class of phenomena, Mr. Mallet, of Dublin, Ireland. There are credible records of between 6,000 and 7,000 earthquakes between 1606 B. C. and 1842 A. D. Professor Fuch's more careful observations of recent years show that there were probably many times that number of unrecorded ones, since he registered ninety-seven during the year 1875 and 104 during 1876. In view of this fact this subject appears to be one of the most interesting problems of nature and is attracting growing attention, which, it is hoped, will presently lead to definite, satisfactory conclusions.

SOUTHEASTERN DAKOTA.

PLANKINGTON, D. T.

Having seen questions in THE INTER OCEAN inquiring about Dakota, and seeing no answers from this county, I concluded to write and tell what I know of it. Aurora is the fourth county from the eastern boundary and the third from the southern. It is considered by all who have traveled over it as one of the finest in Southern Dakota. The county is forty-eight miles long and twenty-four miles wide. In the northwestern portion are situated the "Wessington Hills." These extend from northeast to southwest as far as the Missouri. Among them are beautiful broad valleys and lakes of clear water. The climate is all that can be desired. Last summer the days were warm and the nights invariably cool, so that after a hard day's work you could lie

down and rest sweetly. The past winter here, as in all other parts of the Northern States, has been very cold and stormy. One month, however, would take in all of the very cold weather. One foot would cover all the snow that we have had this winter. The soil is a black loam, varying in depth from one to six feet. The shallowest we have found on our land is eighteen inches, and the deepest four feet. It is very productive. Last year the crops yielded as follows: Corn from 25 to 60 bushels per acre, wheat from 20 to 40 bushels, oats from 50 to 80 bushels, barley from 30 to 60 bushels, rye from 40 to 60 bushels, flax from 7 to 22 bushels, buckwheat from 10 to 30 bushels, potatoes from 100 to 300 bushels, and all other vegetables yielded enormously. The way this county is filling up is wonderful. One year ago last fall there were only about 150 people in the county, and to-day there are between 450 and 500, and scores more coming on every train. If emigrants continue coming as they have done for the last eighteen months, this county will soon be filled up. Spring has already opened out with us, and farmers are putting in their wheat and barley. Plankington, our county seat, which hardly had a name eighteen months ago, is to-day a fine little village of over 700 inhabitants. With early and deep planting this country will grow almost anything.

THOMAS JACKA.

INCOME OF THE CZAR.

FORT WAYNE, Ind.

Will you inform us through Our Curiosity Shop from what source the Emperor of Russia receives his income of $25,000 a day?

S. S. COLEMAN.

Answer.—The annual income of the Czar of all the Russias probably averages a great deal more than $25,000 a day. The crown domains comprise more than a million square miles, covering an area exceeding that of all our New England, Middle, and Southern States. These include cultivated lands, pastures, and forests in different parts of this vast empire, which embraces in its despotic arms more than one-sixth the entire land surface of our globe. Besides the revenue from the above estates, the Czar

derives a large income from gold, silver, copper, and other mines in Siberia. The actual total of his immense revenue from all these sources is not stated in the government budgets or finance accounts, the crown domains being considered the private property of the imperial family. In a British consular report of 1867 the total income of the imperial family is estimated at £2,450,000 sterling, which is an average of about $33,500 a day. The imperial contributions to charities, schools, theaters, etc., are estimated by the same authority at about £450,000, leaving a net sum of £2,000,000 a year to "keep the family."

GETTYSBURG AND WATERLOO.

RED OAK, Iowa.

What was the most destructive battle of the late civil war; and how did it compare with the battle of Waterloo as to numbers engaged and loss of life?

INQUIRER.

Answer.—The heaviest losses suffered by either side in any single battle of the late war were at Gettysburg. The numbers engaged and the losses are stated differently by different writers. Before the Committee on the Conduct of the War, General Meade, the Union commander, said: "Including all arms of the service, my strength was a little under 100,000—about 95,000." Understanding this to include General French's 7,000 men, who were by a blunder kept idle at Frederick, and about 4,000 more of French's force, who had been detailed for special service—none of whom were brought into this battle—it would appear that Meade's force at Gettysburg was about 84,000 men of all arms. This corresponds very nearly with General Humphrey's statement that the Army of the Potomac in this action comprised 70,000 infantry and 10,000 cavalry, with an artillery force of 300 guns. Of the Confederate forces, General Humphrey says that General Lee entered Pennsylvania with 85,000 infantry, 8,000 cavalry, and a due proportion of artillery. Greeley's "American Conflict" says: "Lee's army, carefully counted by two Union men independently, as it marched through Hagerstown, numbered 91,000 infantry, with 280 guns and 6,000 cavalry, while not less than 5,000 cavalry under Stuart advanced into Pennsylvania

without passing through Hagerstown." The Union loss was 23,190, of whom 2,834 were killed, 13,713 wounded, and 6,643 missing. The Confederate loss is not officially stated. It is estimated by one writer (in the American Cyclopedia) at 5,000 killed, 23,000 wounded, and 8,000 unwounded prisoners—a total of 36,000, which is evidently an exaggeration. Greeley's "American Conflict" estimates Lee's loss at 28,000, of whom 18,000 were killed and wounded, and 10,000 were unwounded prisoners; while J. Watts de Peyster, in Johnson's Cyclopedia, estimates Lee's loss at 31,600—18,000 killed and wounded, and 13,600 missing, which includes the unwounded prisoners in our hands. In the battle of Waterloo, the French army under Napoleon I. (according to P. Nicholas, in Haydn's Dictionary of Dates) numbered 71,947 men and 246 guns, and the allies 133,661 men of all arms and 260 guns—English, under Wellington, 67,661; Prussians, 66,000 men. The loss of the allies was 22,976: of whom 4,206 were killed, 14,539 wounded, and 4,231 missing. The French loss was 18,500 killed and wounded, and 7,800 prisoners, total 26,300; but other accounts, including some French writers, make their loss about 30,000, the figures given in most English and American cyclopedias.

FRAUDULENT HOMESTEAD AND TIMBER CLAIMS.

LaCrosse, Wis.

> Is it not the intention of the pre-emption, homestead, and timber-culture laws to encourage actual settlement and improvement of the country, and are not these laws constantly used to encourage fraudulent speculation, to the disadvantage of bona fide settlers?
>
> CITIZEN.

Answer.—Undoubtedly the laws mentioned were enacted for the benefit of actual settlers, and not for the enrichment of speculators. The following communication from Samuel Huckins, Esq., of Hartford, D. T., just received, may be taken as an expose of the actual use made of the laws in thousands of instances: "I have been a reader of your worthy paper from the first year of its publication, and as I live away out here in the far West I take a great interest in the doings of Congress in regard to the public lands, of

which THE INTER OCEAN has so much to say. Now my theory and belief is, and always has been, that the public lands should be given to those who will cultivate and improve them—actual settlers who will make for themselves and their descendants a home—and not throw this munificent gift of the National domain into the hands of land-sharks and speculators. Every person taking a claim, and those now holding claims under any of the different acts of Congress, should occupy and cultivate such lands according to the spirit and intent of the laws granting them the same. I think Congress made a very grave error in giving persons who had filed their entries of land under the homestead act the privilege to pay $1.25 per acre for it instead of residing on the land five years, thus giving those who never occupied the land, and probably never will, a great advantage over the first settlers on homestead land, who, in order to hold their claims, had to make the required improvements and have an actual residence. I believe from my personal knowledge that three-fourths of the land acquired under the above act passed into the hands of capitalists and speculators. The bogus homesteader would go to some money lender and get enough money to prove up on his land—say $200 for 160 acres and $50 or $100 besides—giving a deed or mortgage on the same as security. In this way the poor, honest home-seeker is cheated out of the land. There are a great many claims out here, especially timber claims, held by persons who have not fulfilled the requirements of the law, but as the law is now administered they can hold them with impunity. A great share of the land now covered by timber-culture claims on file is in reality far more effectually covered with rank weeds than with growing timber. Under the present system this law is of little value, and keeps off the sincere home-seeker, who would improve the land and help to build up schools and churches, and make for himself and family a much needed home."

ASSASSINATED ON GOOD FRIDAY.

CHICAGO, Ill.

Please decide whether President Lincoln was assassinated on Good Friday, and settle a dispute.

CONTESTANT.

Answer.—President Lincoln was assassinated on Friday, April 14, 1865, which was Good Friday.

THE DISCOVERY OF MEXICO.

Crab Orchard, Ill.

Who discovered Mexico?

Felix M. Burdett.

Answer.—The first knowledge of Mexico that reached the Spaniards otherwise than by vague and uncertain stories of natives of the West Indies came through two expeditions fitted out by Diego Velasquez, who made the first European settlements in Cuba. The first of these, under the command of Cordova, sailed from St. Jago de Cuba, Feb. 8, 1517, and landed on the shores of Yucatan and Campeachy. The second, commanded by Grijalvo, landed at various places on the coast, but returned without penetrating into the interior or making a settlement. It carried back such reports of the high civilization and great wealth of Mexico, learned through the natives, as served to intensify the determination of Velasquez to explore, and, if possible, conquer the country. He fitted up a fleet of eleven small vessels and placed them in command of Fernando Cortez, who set sail from Cuba, Feb. 10, 1519; landed near the present city of Vera Cruz, on March 4, and became the first actual explorer of the country, and the founder of the Spanish dominion in Mexico.

TITLE OF PRINCE OF WALES.

Hebron, Neb.

1. What is the origin of the title of the Prince of Wales? 2. Who pays the cost of the dinners given at the White House, and what is the annual expense on this account?

James Knox.

Answer.—1. On the conquest of Wales by Henry III. of England, he bestowed the principality of Wales and earldom of Chester on his son, afterward Edward I., as an office of trust and government. In 1343 Edward

III. invested his son Edward, the "Black Prince," with the principality, and from that time the eldest son of the reigning King has borne the title of Prince of Wales. 2. The President pays the expenses of entertainments given at the Executive Mansion out of his annual allowances, and the amount so expended is a private matter.

J. C. CALHOUN—WHIG PARTY.

VOLGA CITY, Iowa.

1. Why did John C. Calhoun resign the office of Vice President? 2. Who was his successor? 3. What caused the death of the Whig party?

H. C. DAVIS.

Answer.—1. Calhoun aspired to the Presidency at the end of President Jackson's first term. This led to a personal alienation and final violent rupture between the two. Calhoun was elected Vice President along with Jackson in 1828, but he resigned the office in 1831 for the above reason, and in order to accept the United States Senatorship vacated by Mr. Hayne when the latter was elected Governor of South Carolina. 2. Martin Van Buren, of New York, succeeded Mr. Calhoun. 3. The growth of the Free Soil and Abolition parties in the North killed the old Whig party.

GREAT FIRES OF HISTORY.

FREDONIA, N. Y.

How did the loss of lives and property in the great fire in Chicago compare with the losses in what are distinguished as the great fires of London and Moscow? Give a list also of the other principal fires recorded in history, and oblige

A CONSTANT READER.

Answer.—The loss of life and property in the willful destruction by fire and sword of the principal cities of ancient history—Nineveh, Babylon, Persepolis, Carthage, Palmyra, and many others—is largely a matter of

conjecture. The following is a memorandum of the chief conflagrations of the current era:

In 64, A. D., during the reign of Nero, a terrible fire raged in Rome for eight days, destroying ten of the fourteen wards. The loss of life and destruction of property is not known.

In 70, A. D., Jerusalem was taken by the Romans and a large part of it given to the torch, entailing an enormous destruction of life and property.

In 1106 Venice, then a city of immense opulence, was almost wholly consumed by a fire, originating in accident or incendiarism.

In 1212 the greater part of London was burned.

In 1666 what is known as the Great Fire of London raged in the city from Sept. 2 to 6, consuming 13,200 houses, with St. Paul's Church, 86 parish churches, 6 chapels, the Guild Hall, the Royal Exchange, the Custom House, 52 companies' halls, many hospitals, libraries, and other public edifices. The total destruction of property was estimated at $53,652,500. Six lives were lost, and 436 acres burnt over.

In 1679 a fire in Boston burned all the warehouses, eighty dwellings, and vessels in the dock-yards; loss estimated at $1,000,000.

In 1700 a large part of Edinburgh was burned; loss unknown.

In 1728 Copenhagen was nearly destroyed; 1,650 houses burned.

In 1736 a fire in St. Petersburg burned 2,000 houses.

In 1729 a fire in Constantinople destroyed 12,000 houses, and 7,000 people perished. The same city suffered a conflagration in 1745, lasting five days; and in 1750 a series of three appalling fires: one in January, consuming 10,000 houses; another in April destroying property to the value of $5,000,000, according to one historian, and according to another, $15,000,000; and in the latter part of the year another, sweeping fully 10,000 houses more out of existence. It seemed as if Constantinople was doomed to utter annihilation.

In 1751 a fire in Stockholm destroyed 1,000 houses; and another fire in the same city in 1759 burned 250 houses with a loss of $2,420,000.

In 1752 a fire in Moscow swept away 18,000 houses, involving an immense loss.

In 1758 Christiana suffered a loss of $1,250,000, by conflagration.

In 1760 the Portsmouth (Eng.) dock-yards were burned, with a loss of $2,000,000.

In 1764 a fire in Konigsburg, Prussia, consumed the public buildings, with a loss of $3,000,000; and in 1769 the city was almost totally destroyed.

In 1763 a fire in Smyrna destroyed 2,600 houses, with a loss of $1,000,000; in 1772 a fire in the same city carried off 3,000 dwellings, and 3,000 to 4,000 shops, entailing a loss of $20,000,000; and in 1796 there were 4,000 shops, mosques, magazines, etc., burned.

In 1776, six days after the British seized the city, a fire swept off all the west side of New York city, from Broadway to the river.

In 1771 a fire in Constantinople burned 2,500 houses; another in 1778 burned 2,000 houses; in 1782 there were 600 houses burned in February, 7,000 in June, and on Aug. 12, during a conflagration that lasted three days, 10,000 houses, 50 mosques, and 100 corn-mills, with a loss of 100 lives. Two years later a fire, on March 13, destroyed two-thirds of Pera, the loveliest suburb of Constantinople, and on Aug. 5 a fire in the main city, lasting twenty-six hours, burned 10,000 houses. In this same fire-scourged city, in 1791, between March and July, there were 32,000 houses burned, and about as many more in 1795; and in 1799 Pera was again swept with fire, with a loss of 13,000 houses, including many buildings of great magnificence.

In 1784 a fire and explosion in the dock-yards, Brest, caused a loss of $5,000,000.

But the greatest destruction of life and property by conflagrations, of which the world has anything like accurate records, must be looked for within the current century. Of these the following is a partial list of instances in which the loss of property amounted to $3,000,000 and upward:

Dates.	Cities.	Property destroyed.

1802	Liverpool	$5,000,000
1803	Bombay	3,000,000
1805	St. Thomas	30,000,000
1808	Spanish Town	7,500.000
1812	Moscow, burned five days; 30,800 houses destroyed	50,000,000
1816	Constantinople, 12,000 dwellings, 3,000 shops	.....
1820	Savannah	4,000,000
1822	Canton nearly destroyed	.....
1828	Havana, 350 houses	.....
1835	New York (“Great Fire”)	15,000,000
1837	St. Johns. N. B.	5,000,000
1838	Charleston, 1,158 buildings	3,000,000
1841	Smyrna, 12,000 houses	.....
1842	Hamburg, 4,219 buildings, 100 lives lost	35,000,000
1845	New York, 35 persons killed	7,500,000
1845	Pittsburg, 1,100 buildings	10,000,000
1845	Quebec, May 28, 1,650 dwellings	3,750,000
1845	Quebec, June 28, 1,300 dwellings	.....
1846	St Johns, Newfoundland	5,000,000
1848	Constantinople, 2,500 buildings	15,000,000
1848	Albany, N. Y., 600 houses	3,000,000
1849	St. Louis	3,000,000
1851	St. Louis, 2,500 buildings	11,000,000
1851	St. Louis, 500 buildings	3,000,000
1851	San Francisco, May 4 and 5, many lives lost	10,000,000
1851	San Francisco, June	3,000,000
1852	Montreal, 1,200 buildings	5,000,000
1861	Mendoza destroyed by earthquake and fire, 10,000 lives lost	....
1862	St. Petersburg	5,000,000
1862	Troy, N. Y., nearly destroyed	
1862	Valparaiso, almost destroyed	
1864	Novgorod, immense destruction of property	.....
1865	Constantinople, 2,800 buildings burned	.....

1866	Yokohama, nearly destroyed 1865 Carlstadt, Sweden, all consumed but Bishop's residence, hospital, and jail; 10 lives lost	.....
1866	Portland, Me., half the city	11,000,000
1866	Quebec, 2,500 dwellings and 17 churches	.....
1870	Constantinople, Pera suburb	26,000,000
1871	Chicago, 250 lives lost, 17,430 buildings burned, on 2,124 acres	192,000,000
1871	Paris, fired by the Commune	160,000,000
1872	Boston	75,000,000
1873	Yeddo, 10,000 houses	.....
1877	Pittsburg, caused by riot	3,260,000
1877	St. Johns, N. B., 1,650 dwellings, 18 lives lost	12,500,000

From the above it appears that the five greatest fires on record, reckoned by destruction of property, are:

Chicago fire, of Oct. 8 and 9, 1871	$192,000,000
Paris fires, of May, 1871	160,000,000
Moscow fire, of Sept. 14-19, 1812	150,000,000
Boston fire, Nov. 9-10, 1872	75,000,000
London fire, Sept. 2-6, 1666	53,652,500
Hamburg fire, May 5-7, 1842	35,000,000

Taking into account, with the fires of Paris and Chicago, the great Wisconsin and Michigan forest fires of 1871, in which it is estimated that 1,000 human beings perished and property to the amount of over $3,000,000 was consumed, it is plain that in the annals of conflagrations that year stands forth in gloomy preeminence.

LOSS OF THE LADY ELGIN.

CRETE, Ill.

When was the Lady Elgin lost, on Lake Michigan and how many persons were lost, and saved?

JOHN MILLER.

Answer.—The steamer Lady Elgin was cut to the water's edge by a sailing vessel named the Augusta, heavily loaded with lumber, which struck her amidships, during the night, Sept. 8, 1860. She sunk almost immediately. Carrying an excursion party from Chicago to Milwaukee at the time, she had about 400 passengers on board. The disaster occurred about twenty-two miles north of Chicago, nearly off Glencoe. Many of the passengers and crew got on rafts and portions of the wreck, and drifted toward the land. Some of these came ashore between Glencoe and Evanston; but the most of them, after getting within hail of the beach, despite the best efforts of citizens and students of Evanston and Winnetka to assist them, were swallowed up in the breakers and carried out into the lake by the terrible undertow. Men with ropes around their chests plunged into the breakers, seized exhausted, drowning men and women, and were dragged in by main strength of men at the lines. Conspicuous among these noble men was Mr. Edward W. Spencer, of Rock Island, Ill., then a student at Garrett Biblical Institute, who saved fourteen or fifteen passengers, persisting until he was utterly exhausted; an example of heroism which was suitably commemorated afterwards by the presentation of a memorial watch and chain, given him by citizens of Chicago and Evanston. Of the total list of passengers only about one-fourth were rescued; 297 perished.

AUSTRALIA.

COLMAR, Ill.

What are the area and principal natural features of Australia, and the nationalities and chief occupations of its population?

CHARLES L. BRICKWELL.

Answer.—Australia, often spoken of as an island, is about ten times the size of Borneo, the largest island of the world properly so called, and is nearly half the size of South America. To be more specific, it measures about 2,500 miles from east to west, and 1,950 from north to south, containing an estimated area of 3,000,000 miles. This is about the same as the entire extent of the United States, exclusive of Alaska. Along the east and west coasts the country is broken, rising at no great distance from the sea into a succession of mountain ranges; but the vast interior is almost as

level as a gently undulating ocean-bed, which it evidently was at no very distant period—geologically speaking. It seems to be for the most part a great sandstone basin, rising toward the coast in nearly every direction. The mountain range in the southeast, known as the Australian Alps, rises to a height of 7,000 feet; the granite and syenitic mountains on the west coast range from 800 to 3,000 feet in elevation, and those along the coast of Queensland, and along the greater part of the north coast, from 1,000 to 4,000 feet. There are immense quantities of coal in Eastern Australia, rich gold mines, some silver, and an abundance of iron, copper, and tin. The broken and much of the mountainous regions are well wooded, but the interior is comparatively naked, and much of it wears a parched look, like the dry, treeless plains of Eastern Wyoming and Colorado, which are available for flocks and herds the most of the year, but not cultivable with profit without artificial irrigation. There are millions of acres of fine agricultural and grazing lands without entering this interior basis to any great distance; and the governments of the several provinces are offering liberal inducements to settlers. Few of the rivers of this vast country are navigable to any great distance, although several of them may be made so for a large part of the year by slight improvements of the channels. Conspicuous among the latter are Murray River, 1,100 miles long; the Roper and the Victoria. The regions beyond the seaboard are not likely to develop rapidly until means of transportation are extended. The railroad mileage of Australia is only a little over 4,042 miles, or about the same as that of Minnesota, which is thirty-six times smaller in area and began to be settled much later. The telegraph lines measure over 30,000 miles. The climate of the Southern half of Australia is quite similar to that of Southern Brazil or Cuba, and that of the greater part of the rest of the continent is a good counterpart of that of Southern Europe. The total population of the five provinces of Australia, by the census of 1881, is as follows:

New South Wales	751,468
Queensland	213,525
South Australia	279,865
Victoria	862,346
Western Australia	29,708
Total	2,136,912

The above does not include aborigines, estimated to number 80,000. The increase by immigration is not rapid. The population is mostly of British origin, but it embraces also nearly 10,000 Polynesians and 25,000 Chinese. The chief occupations are agriculture, grazing, mining, building, and commerce. Manufactures do not flourish, the colonies being dependent almost entirely upon the United Kingdom for manufactured goods. The chief exports are wool, hides, preserved meats, copper, lead, coal, and gold. The total quantity of gold mined in Victoria alone, from the discovery in 1851 to the end of 1880, amounted to 49,500,000 oz., valued at $990,000,000. The government of the several provinces is similar to that of the provinces of the present Dominion of Canada before their union.

ALDERNEYS AND JERSEYS.

SCOTT, Ind.

What is the difference between Alderney cattle and Jerseys, if any? Where did the breeds originate? Your answer will settle a dispute.

A SUBSCRIBER.

Answer.—Alderney, Jersey, and Guernsey are small islands in the British Channel, just off the coast of Normandy, France; from which the first, an isle of about four square miles in area, is separated by only a very narrow strait. Jersey, about sixteen miles off the coast, is a much larger and more fertile island, being about eleven times the size of Alderney. While the cattle of the three islands are all believed to have come from one common Norman stock, and pass under the common name of the Alderney breed, the Jersey cattle have been greatly improved by careful in-breeding, and are better milkers as to quantity, though not as to quality, than the native cattle of Alderney. Few cattle are exported from the latter island, while a considerable number of Jersey cattle are exported to England and this country, where nearly all the representatives of what is known as the Alderney breed are Jerseys. It would not be correct to speak of Alderneys and Jerseys as distinct breeds.

LOTTERY MATTER UNMAILABLE.

SHELL ROCK, Iowa.

Is it unlawful to send letters to lottery companies and lottery agents through the mails?

A SUBSCRIBER.

Answer.—Postal regulation 674 declares "No letter or circular concerning lotteries, so-called gift concerts, or similar enterprises, offering prizes," etc., "shall be carried in the mail. Any person who shall knowingly deposit or send anything to be conveyed by mail in violation of this section shall be punishable by a fine of not more than $500 nor less than $100, with costs of prosecution." Section 674 instructs postmasters and employes of the railway mail service to withdraw letters and third class matter addressed to lottery companies or agents from the mails and refer them to the proper officers for prosecution of the person mailing the same.

THE HIGH SEAS.

UNION GROVE, Wis.

1. What is meant by the "high seas" in article 1, section 8, of the Constitution of the United States? 2. Are the Great Lakes regarded as high seas? 3. If a crime were committed on any of the Great Lakes, where would the criminal be tried—in what court? 4. What persons are meant in the first clause of the ninth section of article 1 of the Constitution?

ROBERT ROBERTS.

Answer.—1. By the "high seas" is meant the open sea: that is the waters outside of the civil jurisdiction of any country, which the law of nations limits to one marine league, or three geographical miles from shore. 2. The Great Lakes are regarded, beyond the limits above designated, as high seas. 3. In the event of crimes committed on the high seas, parties charged therewith are subject to the jurisdiction of the Federal or United States courts in the district which the vessel first enters after the commission of the crime, or in the district where the offender is found. The courts of States bordering on the great lakes have jurisdiction concurrent with that of the

United States courts where it can be shown that the crime was committed within their limits, which extend to the central line of the lakes bounding them. 4. In the clause of the Constitution which reads: “The migration or importation of such persons as any of the States now existing shall think proper to admit shall not be prohibited by the Congress prior to the year 1808,” etc. The word “persons” was understood to mean African slaves. This form was adopted to avoid the use of the word slave in the Constitution, the very thought of which was repugnant to Washington, Adams, Jefferson, and other fathers of that instrument, whether from North or South. The slave trade, in conformity with the above clause of the Constitution, was promptly abolished in 1808.

UNIMPROVED LANDS—IMMIGRATION.

GANGES, Mich.

What proportion of the areas of Ohio, Michigan, Indiana, Illinois, Iowa, and Nebraska is still unimproved Also, please state the number of immigrants arriving in this country in 1882.

H. H. H.

Answer.—1. The census of 1880 gives the following statistics of improved lands embraced in farms in the several States above named, opposite which we place the total area of each State in acres:

States.	No. of farms.	Improved acres.	Total acres.
Ohio	247,189	18,081,091	26,278,400
Michigan	154,008	8,296,862	37,705,600
Indiana	194,013	13,933,738	23,264,000
Illinois	255,741	26,115,154	36,256,000
Iowa	185,351	19,866,541	35,856,000
Nebraska	63,387	5,504,702	49,187,200

From this it appears that nearly one-third of Ohio, more than three-fourths of Michigan, about two-fifths of Indiana, a little more than one-fourth of Illinois, about three-sevenths of Iowa, and almost nine-tenths of Nebraska remained unimproved as farm property at the time of the last

census. In settled States, the number of acres included in cities, towns, and villages, in roads, lakes, and navigable streams, will reduce the proportion of "unimproved acres" by about 2 per cent of the total area. The statistician of Indiana computes that there were in 1879, 249,686 acres, or 1⅛ per cent of the total State area, embraced in roads outside of cities and incorporated towns. 2. The total immigration into the United States in 1882 numbered 788,992.

LAW AGAINST CRUELTY TO ANIMALS.

ROSCOE, Ill.

Please publish in Our Curiosity Shop in condensed form the law of this State to punish cruelty to animals. A person in this neighborhood, remonstrated with for cruelly beating his horse with a pitchfork, retorts that "a man has a right to pound his own horse." Let us know the law for such cases.

A SUBSCRIBER.

Answer.—Chapter 38, section 50, of the Revised Statutes of Illinois says: "Whoever shall be guilty of cruelty to any animal in any of the ways mentioned in this section shall be fined not less than $3 nor more than $200, viz.: By overloading, overdriving, cruelly beating, tormenting, mutilating, or cruelly killing any animal; by cruelly working any old, maimed, infirm, sick, or disabled animal; by failing to provide any animal in his charge or custody with proper food, drink, and shelter; by abandoning any old, maimed, infirm, sick, or disabled animal; or by causing or knowingly allowing the same to be done."

EMANCIPATION IN JAMAICA.

SHULLSBURG, Wis.

In what year and by whom were the slaves of Jamaica emancipated? Also state the circumstances under which they gained their freedom.

RICHARD IVEY, M. D.

Answer.—In 1807 the British Government abolished the slave trade in all British vessels and in British waters. The agitation against slavery was kept up in Parliament from that time, growing more and more irresistible every year, and spreading out into the farthest provinces, until in 1832 the negroes of Jamaica revolted, under the belief that emancipation had actually been decreed and that their masters were holding them in slavery against law as well as against natural right. The atrocities to be expected in a servile insurrection ensued; hundreds of lives and millions of property were destroyed. When the terrible tidings reached England it added new fuel to the emancipation agitation, already at white heat, and in 1833 the famous English emancipation act was passed. The government apportioned £6,161,927 among the owners of the slave population, of 309,338 persons; and after four years apprenticeship all of these former slaves became absolutely free.

BARNBURNERS AND HUNKERS.

Grand Rapids, Mich.

How and when did the political nicknames "Hunker" and "Barnburner" originate in the State of New York?

J. H. P.

Answer.—The Democratic party within New York State became badly divided soon after the inauguration of Mr. Polk, in 1845, owing to the slights put on Governor Silas Wright, of that State, to whose immense popularity Polk really owed his election. Wright could not carry all his friends over to Polk, as is shown by the fact that he was elected Governor by 10,030 majority, while Polk carried the State by 5,106. This, however, decided the electoral count in his favor. Polk was really a weak man, and showed it in nothing more than in his jealousy of Wright and annoyance at the general ascription, of his election by the organs of both parties, to Wright's influence. He tendered Wright the choice of places in his Cabinet under constraint of the general wish of the party, and knowing that this statesman felt bound to retain the high office to which the people of New York had exalted him. Wright declined, but asked that Azariah C. Flagg, of New York, be made Secretary of the Treasury, and he understood the

President to promise this; yet afterward the latter declined to make the appointment, and gave the portfolio of Secretary of State to ex-Governor Wm. L. Marcy, of New York, who was by no means friendly to Wright. The Collectorship of New York, it was understood, would be given as Governor Wright and ex-President Van Buren should request, but here again the President disappointed them. All this reminds us forcibly of the divisions in the Republican ranks in the same State, due to the Garfield-Conkling feud. The trouble rankled, and the Democratic party became divided into two pronounced factions before the election of delegates to the next gubernatorial convention. There were the administration Democrats, calling themselves Conservatives, and the "sore-heads" of those days, stigmatized as Radicals, because, among other things, they were affected with anti-slavery, or "free-soil" sentiments; whereas the administration party was strongly pro-slavery. In the Democratic State Convention, held at Syracuse early in 1847, the latter faction, by political manipulation, secured the organization of that body, and decided nearly all the contested seats in their own favor and made the State ticket and the State Committee to suit themselves; in other words, "carried off the hunk," and fairly won the nickname of "Hunkers." The other faction, led on by Governor Wright's friends, Mr. Van Buren, Colonel Samuel Young, Michael Hoffman, and others, refused to support the ticket, and as a consequence the Whigs carried the State by over 30,000 majority in the gubernatorial election. One of the Hunker orators likened the Wright and Van Buren faction to the Dutch farmer who burned his barn to rid himself of the rats, and thenceforward the name Barnburners was fastened on them, and the two nicknames, Hunker and Barnburner, were bandied back and forth until after the latter joined with the Liberty party, in 1852, to support Mr. Van Buren as the Free Soil candidate for the Presidency. There is no difference of opinion as to the origin of the term Barnburner as above given, but Webster's dictionary defines hunkerism as hostility to progress: "Bartlett's Americanisms" defines "Hunkers" as a name given to a faction of the Democratic party because of devotion to old principles, from the Dutch "honk, place, post, home;" while others insist that the term grew out of the triumph of the administration faction at the Syracuse convention referred to above, which led them to imagine that they were "all hunk," as the New York boys exclaim in certain games when they have reached their goal or "home" without being intercepted by the contestants on the other side of the game.

Hunk, in this sense, is evidently a corruption of the Dutch "honk" or "home," handed down by the Dutch children. As the Hankers did "carry off the hunk at Syracuse, did imagine themselves all hunk," and were "hostile to progress," either or all of the above explanations may be accepted without doing violence to history, whatever the consequences to philology.

COMMITTEE OF THE WHOLE.

CLINTON, Mich.

What is meant when it is said "the House went into committee of the whole?" Please explain the whole subject.

SUBSCRIBER.

Answer.—Messages from the President and other matters of great importance are usually referred to a committee of the whole House, where general principles are digested in the form of resolutions, which are debated and amended until they get into a shape that meets the approbation of a majority. These resolutions, after being reported and confirmed by the House, are then referred to one or more select committees, where they are reduced into the form of bills or joint resolutions. It is found that the sense of the House is better learned in committee, because in all committees everyone speaks as often as he pleases. No gag law can be applied in committee by moving the previous question. The form for going from the House into the committee of the whole is for the Speaker, on motion, to put the question that the House do now resolve itself into a committee of the whole to take into consideration such a matter, naming it; to which the deliberations of the committee must be confined. If determined in the affirmative, he leaves the chair and takes a seat elsewhere, as any other member, and the person appointed chairman seats himself at the clerk's table. The Speaker usually appoints a chairman, but the committee has full power to set him aside and select its own chairman. In case of the committee's getting into violent disorder the Speaker, who is clothed with authority to call in the Sergeant-at-arms, if necessary, to enforce order, may take his chair, and at the tap of his gavel every member is required to take his proper seat, such action having the effect to dissolve the committee. Cases of this kind are rare. Usually when the committee is ready to rise the

chairman rises, the Speaker immediately resuming the chair; if the business is unfinished, the chairman of the committee reports progress and asks permission for the committee to sit again, which the House may or may not consent to. If the business is finished the chairman tenders his report.

SAMUEL ADAMS, THE GREAT ORGANIZER.

CARBONDALE, Ill.

Give a short biographical sketch of Samuel Adams, of revolutionary times.

CHARLES L. H.

Answer.—Samuel Adams was one of the very first who organized measures of resistance against the encroachments of Great Britain on the rights of the colonies. He drew up the famous petition of the General Court of Boston to the King, in 1764, against taxation on trade. He was elected a Representative in the Massachusetts House of Representatives in 1765, was chosen Clerk, and served in that body ten years. It is said that he was the first to suggest the congress of colonial delegates that assembled in New York in 1765, and was the father of the non-importation agreement of 1789, intended to check the use of British manufactures and other foreign imports and foster home manufactures and, still more, a spirit of independence. He was Chairman of the committee that waited on the Royal Governor and Council in 1770, on the day after the Boston riot and massacre, and demanded the removal of the troops. He was one of the signers of the declaration of independence: was one of those who matured the plan of the Continental Congress, to which he was a delegate from Massachusetts from 1774 to 1782, and signed the articles of confederation, which were the constitution of the country until replaced by the present Federal Constitution. He was Lieutenant Governor of Massachusetts from 1789 to 1794, and Governor from 1794 to 1797. He was born in Boston Sept. 27, 1722, graduated at Harvard in 1740, and died in Boston Oct. 2, 1803.

ORIGIN OF THE CAUCUS.

CHICAGO, Ill.

Can you tell us the origin of the American caucus?

JOHN ALLEN.

Answer.—The origin of the term "caucus" is traced back to the Caucus Club, Boston, of revolutionary days. This club was composed mainly of persons engaged in ship-building. It was one of the most radical opponents of British oppression. It and the Merchants' Club of the same period, used to meet before elections and agree on candidates for town and provincial offices. "Caucus" is believed to be a corruption of "caulkers."

THE YORK SHILLING.

CHICAGO, Ill.

To settle a dispute please inform us through Our Curiosity Shop whether the United States ever issued a coin called the "York shilling?" Was there not a coin of some kind called a York shilling?

READER.

Answer.—The United States certainly never did mint any such coin. Neither did New York itself before the adoption of our present Constitution, under which individual States are not permitted to coin money. Most of the original thirteen States had issued bills of credit during colonial times, which had depreciated in the several colonies in different degrees, according to provisions made for their redemption and other incidents. In New England, after the adoption of the Federal decimal system, the pound in paper currency was worth only $3.33⅓ and the shilling 16⅔ cents, equal to six shillings to the dollar. This standard prevailed also in Virginia, Kentucky, Tennessee, Indiana, Illinois, Missouri, Mississippi, Alabama, and Florida. In New York the paper currency pound was worth only $2.50, and so the shilling was reckoned but 12½ cents, equal to eight shillings to the dollar. This last is the "York shilling," a money of account. The only coin that ever passed by that name is the Spanish real, known along the Ohio and Lower Mississippi as "a bit," which, until a few years ago, was current through the country at 12½ cents, the value, as above shown, of the New York paper currency shilling of the olden times. In Pennsylvania, New

Jersey, Delaware, and Maryland the pound was worth $2.70, making the shilling worth 13½ cents, or 7s. 6d. to the $1. In Georgia and South Carolina the pound was worth $4.20, and the shilling 21-3/7 cents, or 4s. 8d. to the dollar. Such was the force of habit that, long after the old colonial paper money passed out of use, people continued to buy and sell and keep accounts in pounds and shillings; and schoolboys were required to familiarize themselves with the rules for reducing the several State currencies to Federal currency.

THE GREAT NAPOLEON'S DEFEATS.

CHICAGO, Ill.

1. Was Bonaparte repulsed at Acre? 2. Was he forced to leave Egypt? 3. Did he make a disastrous retreat from Moscow? 4. Did the Duke of Wellington suffer defeats parallel to those endured by Napoleon Bonaparte?

THOMAS WILSON.

Answer.—1. In 1799, after laying siege to the stronghold of Acre, Syria, for sixty-one days, Napoleon Bonaparte resolved to raise the siege and return to Egypt, where his presence was demanded by the threatening state of affairs, which culminated at last in the great battle of Aboukir, in which he defeated Murad Bey, for the second time, with great slaughter. There is no doubt that, although victorious over the Ottoman and Egyptian armies, the almost utter annihilation of the French fleet by the English and Turks in the famous naval battle of the Nile, some months before this, and the menacing state of affairs in France, made it prudent for Napoleon to take advantage of the prestige of this victory to retire from Egypt, leaving the government of the country he had conquered to General Kleber, who soon after this totally defeated the Ottoman army, 70,000 strong, before Heliopolis. Not until after Kleber was assassinated and months of the unwise administration of his successor, General Menou, did the insurrection fomented by the English, and finally assisted by an English naval and land force, compel the French under Menou, to withdraw from Egypt, nearly two years after Bonaparte himself had returned to France. Taken all in all the French expedition into Egypt, planned by Napoleon Bonaparte, although

distinguished by several brilliant exploits, must be regarded from a political and military standpoint as a failure. 3. So was the expedition to Moscow, which, after a succession of victories, ended in a disastrous retreat in midwinter, forced upon the French, not by arms, but by threatening starvation and other results of the burning of Moscow. 4. The Duke of Wellington, although several times compelled to retreat before French armies during campaigns in the Netherlands and in Spain, never suffered any disasters comparable with those inflicted on Napoleon; neither did he ever exhibit, even at Waterloo, where, with the allies, he had double the strength of the French army, such marvelous generalship as made Napoleon Bonaparte for many years more than a match for all the powers of Europe combined, the arbiter of all their thrones.

FUNDED AND FLOATING DEBT DEFINED.

IROQUOIS, D. T.

Explain the terms "floating debt," "funded debt," and "sinking fund."

QUERIST.

Answer..—"Funded debt" is government or corporation indebtedness in the form of bonds or other evidences of money stipulated to be paid at stated intervals, and usually bearing interest payable annually or oftener. "Floating debt" is indebtedness, such as unsettled accounts, scrip in the nature of due bills, etc. not funded. A sinking fund is money set apart out of taxes, earnings, or other income, for the redemption of government or corporation bonds or other specific tokens of indebtedness.

ARTIFICIAL INCUBATION.

FAYETTE, Iowa.

I am very anxious to learn how to make an incubator, or have one made, for hatching chickens by artificial means. Will you oblige myself and other readers by giving such minute directions that a carpenter can make one by following them?

Answer..—Similar requests are made by C. A. Brace, Esq., of Persia, Iowa; L. R. S., Cameron, Neb.; Q., of Elk Grove, Wis., and several others, some of whom desire to know what success has attended experiments in artificial incubation with modern apparatus. Conflicting reports as to this latter question, together with the fraudulent methods taken by some persons engaged in vending pamphlets that cost the publishers not to exceed 8 cents a copy, containing directions for making apparatus of this sort, at the extortionate price of $2, and selling ready-made incubators at exorbitant prices, has made caution advisable in treating this subject. Reports received within the past six weeks from twenty different persons, who have experimented with incubators, indicate that in about twelve cases out of twenty the average success is encouraging, and in the cases of the others the average results are quite discouraging. It is very certain that in a climate incident to such sudden and extreme changes as ours success demands skill and constant attention. None but absolutely fresh eggs must be selected, a temperature hardly varying from 103 deg., and a proper degree of moisture must be maintained, with sleepless vigilance. Let the eggs be chilled even for a few minutes and the consequences are disastrous. For a comparatively inexpensive incubator make a box 4 feet long, 3 feet wide, 6 inches deep, outside measurement, with a tight board lid and a zinc bottom; using boards 1¼ inches thick, nailed or screwed together. This is the heater. Of the same kind of boards make an egg-drawer 4 feet long, 2 feet 11½ inches wide, 5 inches high, outside measure, and 4 inches deep on the inside, with slats nailed in crosswise, instead of a board for the bottom. The slats better be of inch-thick lumber, not more than 1 inch wide, and set one inch apart. Over these slats on the inside tack a piece of coarse sack the full length and width of the box. Draw it tight and tack it securely to the slats and the ends of the box. Next make a frame 3 feet 7 inches long and 32 inches wide, using inch-square strips for the end pieces and inch-wide strips of half-inch thickness for the sides. Strain stout muslin over this frame and tack it firmly. Lay this, muslin side down, on the coarse cloth in the egg drawer. This is to support the eggs. Next bore twenty half-inch holes in each side of the egg drawer, 1¾ inches apart, and as close to the frame with the muslin bottom as can be done and yet allow this frame to slide easily underneath twenty slats a half-inch square each, which must be run through the box from hole to hole, to keep the eggs in position. Arrange the eggs between

these slats, resting on the muslin of the muslin frame. It will be seen that by moving this frame about two inches backward or forward the eggs can be turned half over. Make a box of precisely the same length and breadth as the heater, but eight inches deep instead of six. Nail on a tight bottom of inch flooring stuff; bore twelve half-inch holes in this bottom, into which insert as many tin tubes of the same diameter, seven inches long, for ventilators. Fill all the space between the pipes with sawdust to within about an inch of their tops. Next set the egg drawer on top of this ventilator box, and set the heater, the first box described, on the top of the egg drawer. Take common inch-boards, one foot wide, and nail one on each side and across one end of this pile of boxes, driving the nails along the lower edge of each board into the ventilator box, and along the upper edge into the heater box; raising the latter off of the egg-drawer barely enough to let the latter slide easily back and forth between the heater and ventilator.

As the incubator stands now, the egg-drawer is protected from the cold, underneath, by the ventilator box with about six inches of sawdust: but it must be similarly protected on the sides and top. Set this nest of boxes, as now arranged, on a couple of trestles made of pieces of scantling, four feet eight or ten inches long, with short legs eight inches long, and build another box 27 inches high (outside) around them, long enough and wide enough to form a sawdust chamber 8 inches wide along both sides and the back end of the incubator, and rising 8 inches higher than the top of the heater. Next get two tin pipes, 12 or 13 inches long and about 2½ inches in diameter, seamed together, as solder melts; also get two such pipes about 6 inches long, and two elbows. Bore a 2½-inch hole through the sawdust-box and the heater-box entering the latter about 9 inches from the front and 2 inches below the lid, and slide one of the longer pipes through these holes. Attach one of the elbows and one of the 6-inch pipes outside. Put the other pipe into the heater from the opposite side, about 9 inches from the back end of the heater. Two kerosene lamps, set on brackets, on the outside of the sawdust box, with their chimneys thrust up into the short pipes, will supply all the heat that is required for hatching the eggs. If the lamps smoke, drop them low enough to admit a little air to enter between the chimneys and the inside of the pipes. Opposite where each of these tin flues enters the heater, bore three three-quarter-inch holes through the top of the heater, nine or ten inches apart, in a line about three inches from the side. Slide six tin tubes of the same diameter, fifteen or sixteen inches long, through these holes to

within a half-inch of the zinc bottom of the heater. Now fill the sawdust chamber around the incubator and on top, putting earth instead of sawdust just around the hot-air flues, to avoid fire. As the zinc directly under where the hot-air flues enter the heater is apt to get overheated, it is best before covering the heater with sawdust to lay a piece of zinc or tin, about a foot square, on the zinc bottom as an equalizer of the temperature. Keep a thermometer in the egg drawer to test the temperature. This drawer will hold about 250 eggs.

This is the incubator; directions for using it will be given hereafter.

M. A. Bevard, Derby, Iowa—General Hull took part in the revolutionary battles of White Plains, Trenton, Stillwater, Princeton, Saratoga, and Monmouth. 2. Aaron Burr died on Staten Island.

INTEREST ON NOTES.

WASHBURN, Wis.

1. Will a promissory note draw interest if it is not so specified in the note? 2. Will a note made payable one year after date, with interest at 7 per cent, draw interest after the note becomes due?

A. E. R.

Answer..—1. Such a note will not draw interest until after due and payment has been demanded. It will draw legal interest from date of such demand. 2. Such a note will continue to draw interest at the same rate if payment is demanded at maturity and payment is withheld.

NEW YORK IMMIGRATION COMMISSION.

BARNARD, Ill.

Who was the first to propose Castle Garden for the benefit of foreign immigrants? Is the board of management a National or a State organization? How did it originate?

Answer.—The pitiable condition in which immigrants were landed in New York, the cruelties inflicted upon them in many cases in overcrowded emigrant ships, the extortions and downright frauds practiced upon them when they were put ashore like so many cattle, and left to shift for themselves in a strange city, without language to make their wants known, began to attract the attention of humane public officers and merchants of that city at an early day. The outrages multiplied, and the importance of providing some remedy grew with the rapid increase of foreign immigration, which swelled from 22,633 for the whole United States in 1831, to 104,565 in 1842. The Legislature of New York State was appealed to, and on May 5, 1847—in which year the rate of foreign immigration more than doubled upon that of 1842, the total number received rising to 234,968—it created the present Board of Commissioners of Emigration of the State of New York, which has been in successful operation ever since, and has proved one of the most beneficent institutions of the land. It consists of nine members, six of whom are appointed by the Governor with consent of the Senate, while the other three are the Mayor of the city and the Presidents of the German Society and the Irish Emigration Society. All of these serve without compensation. The law makes it their duty to provide suitable quarters for the reception of alien passengers arriving at New York; to care for the sick and helpless among them; to protect them from extortion, fraud, and impositions of any kind; to aid those who wish transfer to the railways and other transportation routes to the interior of the country; to assist such as wish to remain in the city to obtain work, and, in general, to give them trustworthy information and advice, and guard their interests. For this purpose they were authorized to collect of vessel owners $2.50 for each passenger, until 1871, when it was reduced to $1.50.

In 1855 the city of New York leased Castle Garden to the Commissioners for an immigrant landing depot, and it was opened for this purpose in August of that year. It occupies the extreme southern point of the city at the junction of the North River, or Hudson, with the East River. A more convenient, healthy, an every way desirable station could not have been selected. The immigrants are brought here directly from immigrant vessels, in tugs or barges, and received into rooms properly heated, lighted, and ventilated. Bath-rooms, lunch counters, with provisions at reasonable

prices, suitable sleeping quarters, and other conveniences are all found within the building, and are conducted under strict superintendence. The names of such as have money, letters, or friends awaiting them are called out. Clerks stand ready to write letters for them in any European language. There are railway offices where tickets are sold them by thoroughly responsible clerks, who can talk with them in their native tongues. Responsible brokers exchange their foreign coin and currency at par market value. There is an employment bureau to find work for those who do not care to go any farther. A physician is in attendance, and the sick are properly cared for in a temporary hospital until they are transported to the immigrant hospitals on Ward's Island.

In view of the fact that about two-thirds of all the foreign immigration to the United States land at New York, it is, indeed, a noble institution that meets these strangers with such generous provisions for their wants. According to an article in "The American Cyclopedia," of the 5,033,392 immigrants arriving at New York between May 5, 1847, and Jan. 1, 1873, for whom commutation money was paid by the vessel-owners, "all of whom received protection, advice, and information from the commissions, 1,465,579 were provided and cared for out of the immigrant fund, for a greater or less period during the five years subsequent to their arrival; 398,643 received treatment and care in the institutions of the commissioners; 449,275 were temporarily supplied with board and lodging and money relief in the city of New York; 349,936 were provided with employment through the labor bureau at Castle Garden; 53,083 were forwarded from Castle Garden to their destination in the United States, or returned to Europe at their own request; and 214,642 were relieved and provided for in various parts of the State of New York," all out of this immigrant fund. In 1872-3 bills were introduced into Congress to supersede this New York Emigration Commission by a National bureau, but the movement excited great opposition, not only in New York, but in other quarters, and it ended in failure.

DERIVATION OF SIRLOIN.

GALENA, Ill.

Is it true that an English king knighted a roast of beef as Sir Loin, and that this was the origin of the name sirloin for a certain cut of meat?

A SUBSCRIBER.

Answer.—It is true that the great lexicographer, Dr. Johnson, gave credence and currency to this etymological nonsense, and that subsequent lexicographers, down to Webster and Worcester, parrot-like repeated it. But both of our distinguished lexicographers rejected this popular tradition of a silly freak or pun of James I. or Charles II. as of no etymological value, and agree that sirloin, which appears in Johnson's dictionary for the first time with this orthography, is derived from the French surlonge, that is, "upper loin." In the old English dictionaries, such as Ainsworth's and Cotgrave's, the English word was spelled surloin, and both Webster and Worcester, while giving sirloin as the usual orthography, recommend surloin, and authorize it as the preferable spelling. Skeats' Etymological Dictionary, Oxford, 1882, vocabulates this word thus: "Sirloin, an inferior spelling of surloin, q. v.;" and under surloin says: "Frequently spelled sirloin, owing to a fable that the loin of beef was knighted by one of our kings in a fit of good humor." The king was naturally imagined to be the merry monarch Charles II., though Richardson says (on no authority) that it was so entitled by King James I. Both stories are discredited by the use of the original French surlonge in the fourteenth century. Indeed, Wedgewood actually cites 'a surloyn of beef' from an account of expenses of Henry VI. But Richardson had the authority of Dean Swift for referring the pun on surloin to James I. In "Polite Conversation" Swift says: "But, pray, why is it called a sirloin? Why, you must know that our King James I., who loved good eating, being invited to dinner by one of his nobles, and seeing a large loin of beef at his table, he drew out his sword and in a frolic knighted it." Which Swift, in all probability, intended to be taken as a legend, and nothing more.

NORTH CAROLINA GOLD MINES.

Give us some information in regard to the extent of mining for the precious metals in North Carolina.

MALCOLM MCMANUS.

Answer.—There was a time when gold mining in North Carolina was an important industry. The earliest record at the United States mint of gold produced in this country was in 1804. In that year a deposit was made at the mint of gold found in North Carolina. Small amounts, not exceeding an annual average of $2,500, were received from 1804 to 1823, after which there was a steady increase, as follows: In 1824, total amount received at mint, $5,000; in 1825, $17,000; in 1826, $20,000; in 1827, $21,000; in 1828, $46,000; in 1829, $134,000. During this last year $2,500 was received from Virginia and $3,500 from South Carolina. A Southern "gold fever" set in, and hundreds of people went to prospecting all along the Appalachian Mountains, so that in the next year, 1830, the mint received $212,000 from Georgia, $204,000 from North Carolina, $26,000 from South Carolina, $24,000 from Virginia, and $2,000 from Tennessee and Alabama. The total amounts of precious metals from the mines of the South, deposited at the United States mint from 1804 to 1881, was as follows:

From Virginia	$ 1,689,797.00
From North Carolina	10,750,468.64
From South Carolina	1,429,751.55
From Georgia	7,869,282.60
From Alabama	220,892.25
From Tennessee	86,511.61
Total	$22,046,703.65

Various causes conduced to the decrease of mining in the South before the discovery of gold in California, but this latter event drew away the best miners and most experienced, most enterprising capitalists engaged in the business, so that the gold product of this region became insignificant. A revival of mining has set in in North Carolina, yet the products of the Carolinas and Georgia in 1881 was only about $275,000.

MEERSCHAUM—SEA FOAM.

GILMAN, Ill.

Is meerschaum a product of sea foam, as some persons declare?

W. C. DUCKHAM.

Answer.—Meerschaum is a German word, compounded from *meer*, sea, and *schaum*, foam. It is the name of a fine clay composed of magnesia, silica, and water in equal parts. When fresh from the pit it is soft and makes a lather like soap, which gave rise to its name. After being molded into pipes, these are boiled in oil or wax and baked until hard.

STATE GOVERNORS.

ZANESVILLE, Ohio.

Please give the names and politics of all State and Territorial Governors. Also, their salaries and dates of expiration of their terms.

A SUBSCRIBER.

Answer.—The following is a full list of Governors of the several States and Territories, with their salaries and the times when their terms end. The politics of Governors is indicated by running the names of Republicans in Roman, and of Democrats and Fusionists in italics:

STATE.	Governor.	End of term.	Salary.
Alabama	*Edw. A. O'Neal*	Dec. 1, 1884	$3,000
Arkansas	*James H. Berry*	Jan. 2, 1885	3,000
California	*George Stoneman*	Jan. 4, 1887	6,000
Colorado	*James B. Grant*	Jan. 9, 1885	5,000
Connecticut	*Thos. M. Waller*	Jan. 3, 1885	2,000
Delaware	*Chas. C. Stockley*	Jan. 31, 1887	2,000
Florida	*Wm. D. Bloxham*	Jan. 6, 1885	3,500
Georgia	*H. D. McDaniel*	Nov. 3, 1885	3,000
Illinois	John M. Hamilton	Jan. 12, 1885	6,000
Indiana	Albert G. Porter	Jan. 12, 1885	5,000
Iowa	B. R. Sherman	Jan. 14, 1884	3,000
Kansas	*George W. Glick*[7]	Jan. 9, 1885	3,000

Kentucky	*L. P. Blackburn*	Sept. 5, 1883	5,000
Louisiana	*S. D. McEnery*	May 19, 1884	4,000
Maine	Frederick Robie	Jan. 7, 1885	2,000
Maryland	*W. T. Hamilton*	Jan. 2, 1884	4,500
Massachusetts	*Benj. F. Butler*[8]	Jan. 2, 1884	4,000
Michigan	*Josiah W. Begole*[9]	Jan. 1, 1885	1,000
Minnesota	L. F. Hubbard	Jan. 7, 1884	3,800
Mississippi	*Robert Lowry*	Jan. 5, 1886	4,000
Missouri	*T. T. Crittenden*	Jan. 12, 1885	5,000
Nebraska	James W. Dawes	Jan. 8, 1885	2,500
Nevada	*Jewett D. Adams*	Jan. 2, 1887	6,000
N. Hampshire	Samuel W. Hale	June 3, 1885	1,000
New Jersey	*Geo. C. Ludlow*	Jan. 15, 1884	5,000
New York	*Grover Cleveland*	Jan. 1, 1886	10,000
No. Carolina	*Thomas J. Jarvis*	Jan. 1, 1885	3,000
Ohio	Charles Foster	Jan. 14, 1884	4,000
Oregon	Zenas F. Moody	Jan. 1, 1887	1,500
Pennsylvania	*R. E. Pattison*	Jan. 18, 1887	10,000
Rhode Island	A. H. Littlefield[10]	May 29, 1883	1,000
So. Carolina	*H. S. Thompson*	Dec. 30, 1884	3,500
Tennessee	*Wm. B. Bate*	Jan. 15, 1885	4,000
Texas	*John Ireland*	Jan. 15, 1885	4,000
Vermont	John L. Barstow	Oct. 4, 1884	1,000
Virginia	*W. E. Cameron*[11]	Jan. 1, 1886	5,000
West Virginia	*Jacob B. Jackson*	March 4, 1885	3,700
Wisconsin	J. M. Rusk	Jan. 5, 1885	5,000
Territories—			
Arizona	Frederick Tritle	Feb. 6, 1886	2,600
Dakota	Neh. G. Ordway	May 22, 1884	2,600
Idaho	John B. Neil	July 12, 1884	2,600
Montana	J. S. Crosby	Aug. 4, 1886	2,600
New Mexico	Lionel A. Sheldon	May 5, 1885	2,600
Utah	Eli H. Murray	Jan. 27, 1884	2,600
Washington	Wm. A. Newell	April 26, 1884	2,600

Wyoming	William Hale	Aug. 3, 1886	2,600

FOOTNOTES:

[7] By union of anti-Prohibition Republicans with Democrats. Lieutenant Governor and Legislature went Republican.

[8] By union of Democrats, Greenbackers, and Independents.

[9] By fusion of Democrats and Greenbackers.

[10] By combination of Readjusters and Republicans.

[11] Republican, elected for term of one year, beginning May 29, 1883.

FIRST FUGITIVE SLAVE LAW.

CEDAR FALLS.

Tell us who brought forward the first fugitive slave law.

P. G. KLOCK.

Answer.—In the constitutional convention of 1787 Mr. Pierce Butler, a delegate from South Carolina, moved the adoption of clause 3, section 2, article 4 of the Constitution, which reads: "No person held to service or labor in one State, under the laws thereof, escaping into another, shall, in consequence of any law or regulation therein, be discharged from such service or labor, but shall be delivered up on claim of the party to whom such service or labor may be due." The first law to give effect to this constitutional provision was prepared by a committee of the Senate appointed in November, 1792. This committee was composed of Mr. Johnston, of North Carolina; Mr. Cabot, of Massachusetts, and Mr. Read, of Delaware. In December Mr. Johnston reported a bill which was not entirely satisfactory. Mr. Taylor, of Virginia, and Mr. Sherman, of Connecticut, were added to the committee. On Jan. 3, 1793, Mr. Johnston reported a bill, which, after several days' consideration, was passed without a single dissenting voice. On the 4th of February following, this bill passed the House by a vote of 48 to 7. We cannot give the text of it, but it gave slave-masters and their agents summary power to seize, hold, and return fugitives

from slavery to their former bondage, whatever laws the States in which they were found might pass to the contrary, the matter being one under jurisdiction of the United States courts.

THE WORLD'S PRINCIPAL TIN MINES.

ALTONA, Ill.

Where are the principal tin mines, and of what is this metal composed?

JONATHAN TREXLAR.

Answer.—Pure tin is an elementary metal, as much so as lead, iron, silver, or gold. The principal tin-producing country is England. The Phœnicians traded with England for tin 1,100 years before the Christian era. There is reason to believe that they got tin from Spain also; but England was depended on for nearly all the tin used in Europe until this ore was discovered in Germany in 1240. It was discovered in Northern Africa, in the Barbary States, in 1640; in India in 1740; in New Spain in 1782. Tin was mined in Mexico before the Spanish conquest, and used in T shaped pieces for money, and in a bronze composition for sharp tools; the principal mines being at Tasco. Peru has valuable mines of this metal, so have New South Wales, Australia, and Banca, and Malacca in the Malay peninsula. Tin has been discovered in Pennsylvania, Missouri, California, and other States of the Union, but not in quantities to tempt capital to engage in mining it. The chief tin-producing countries are the following, arranged in the order of importance: England, about 10,000 tons a year; Malacca, about 8,500 tons; Australia, about 6,000 tons; Banca, about 4,000 tons, and Billiton, about 3,000 tons. Both of these last-named places are islands of the Dutch East Indies.

THE ZERO POINT OF THERMOMETERS.

O'KANE, Neb.

Why was not zero on thermometers placed at the freezing point instead of 32 degrees below?

M.

Answer.—Zero is placed at freezing point on some thermometers, although this is not the case on the Fahrenheit scale, the one in common use in England and the United States. When Fahrenheit graded his thermometer he supposed that there was no greater degree of cold than had been observed in Iceland, or discovered by experimenting with freezing mixtures. This point he marked zero; i. e., empty or nought, as denoting the absence of all heat. It is 32 degrees below freezing, and corresponds to the cold produced by a freezing mixture composed of snow and salt, or sal-ammoniac; from which it has been inferred that this was the test used by Fahrenheit, the instrument-maker of Amsterdam, who introduced this scale into common use, and after whom it is named, but who never actually divulged the secret of his process. It is now known that this is an arbitrary point, far above the lowest temperature in the polar regions and several hundred degrees above the greatest cold produced by artificial methods. In the Reaumer thermometer, generally used in Germany, and the Centigrade thermometer, commonly used in France and by scientists of all nations, zero marks the freezing point of distilled water at the sea level, or under an atmospheric pressure of 14.73 pounds to the square inch. To reduce Fahrenheit to Centigrade, subtract 32 and multiply by 100/180, or 5/9. Conversely, to reduce Centigrade to Fahrenheit, multiply by 9/5 and add 32.

THE REPUBLIC OF SOUTH CAROLINA.

RIVERSIDE, Cal.

I noticed in the *Century* for December, 1882, page 172, that Chief Justice Rutledge was "President of South Carolina from 1776 to 1778." What form of government had South Carolina at that time?

J. M. BAHER.

Answer.—In 1776 South Carolina, in a Constitutional State Convention, of which John Rutledge was a member, took on the form of an independent republic, and soon after Rutledge was made President and Commander-in-chief of the State forces. He held this office until 1778, when he was

succeeded by Rawlins Lownds. The constitution was modified March 19, 1778, and thereafter the chief State executives were known as Governors.

OLD-TIME FALCONRY—HAWK'S BELLS.

PANA, Ill.

In Barnes' History of the United States, in the narrative of the discovery of Cuba, it is stated the natives bartered their valuables for "hawk's bells." Please explain the term "hawk's bells."

A SUBSCRIBER.

Answer.—Falconry, or hawking, was a favorite sport with the nobility and gentry of Europe down to the first half of the seventeenth century, when the introduction of fowling pieces of a light and elegant pattern and the art of shooting flying gradually replaced it. Hawks were trained to mount and pursue game and bring it to their masters and mistresses, coming and going at the call of the latter with marvelous docility. The hawks were tricked out with gay hoods and held until ordered to pursue "the quarry," or game, by leathern straps fastened with rings of leather around each leg, just above the talons, and silken cords called "jesses." To each of these leathern straps, or "bewets," was attached a small bell, shaped in most cases like the nearly closed sleigh bells of the present time. In a flight of hawks it was often so arranged that the different bells made "a consort of sweet sounds." Bells of this description, but of the cheapest kind, were among the most popular trinkets used by the early explorers and traders in bartering with the natives of America.

SOURCES OF BRITISH REVENUE.

SYCAMORE, Ill.

As England receives little or nothing from a tariff, where does the money come from to pay the expenses of the government? Who are taxed and who are not?

R. A. S.

Answer.—It is a mistake to suppose that the United Kingdom of Great Britain and Ireland derives "little or no revenue from tariff" or custom dues. The following table shows the sources of the national revenue for the year ending March 31, 1882:

Customs	£19,287,000
Excise	27,240,000
Stamps	12,260,000
Land and house tax	2,725,000
Income tax	9,945,000
Postoffice	7,000,000
Telegraphs	1,630,000
Crown lands	380,000
Interest on advances and Suez Canal shares	1,219,262
Miscellaneous	4,136,019
Total	£85,822,281

Here is the sum of £19,287,000, or almost $100,000,000, received from customs, as against $220,410,730.25 collected from the same source in the United States. 2, The inland revenue, composed of "excise, stamps, and taxes," is so distributed as to touch pretty much everybody.

KANSAS GOVERNORS AND SENATORS.

SHERMAN CITY, Kan.

Please give the names of all the Territorial and State Governors of Kansas, and the names of Senators from the first.

INQUIRER.

Answer.—The Territorial Governors of Kansas were A. H. Reeder, 1855; (John L. Dawson, appointed but declined), Wilson Shannon, 1857; John W. Geary, 1856; R. J. Walker, 1857; J. W. Denver, 1858; Samuel Medary, 1858. The following is a full list of the State Governors:

Charles Robinson	1861
Thomas Carney	1861-1864
S. J. Crawford	1864-1869

James M. Harvey	1869-1873
Thomas A. Osborne	1873-1877
George T. Anthony	1877-1879
John P. St. John	1879-1883
George W. Glick	1883-1885

The several Senators in Congress have been or are:

James H. Lane	1861-1866
Samuel C. Pomeroy	1861-1873
E. G. Ross	1866-1871
Alexander Caldwell	1871-1873
Robert Crozier	1873-1874
John J. Ingalls	1873-1885
James M. Harvey	1874-1877
Preston B. Plumb	1877-1883

Senator Caldwell resigned March 24, 1874, during investigation for bribery, in securing his election, and was followed by Robert Crozier, appointed by the Governor to fill the vacancy. Senator Crozier was succeeded by James M. Harvey, elected by the Legislature for the remainder of Mr. Caldwell's full term.

REPUBLICS AND PRESIDENTS.

BARNARD, Ill.

Is President the title of the highest officer in every republican government?

ANNA SIERLE.

Answer.—Yes, unless we take into account the pigmy republics, or semi-republics, of San Marino and Andorra, the former a rough, craggy mountain among the Appenines, with a total area of 21 square miles and a total population of 7,816 persons, and the latter an isolated valley in the Eastern Pyrenees, shut in between the two great, jealous powers, France and Spain, with an area of about 300 square miles, and a population variously estimated at from 4,000 to 12,000. Andorra is governed by "the Sovereign

Council" of twenty-four members, which elects one of its members to be Syndic for life, the chief executive of the State. San Marino is governed by "the Sovereign Grand Council," composed of sixty members, of whom one-third are nobles. There are two heads of this mammoth republic, called, "Captains Regent," one chosen from the nobles and the other from the "bourgeoisie," or common people, each holding office for only six months.

THE TAY BRIDGE HORROR.

MOUNT VERNON, Iowa.

> Were there ever any bodies found after the disaster of the great bridge over the Frith of Tay? How long had the bridge been built, what were its dimensions, cost, and particulars of the calamity?

C. N. WARREN.

Answer.—The enormous but ill-constructed bridge across the Tay at Dundee, Scotland, was authorized by an act passed in 1870. Work was begun in June, 1871. It was much injured by a gale Feb. 4, 1877, but was pushed forward and declared to be completed Aug. 30, 1877. It was tried on the 25th of the following month, and opened for business on May 31, 1878. Twenty lives were lost in its construction, and it cost £350,000, or about $1,750,000. It was 10,612 feet long, and rested on 85 spans, some of which were 90 feet above low tide. At about 7:15 p. m. on Dec. 28, 1879, less than seventeen months after it was first opened to traffic—while a North British mail train was crossing in the midst of a fierce gale—the structure gave way, leaving a gap of 3,000 feet. The train plunged into the surging sea, and not one of the ill-fated passengers escaped. There were between 75 and 90 persons on board; exactly how many was never ascertained. Forty-six bodies were recovered up to April 27, 1880. After the official inquiry Mr. H. C. Rothery declared that "the bridge had been badly planned, badly constructed, and badly maintained." A new bridge, of a much more substantial character, is now in process of construction.

CAN A SOLDIER ENTER A HOMESTEAD.

FORT PEMBINA, D. T.

Can a soldier in the regular army take up a homestead or pre-emption claim, and get some other person to make the improvements required by law on either of said claims? By answering this question you will settle a dispute and greatly oblige,

HENRY BROWN, Serg't Co. B, Fifteenth Inf.

Answer.—Soldiers now in the regular army may perform certain preliminary acts relating to homestead entries, but they cannot perfect title to such land until their terms of service have expired. See instructions in "Copp's Land Owner," vol. 2, p. 133, and case of Charles Harris, "Land Owner," vol. 6, p. 190. The soldier or his family must reside on the land at least one year, under any circumstances, before he can acquire title.

POPULATION OF PEKING.

CHICAGO, Ill.

Please state what is the population of Peking, China, and settle a dispute.

DAVID MCGOWAN.

Answer.—According to the "American Almanac," which in turn refers to the famous "Bevolkerung der Erde," of Gotha, edited by Messrs. Behm & Wagner, the population of Peking in 1880 was 500,000. Until within a comparatively recent date the estimates of the population of that city never ranged below 1,000,000. Cyclopedias generally estimated it at 1,500,000, and some of them as high as 2,000,000. Messrs. Behm & Wagner have carefully revised their former statistics of China, and have reduced their estimate of the total population of the country fully 55,000,000. The Almanach de Gotha gives the population of Pekin as uncertain, estimates varying between 500,000 and 1,650,000.

HEBREW NOT A LIVING LANGUAGE.

RAPID CITY, D. T.

A Jewish gentleman and myself have had an argument, he asserting that Hebrew is a spoken language at the present time. I am of the impression that Hebrew ceased to be a spoken language during the seventy years' captivity in Babylon, while he declares that he has seen a Jew, directly from Jerusalem, who could talk nothing but Hebrew. Can you give us any light on this subject?

H. H. J.

Answer.—Hebrew, like Latin and classic Greek, is a literary, and not a colloquial language. The precise time when Hebrew ceased to be the living, vernacular language of the Jews is not known. Some learned Hebraists maintain that they lost the living use of the Hebrew during the Babylonish captivity, but the weight of argument is in favor of the belief that they retained the partial use of it for some time after their return to Palestine, and lost it by degrees. No decisive evidence, however, shows exactly when it became a virtually dead language; although there are satisfactory reasons for declaring that it gave place to a corrupted form of the Aramaic language, a mixture of Syrian and Chaldean or Babylonish speech called the Syro-Chaldaic dialect, several hundred years before the Christian era, and that more than a century before this era it ceased to be used even as a written language and was thenceforth studied only as the language of the sacred books, by the learned.

ABANDONMENT OF HOMESTEAD.

OWATONNA, Minn.

To settle a dispute, please state whether a person who has "filed" on a quarter section of public land, under the homestead laws, and has let it go back to the government, can make another homestead entry?

OLD SUBSCRIBER.

Answer.—According to "Copp's Public Land Laws," as the law allows but one homestead privilege, "a settler relinquishing or abandoning his claim cannot thereafter make a second entry; but where an entry is canceled

as invalid for some reason other than abandonment, and not the wilful act of the party, he is not thereby debarred from entering again, if in other respects entitled, and may be allowed credit for fees and commissions already paid, on a new homestead entry." Such a claimant must be prepared to show that he did not voluntarily abandon his first entry.

PHARMACY LAWS AND TRAINED DRUGGISTS.

HODGES PARK, Ill.

What States have pharmacy laws, and what is the proportion of trained druggists in this country?

A SUBSCRIBER.

Answer.—Probably all the States have pharmacy laws; that is, laws regulating the compounding and sale of drugs, but these are loosely administered in most States, the laws themselves being radically defective. Most prescription clerks pick up their knowledge of pharmacy between errands and "by practice," as it is called, without even an elementary knowledge of chemistry or any systematic course of training. There are in all fourteen schools of pharmacy in the United States; 1 in San Francisco, 1 in Chicago, 1 in Louisville, 1 in New Orleans, 1 in Baltimore, 1 in Boston, 1 in Ann Arbor, Mich., 1 in St. Louis, 2 in New York City, 1 in Cincinnati, 1 in Philadelphia, 1 in Pittsburg, 1 in Nashville, and 1 in Washington. All told, they had only 1,347 students in 1880, of whom they graduated but 186. There are 284 retail drug stores in Chicago, and it is estimated that there are more than 1,600 in the State and about 25,600 such stores in the United States with twice that number of persons compounding medicines; so that it is a clear case that comparatively few druggists and prescription clerks are properly educated for their duties.

AGNOSTICISM.

ARTHUR, Ill.

Be so good as to define the word "agnosticism," as used in theological or religio-scientific discourses. I have examined

several dictionaries and one encyclopedia, and have failed to find the word.

E. J. A.

Answer.—Agnosticism is a sort of supernatural knownothingism. It is true that this word is not defined in either Webster's or Worcester's unabridged dictionaries, except in the supplements to the latest editions, and does not appear in the regular order of subjects in the popular encyclopedias. It is derived from a Greek word that signifies "to know not." Agnosticism then, as used by Herbert Spencer and his disciples, is the doctrine that, professing ignorance of the supernatural, neither asserts nor denies the existence of a personal Deity, and claims that such doctrine can be neither proved nor disapproved, because of the insufficiency of the evidence furnished by rational and material nature to warrant a positive conclusion: or, as others say, because of the necessary limits of the human mind. Agnosticism is opposed both to the positive assertion of the skeptic, who denies the existence of a personal God, and the opposite declaration of the Christian church, or dogmatic theism, affirming such existence.

PTOLEMY PHILADELPHUS.

Give a brief sketch of Ptolemy Philadelphus, a celebrated King of Egypt, often referred to in books and lectures.

F. F. SLOAT.

Answer.—He was the son of that able general of Alexander the Great who, after the death of that monarch, became King of Egypt under the title of Ptolemy I. Ptolemy II., surnamed Philadelphus, was distinguished for his love of learning, patronage of men of letters and artists, and encouragement of trade and all the arts of peace. He founded the famous library of Alexandria, the greatest treasury of ancient learning, and through his efforts the Hebrew Scriptures were translated into Greek by seventy eminent Hebrew scholars. This is what is known as the Septuagint version of the Holy Scriptures. He reigned from 285 to 247 B. C., a period in which the Egyptian Kingdom reached the highest point of military glory, prosperity, and wealth.

AN INCUBATOR SUCCESS.

VESPER, N. Y.

For the benefit of readers of THE INTER OCEAN I will give my experience with an incubator that I built last June, the materials of which cost $5.50. It holds 234 eggs at a hatching. It took me three days to build it. As a test trial, about the 15th of June I placed nine dozen of eggs in the incubator, and in due time I obtained 86 per cent of chicks as the result, which I considered extremely satisfactory. About the 10th of July I made another trial, using this time eleven dozen of eggs, and the result was 87 per cent of chicks. About 6 per cent of the eggs from these two trials which did not hatch were found on examination to be unfertile, leaving 7 per cent with dead chicks in the various stages of maturity. These two trials proved satisfactory, even beyond my most sanguine expectations. On the 15th of January I procured 204 eggs from the farmers, and placed them in the incubator for my third trial, but, owing to the extremely cold weather during the time the eggs were laid, they had become chilled before being gathered, and, as the result, I only succeeded in getting forty chicks, or a little less than 20 per cent. To avoid a second failure, I determined to wait until the cold weather was over before securing eggs for my next hatching.

D. A. ROWLAND.

NORTHERN PACIFIC RAILWAY.

SANTA BARBARA, Cal.

How far west of St. Paul are the cars now running on the Northern Pacific Railroad? What is the name of the present western terminus? How many miles are completed from the west end? When is it expected to be completed?

E. S. SHEFFIELD.

Answer.—The company is now running trains with Pullman sleepers and dining-room cars to Livingston, 1,030 miles west of St. Paul. It is also running trains from Portland to Second Crossing, 527 miles. From Livingston to Second Crossing passengers are carried by stage as follows:

From Livingston to Bozeman, 25 miles, 4 hours.

From Bozeman to Helena, 108 miles, 18 hours.

From Helena to Missoula, 130 miles, 22 hours.

From Missoula to Second Crossing, 80 miles, 16 hours.

The total distance from St. Paul to Portland is 1,900 miles, and the time 180 hours. The fare from St. Paul to Missoula by rail and stage is $47.10. The road is to be completed this year.

AMERICAN LITERATI.

OCONTO, Mich.

What literary characters has our country produced during this past century?

CARRIE STROUD.

Answer.—There is space here to mention only a few of the most prominent American writers of this century. First in poetry stand Bryant, Prentice, Sigourney, Willis, Holmes, Longfellow, Whittier, Morris, and Miller. Among the most conspicuous historians are Irving, Sparks, Lossing, Bancroft, Cooper, Motley, Prescott, Parkman, Parton, Ramsay, and Greeley. Among novelists, Cooper, Irving, Hawthorne, Holland, and Mrs. Stowe hold the front rank, although there is a legion just behind them, some of

whom press close upon them. In the field of essayists, literary, political, theological, and metaphysical, the catalogue of noted names is too long to admit of personal designation.

THE ASHTABULA HORROR.

COTTAGE, Iowa.

Was there anything in the death of Mr. P. P. Bliss in voluntarily remaining with his wife at the time of the railway accident at Ashtabula that justifies the charge that he committed suicide? Give particulars.

M. L. PERCIVAL.

Answer.—Mr. P. P. Bliss, the popular composer of sacred lyrics, and evangelistic vocalist, perished at Ashtabula, Ohio, in the terrible railroad disaster consequent on the fall of the Ashtabula bridge on the night of Dec. 29, 1876. Two engines and eleven cars, with about 160 passengers, were precipitated into the creek, seventy feet below. The wreck immediately took fire, and before help could reach the scene more than a hundred persons had perished through the fall or the flames, or were so badly injured that they afterward died. A terrible snowstorm and intense cold added to the sufferings of the survivors. In the midst of this scene of horror and distraction Mr. Bliss and his wife both lost their lives. It is by no means certain that Mr. Bliss could have escaped if he had abandoned his wife. If he could have done so, but perished in the effort to rescue her, such an act was heroic, and none but an idiot would class him with suicides.

STATESMEN AND MARTIAL HEROES.

OCONTO, Mich.

Name five of the greatest American statesmen of early times, and as many or more of their greatest successors; also name the principal military and naval heroes of our country, and oblige several readers.

CARRIE STROUD.

Answer.—Five of the greatest American statesmen concerned in the founding of this Republic were Washington, Franklin, Hamilton, Jefferson, and John Adams. Seven of the most distinguished successors of these grand men were DeWitt Clinton, Daniel Webster, Henry Clay, William H. Seward, Abraham Lincoln, Thaddeus Stevens, and Charles Sumner. Twelve of the ablest generals this country can boast are Washington, Gates, and Green, of the revolutionary war; Jackson and Harrison, of the war of 1812; Scott and Taylor, of the Mexican war, and Grant, Sherman, Sheridan, Thomas, and Meade, of the war for the Union. Ten of our greatest naval heroes are Paul Jones, of the revolutionary war; Perry, MacDonough, Porter, Decatur, Hull, Bainbridge, and Chauncey, of the war of 1812, and Farragut and Porter, of the last war.

PUBLIC LANDS IN WASHINGTON TERRITORY.

GLORIETA, N. M.

Is there any government land open to pre-emption or homestead in Washington Territory. If so, is any of it suitable for agricultural purposes?

MONTEZUMA.

Answer.—Out of an estimated area of 44,796,160 acres of public lands in Washington Territory in the beginning, only 17,757,033 acres, or about one-third, had been surveyed up to June 30, 1882, and a considerable part of this third is still open to purchase or entry under the general or special land laws. In Washington Territory, California, Oregon, and Nevada there are great areas of timber and stone lands for sale under the law of June 3, 1878, at $2.50 per acre. The "Desert Lands Act" of March 3, 1877, provides for the sale of certain lands which can be cultivated only by artificial irrigation, at 25 cents an acre. After deducting these tracts, mineral lands, coal lands, and saline lands, there are still millions of acres of lands in Washington Territory subject to pre-emption and entry under the homestead law, and much of this land is well adapted to agriculture and grazing.

OLDEST SETTLEMENTS IN THE UNITED STATES.

PARKERSBURG, Iowa.

1. What was the first European settlement made in the United States, and what was the name of the first child of European parents born in this country? 2. What is the length of the Niagara River, and what large islands are there in it?

HOMER L. FORBES.

Answer.—1. The oldest permanent European settlement within the present limits of the United States was made at Saint Augustine, Fla., in 1565. Francisco Vasquez de Coronado, Captain Francisco de Coronado, and Don Antonio de Espejo, explorers of New Mexico, occupied, temporarily, various points in that region between the years 1540 and 1583. The latter of these took possession of a native pueblo, or town, called Tuoas, or Taos, in the latter year, or thereabouts, and named it La Ciudad de Santa Fe, which was identical in site with the present capital of New Mexico. Forts, colonies, and missions were established in various places in New Mexico by Juan de Ouate, who was sent there for that purpose between 1595 and 1590. The next at Jamestown, Va., in 1607, and the next at Albany, N. Y., in 1614. It is not known who was the first child of European parents born within the United States. 2. The Niagara River is thirty-three miles long. There are no large islands in it except Grand Island and Goat Island, but there are numerous smaller ones.

THE CONTINENTAL CONGRESS.

CHICAGO, Ill.

What was the seat of government during the revolutionary war? Who took the place of President, as head of the government?

JANE EVANS.

Answer..—There was no permanent seat of government. The articles of confederation provided that "Congress shall have power to adjourn at any time within the year and to any place within the United States, so that no period of adjournment be for a longer duration than the space of six months." When suffered to have its own way Congress sat, during the war,

in Philadelphia, but the "red coats" were as keen to go to Congress as the average modern politician, and the patriots, to avoid a row over contested seats, adopted a sort of methodistic itinerancy, minus the method. Congress was in session at Philadelphia in December, 1776, when, seeing that the British were likely to force themselves upon the hospitality of that city, it adjourned to Baltimore. It returned to Philadelphia, but after the American defeat at Brandywine, Sept. 11, 1777, it adjourned to Lancaster, and then to York, Pa. From the first session to the last the Continental Congress met as follows: At Philadelphia, Sept. 5, 1774, and May 10, 1775; at Baltimore, Dec. 20, 1776; at Philadelphia, March 4, 1777; at Lancaster, Pa., Sept. 27, 1777; at York, Pa., Sept. 30, 1777; at Philadelphia, July 2, 1778; at Princeton, N. J., June 30, 1783; at Annapolis, Md., Nov. 26, 1783; at Trenton, N. J., Nov. 1, 1784; at New York, Jan. 11, 1785, which continued to be the seat of Congress until the adoption of the Constitution of the United States. There was no executive head of the United States under the articles of confederation. These provided that Congress should have authority to appoint a "Committee of the States," to consist of one delegate from each State, to sit in the recess of Congress. The President of Congress came the nearest to being an executive chief, but he and the above committee, the "Board of War," and certain other special committees or boards were each charged with the execution of law according to specific provisions in the act itself. Of these Presidents of the Continental Congress the following shows the names and the time of their election:

Payton Randolph, of Virginia, elected Sept. 5, 1774.

Henry Middleton, of South Carolina, Oct. 22, 1774.

Peyton Randolph, of Virginia, May 10, 1775.

John Hancock, of Massachusetts, May 24, 1775.

Henry Laurens, of South Carolina, Nov. 1, 1777.

John Jay, of New York, Dec. 10, 1778.

Sam Huntington, of Connecticut, Sept. 28, 1779.

Thomas McKean, of Delaware, July 10, 1781.

John Hanson, of Maryland, Nov. 5, 1781.

Elias Boudinot, of New Jersey, Nov. 4, 1782.

Thomas Mifflin, of Pennsylvania, Nov. 3, 1783.

Richard Henry Lee, of Virginia, Nov. 30, 1784.

Nathaniel Gorham, of Massachusetts, June 6, 1786.

Arthur St. Clair, of Pennsylvania, Feb. 2, 1787.

Cyrus Griffin, of Virginia, Jan. 22, 1788.

FIVE SUNDAYS IN FEBRUARY.

CHICAGO, Ill.

In 1880 February had five Sundays. When will this occur again? This question was asked in one of the Chicago dailies recently, and received several different answers, none of which were right, or I am in error.

INQUIRER.

Answer.—Usually this event occurs every twenty-eight years, or at the close of each solar cycle of twenty-eight years; but owing to the fact that the year 1900 will not be a leap year (for reasons explained in Our Curiosity Shop not many weeks ago), it will be forty years before February contains five Sundays, or not until the year 1920.

FORMING STATES OUT OF OTHER STATES.

FAIRFIELD, Ill.

Can a State be formed out of part of another State? If not, how was West Virginia organized within the original limits of Virginia?

BYRON.

Answer..—Article 4, section 1, clause 1, of the Constitution of the United States declares that "No new State shall be formed or erected within the jurisdiction of any other State; nor any State be formed by the junction of two or more States, without the consent of the Legislatures of the States concerned as well as of the Congress." The erecting of West Virginia into a

State was an incident of the late war. While the convention in session at Richmond resolved to take Virginia out of the Union, the Unionists of West Virginia called a convention that assembled at Wheeling May 13, 1861, composed of delegates from twenty-five western counties of the State. This convention passed resolutions denouncing secession and providing for a convention of all the counties of Virginia adhering to the National Government. Delegates representing forty counties convened in Wheeling on June 11, repudiated the acts of the rebel convention, and on June 20 elected Francis H. Pierpont Governor of what they denominated the "reorganized State of Virginia." A Legislature was elected, which met in Wheeling on July 2. This body elected two United States Senators to take the place of the Virginia Senators which had gone over to the Confederacy. It also provided for an election, to be held on the 24th of the following October, to decide upon the formation of a new State, the eastern part of the State being in possession of the rebels. The people, by a large majority, declared in favor of a new State, and, at the same time, chose delegates to a convention to meet at Wheeling Nov. 24, which convention framed a State Constitution, which was ratified by the people May 3, 1862. May 13 the Legislature—which claimed, it must be remembered, to represent the whole State of Virginia, as it certainly did represent all the loyal part—approved the formation of the new State under the name of West Virginia, and Dec. 31, 1862, provided for its admission to the Union. It was held by distinguished jurists that the government at Richmond having placed itself outside of the Constitution by the treasonable act of secession, the only legal legislative body within the State was the one in session at Wheeling, which consented to the organization of the new State, and that the terms of the Constitution contained in the clause above quoted had been met. When Virginia was reconstructed she was admitted on the understanding that West Virginia was a separate State.

A BRIBE-PROOF PATRIOT.

HAVANA, Mo.

Who was it who, when the British tried to bribe him, said: "Poor as I am, the King of England is not rich enough to buy me?"

FLORENCE WYATT.

Answer.—It was General Joseph Reed, a delegate from Pennsylvania to the Continental Congress. When approached by one of three British commissioners, Governor Johnstone, with an offer of £10,000 and the most lucrative office in America, if he would use his influence to reunite the Colonies to Great Britain, he answered: "I am not worth purchasing, but, such as I am, the King of Great Britain is not rich enough to buy me!"

MASON AND DIXON'S LINE.

GRANGER, Mo.

What is Mason and Dixon's line, and what were the provisions of the Missouri compromise? Who were responsible for its repeal?

R. E. GLOVER.

Answer.—Mason and Dixon's line is the concurrent State line of Maryland and Pennsylvania. It is named after two eminent astronomers and mathematicians, Charles Mason and Jeremiah Dixon, who were sent out from England to run it. They completed the survey between 1763 and 1767, excepting thirty-six miles surveyed in 1782 by Colonel Alex. McLean and Joseph Neville. It is in the latitude of 39 deg. 43 min. 26.3 sec. Missouri was admitted to the Union only after a long protracted and violent discussion, growing out of a provision in the State constitution sanctioning slavery. A compromise was finally effected by which the new State was admitted with slavery, with a solemn agreement that there should be no more slave States formed out of territory north of the parallel of 36 deg. 30 min., the southern boundary of Missouri. In political discussions Mason and Dixon's line was understood to mean both of the above lines and the Ohio River, or, in other words, the boundary between free and slave territory the country through. When Kansas was thrown open to settlement the Southerners were determined, despite the Missouri compromise, to try to make Kansas a slave State. Their Representatives in Congress, with the exception of a few Whigs, united in favor of a repeal of the compromise. With the help of the Douglas Democrats in the North and several pro-slavery Whigs, they carried their point. The consequence was the bloody

struggles between the free-State and pro-slavery men in the early history of Kansas, which was practically the inauguration of the war of the rebellion, although the latter did not burst into full flame until after the election of President Lincoln and the secession of the Southern States.

RATES OF INTEREST COMPARED.

FREEPORT, Ill.

Please give your readers a comparison of the rates of interest in England and the United States for several years back.

A. BORROWER.

Answer.—Of course rates vary greatly in this country with locality. Where opportunities for profitable investment are in excess of capital, as in the Western States, rates are higher than at the great money centers. The following statement of the average rates of interest in New York City for each of the fiscal years from 1874 to 1882, inclusive, is taken from the report of the Comptroller of the Currency:

Years.	Call loans, per cent.	Com'l paper, per cent.
1874	3.8	6.4
1875	3.0	5.8
1876	3.3	5.3
1877	3.0	5.2
1878	4.4	5.1
1879	4.4	4.4
1880	4.9	5.3
1881	3.8	5.0
1882	4.4	5.4

The average rate of discount of the Bank of England for the same years was as follows:

	Per cent.
Year ending Dec. 31, 1874	3.69
Year ending Dec. 31, 1875	3.23

Year ending Dec. 31, 1876	2.61
Year ending Dec. 31, 1877	2.91
Year ending Dec. 31, 1878	3.78
Year ending Dec, 31, 1879	2.50
Year ending Dec. 31, 1880	2.76
Year ending Dec. 31, 1881	3.49
Fiscal year ending June 31, 1882	4.01

MEMBERS OF PARLIAMENT.

COUNCIL BLUFFS, Iowa.

Are there any lady members of either House of Parliament? How many members are there in each House, and what are their titles?

J. A.

Answer.—There are seven peeresses in their own right entitled to seats in the English House of Peers. These are the Baroness Emma Harriet Tyrwhitt; the Baroness Augusta Mary Elizabeth Cavendish-Bentwick; the Baroness Angela Georgiana Burdett-Coutts; the Countess Anne S. Leveson-Gower (Duchess of Sutherland); the Baroness Mary Elizabeth Boscawan; the Baroness Susan North; the Baroness C. E. H. D. Willoughby. Besides the ladies the House of Peers contains in all 509 members, viz.: Six princes of the blood; 3 archbishops; 20 dukes; 18 marquises; 114 earls; 26 viscounts; 24 bishops; 225 barons; 16 Scottish representative peers, elected for each Parliament; 28 Irish representative peers, elected for life. There are also 10 minor peers, who will be entitled to seats when they attain their majority. The House of Commons is composed of 639 members, of which 489 are representatives of counties, universities and towns in England and Wales; 60 are Scottish and 103 Irish representatives. The title of honorable is given to members of the House. Some of them have titles in their own right, as Lord Elcho, Earl Bective, Viscount Galway, Right Honorable Sir Michael Hicks-Beach, and so on.

BONE DUST AS A FERTILIZER.

ALMOND, Wis.

How are bones treated before being used for fertilizing purposes? For what crops is bone-dust most used, and on what soils?

SUBSCRIBER.

Answer.—First, they are generally boiled for the oil and glue or gelatine in them, which do not materially affect their value as fertilizers. They are then ground or crushed, without being previously burned. In this state this fertilizer is known as bone dust, and is sown broadcast at the rate of 50 to 100 pounds to the acre, as a rich manure for pasture, turnips, and small grain lands. In Cheshire, England, where the fine red sandstone loam had become comparatively sterile before the first of this century, through deficiency of phosphoric acid in the soil, caused by constant pasturage in dairy farming, they resorted to the use of calcined bone and bone dust, with the effect of doubling the product the first year. There they often lay on a half ton to a ton to an acre, which serves as a good dressing for sixteen to twenty years. The best way to ascertain whether a soil needs bone dust is to experiment for a year or two with a small plat of ground. The result will determine better than a chemical analysis whether a bone dust dressing will pay.

THE AGE OF SANTA FE.

ATCHISON, Kan.

Is Santa Fe the oldest of American cities, as the Santa Fe papers claim?

A SUBSCRIBER.

Answer.—Cabez de Vaca, a Spanish adventurer, was in New Mexico with his shipwrecked party as early as 1535. General Coronado, with a large military expedition, conquered the Zuni and Moqui towns, or pueblos, in 1540-41, and kept a journal, still in existence, which identifies the regions he overran as undoubtedly a part of this Territory. Don Antonio Espejo left Zacatecas in 1581 according to some authorities, but late in 1582 according to others, and visited what is now Santa Fe County, New Mexico, in July of

1583. He gave a fuller report than had ever been given before of the pueblos of this region, in which he estimated the population of the province of Taos as 40,000. The principal pueblo in this province was Tanos, afterward known as Tegra, and still later as Santa Fe. As an Indian town Santa Fe may be older than any other town in the United States, but as a European settlement St. Augustine, Fla., still carries the palm of antiquity, having been founded in 1565.

JOAQUIN MILLER'S REAL NAME.

CHICAGO, Ill.

What is "Joaquin" Miller's real name, and what were the real and assumed names of his divorced wife? The Chicago *Herald* says his name is Henry F. Miller, which I think is incorrect.

A. STEELE.

Answer.—The real name of "Joaquin" Miller, author of the "Songs of the Sierras," is Cincinnatus Heine Miller. His divorced wife's maiden name was Minnie Theresa Dyer, and her literary pseudonym was "Minnie Myrtle." It is said that the name "Joaquin" was given to Mr. Miller by "the boys" in his early California experience, when he was "roughing it," from a real or fancied resemblance to a noted Spanish highwayman, and he adopted it as a pseudonym.

THE BLACKHAWK WAR.

BATTLE CREEK, Mich.

Who was the commander in the Blackhawk war? State some of the chief facts as to that war.

V. H. LUCAS.

Answer.—By a treaty made with certain chiefs of the Sacs and Foxes at St. Louis in 1804, the Indians ceded all their lands in Illinois to the United States for the paltry annuity of $1,000 and goods to the value of $2,234.50. In a treaty made in 1822, covering various matters, a clause was introduced confirming the cession of 1804. Still the government did not demand actual

possession of these lands. In 1830, Keokuk, Black Hawk's rival, negotiated a treaty in which the government recognized him as the head chief of the Sacs and Foxes, and in which he clearly ceded all the lands in question. Black Hawk, who had always opposed any cession of territory to the whites, was not present at this convention, and he and his followers, constituting a minority of the tribe, but really representing the portion most concerned, the actual occupants of the great village at Rock Island, protested against the validity of this and the previous cessions. Black Hawk declared that the treaty of 1804 was made by only four chiefs, that they signed it under the influence of liquor, and had never been authorized by the tribe to cede lands. It was not so easy to explain away the clause in the treaty of 1822, but he characterized it also as a fraud, signed without full understanding of its intent. As to the convention of 1830, he denied the authority of Keokuk's band to deed away the lands east of the Mississippi.

Returning in April, 1831, from the winter's hunt in the North, Black Hawk's band found that their chief's former friend, an Indian fur-trader at Rock Island, had purchased of the government the ground on which this ancient village stood, in the forks of the Mississippi and Rock River, and with his associate speculators were preparing to cultivate the Indian field of some 700 acres adjoining the village. It seems marvelous that Black Hawk could so far restrain his people as to persuade them to submit to a compromise by which they yielded possession of half this field for the season to the speculators. But the latter were not satisfied, and both parties soon grew irritated. Governor Reynolds, of this State, was asked to interfere. Soon after the militia were called out. On the 7th of June General Gaines, of the regular army, commanding at Fort Armstrong, on Rock Island, summoned the Indians to a council, when he commanded them to leave the east side of the Mississippi. Black Hawk refused; but as the State militia, to the number of about 1,600, under command of General Joseph Duncan, drew near, he saw that his few hundred warriors would be overwhelmed, and on June 24, during the night, the Indians deserted their village, which the Americans a few days later utterly destroyed. On June 30, Black Hawk and his party signed a treaty by which for the first time he individually joined in the relinquishment of the lands in dispute. The next winter found him and his band in a destitute, starving condition, owing to their being driven from their cornfields at a season when it was too late to plant elsewhere. In the spring, in defiance of the treaty, he and 368 warriors

with their families, crossed the Mississippi and passed up Rock River, to plant corn, as they said, in the Winnebago country, in Southern Wisconsin. General Atkinson, in command of the regular troops at Fort Armstrong, warned them to return. Governor Reynolds again called out the militia, and placed them under command of General Samuel Whiteside. Nothing serious occurred until the 14th of May, when the rash conduct of a party of 275 volunteers under Major Stillman provoked a fight with some sixty of Black Hawk's warriors, near the mouth of the Kishwaukee a few miles south of Rockford. The whites were panicstricken and fled with the loss of eleven men. So slow had been the movement of the militia that already their time of enlistment had nearly expired, and, not liking this taste of Indian war, they became mutinous, and had to be discharged. General Atkinson could do little with his mere handful of regular troops, so he intrenched his company at Dixon and remained there, while Black Hawk's followers, re-enforced by a few Winnebago, Ottawa and Pottawatomie braves, roamed over the country committing outrages on defenceless settlers, a number of whom were killed. Affairs grew serious. Governor Reynolds called for 2,000 militia. In July the regulars and militia, all under the chief command of General Atkinson, drove Black Hawk up Rock River and across to the Wisconsin River, where General James D. Henry, the chief hero of this war, in command of a brigade of Illinois militia, overtook him at Wisconsin Heights, and inflicted the first serious punishment the Indians had suffered. Over fifty warriors were killed, and the entire body of them was badly demoralized. Escaping across the Wisconsin with great loss, they fled, leaving their dead and dying, and abandoned articles along their trail. The whole army followed in hot pursuit, and on Aug. 2, General Henry again struck their main force and drove them into the Mississippi at the mouth of the Bad Axe. Here the regulars and the rest of the army joining in, soon cut them to pieces. General Winfield Scott took command five days later, on Aug. 7, 1831, and not long afterwards negotiated a treaty of peace. Black Hawk and two of his sons, with several of his principal warriors, were held as hostages for a time. After detention at Fortress Monroe until June 5 of the next year, he was released. During his captivity he was taken to all the principal cities, where his fate elicited a good deal of sympathy. After his return he lived peaceably with his tribe in Iowa until his death, Oct. 3, 1838, in the 70th year of his age. He was buried at Iowaville, Iowa.

THE BERMUDAS.

GENESEO, Ill.

Please give a concise history of the Bermuda Islands.

MRS. M. H. PIERCE.

Answer.—The Bermudas were discovered successively by Juan Bermudez, a Spaniard, in 1522; Henry May, an Englishman, in 1593: and Sir George Somers in 1609; the discovery in each case being due to the shipwreck of the discoverer. Sir George established the first settlement shortly before his death. In 1612 these islands were granted to 120 persons, an offshoot of the Virginia Company, sixty of whom, led by Henry More, and followed by fugitives from the civil war in England, commenced the cultivation of the soil, which soon yielded rich crops of tobacco. Later the salt lagoons furnished the chief article of commerce. The government consists of a Governor, appointed by the crown, and a privy council of nine members, appointed by the Governor. The House of Assembly is composed of thirty-six members, elected by the people. The acts are revised from time to time, being passed for a limited period.

LIVE QUESTIONS FOR DEBATE.

WEST PILOT, Iowa.

Will you please give some live questions for debate in a lyceum?

WILLIE G. SPRINGER.

Answer.—Should an international copyright system be established? Should the government establish postal savings banks? Should literary ability be acknowledged and encouraged in this country, as in England, by grants or pensions from the government? Should the election of President and Vice President be by direct popular vote, instead of through the electoral college?

GIVE FOWLS GOOD FOOD AND EXERCISE.

NEBRASKA CITY, Neb.

What is the matter with my fowls? They do not seem to be sick, but they are languid and do not lay or seem to have any ambition.

AMANDA.

Answer.—Perhaps it is because they are too closely cooped and have not sufficient exercise. Give them plenty of sunlight; keep them dry; bury a share of their grain in their dusting-place so that they will have to scratch for it; scatter the rest of their food so that they will have to exercise in order to get it and can not eat too fast; give them a variety of dry and cooked food, including cooked meat and vegetables in the morning and grain at night; and the probability is that you will see a marked improvement.

THE SULLIVAN-HANFORD MURDER.

CHICAGO, Ill.

When did Alexander Sullivan shoot Francis Hanford, the Chicago school principal? When did his trial take place and before what Judge? Was the Judge impeached for his course on that trial? Is it certainly so that this is the same Sullivan who is now at the head of the Irish National League of America? One friend says it is and another says that this latter Sullivan is a New Yorker.

INQUIRER.

ST. HELENA, Neb.

Is the Alexander Sullivan, of Chicago, elected President of the Irish National League, recently organized in Philadelphia, the same man who some years since killed Francis Hanford, the Chicago school principal? Why was that Sullivan acquitted?

JOHN MARTIN.

Answer.—Alexander Sullivan shot Francis Hanford, Principal of the North Side High School, Chicago, on Aug. 7, 1876, under the following circumstances: In an anonymous paper read that afternoon in the City Council it was charged that Mrs. Alexander Sullivan had procured the appointment of her husband, as Secretary of the Board of Public Works, through undue influence over Mayor Colvin. It was also charged that she was the moving spirit in a corrupt ring that dictated the management of the public schools. Mr. Sullivan was told that the author of this paper was Mr. Hanford. At 7 o'clock that same evening, himself, wife and a younger brother drove up in front of the Hanford residence as that gentleman was sprinkling his grass plat, while Mrs. Hanford sat on the door-step looking on. Sullivan demanded an immediate retraction; after a few words he knocked Mr. Hanford down. A scuffle ensued which ended in Sullivan's drawing a revolver and shooting Mr. Hanford dead in the presence of his family. He afterward claimed that during the fracas, when Mrs. Sullivan came up to separate them Mr. Hanford had struck her. On the trial the prosecution claimed that if this were so, the blow was not directed or intended for Mrs. Sullivan, but came about in Mr. Hanford's efforts to protect himself from Sullivan's attack. The first trial of Sullivan began Oct. 17, 1876, and ended Oct. 27 in a disagreement of the jury. The public was greatly exasperated, and, believing that the disagreement of the jury was due to the rulings and charge of Judge McAllister, there was a loud call made by the most respectable citizens of all classes for his resignation. When the news reached the Board of Trade such a scene was witnessed as seldom occurs in such a place. By unanimous consent all business was suspended. In ten minutes a petition was prepared, asking Judge McAllister to resign at once. In half an hour it had received 500 signatures, and by night there were 1,200 names appended, all of members of the board. The Judge treated this petition and the unanimous condemnation of the press with silent contempt. Sullivan's second trial opened Feb. 26, 1877, before the same judge, and closed March 9 with a verdict of acquittal. Judge McAllister was never impeached before any legal tribunal; but at the bar of public opinion he suffered the condemnation of the intelligent, order-loving element of the entire country. This Alexander Sullivan is now the President of the newly organized Irish National League of America.

SECURITY OF NATIONAL BANKS.

DOWNSVILLE, Wis.

Are the notes and deposits of the National Banks well secured? What is the rate of loss suffered through these banks?

S. S. C.

Answer.—The currency issued by National banks is amply secured by the deposit of registered bonds of the United States with the Treasurer of the United States. The Comptroller of the Currency makes frequent inspections of these institutions, and whenever the market value of the bonds thus deposited falls below the amount of the circulation issued for the same, he is authorized to demand additional security in United States bonds or money to the amount of such depreciation. National bank notes are all printed by the government, and furnished to the banks only in such quantities as they are authorized to circulate. As a consequence there can be no over issues. In case of the failure of a bank to redeem its circulating notes, the holders may present them for payment at the Treasury of the United States, where they will be redeemed. The government is protected against loss by holding a first lien on all the assets of such banks. Depositors in cases of failure do not always realize the full amount of their claims, but the history of banking shows no parallel to the excellence of this system in respect of the small proportion of loss suffered by depositors. The loss to all creditors of the United States National banks from the passage of the act of Feb. 25, 1863, to Nov. 1, 1882, amounted to only about $400,000 per annum on an average capital of $450,000,000, and annual deposits averaging $800,000,000, so that the average loss to depositors during a period of nearly twenty years was but one-twentieth of 1 per cent per annum.

GOVERNORS OF IOWA.

ANAMOSA, Iowa.

Please give a full list of the Governors of this State from the organization of Iowa Territory, with the years that they were in office.

SUBSCRIBER.

Answer.—The Territorial Governors of Iowa were:

Robert Lucas	1838-41
John Chambers	1841-46
James Clark	1846-46

Iowa was admitted into the Union as a State Dec. 28, 1846, since when its Governors have been:

Ansel Briggs	1846-50
Stephen Hempstead	1850-54
James W. Grimes	1854-58
Ralph P. Lowe	1858-60
Samuel J. Kirkwood	1860-64
William M. Stone	1864-68
Samuel M. Merrill	1868-72
Cyrus C. Carpenter	1872-76
Samuel J. Kirkwood	1876-78
John H. Gear	1878-82
Buren R. Sherman	1882-

The above does not give the names of the Governors of Missouri, Michigan, and Wisconsin Territories at the dates when what is now Iowa was attached to those Territories. After Missouri became a State, in 1821, Iowa was left without any civil government. From 1834 to 1836 it was attached to Michigan Territory, then embracing Wisconsin, Stevens T. Mason, Governor. In 1836 Wisconsin Territory was organized, including Iowa, and the Wisconsin Territorial Legislature was actually in session at Burlington, Iowa, when news came from Washington that Iowa had been constituted a separate Territory. Of course there was nothing left for the "Badgers" but to pack their carpet bags and decamp for their own Territory, which they did instanter. Henry Dodge was Governor of Wisconsin while Iowa was joined to it.

STEEL AND STEEL RAILS.

MARION, Ind.

Please explain how steel rails are made.

ALPHA.

Answer.—Steel is a carburet of iron, rendered as free as possible of all foreign matter, such as sulphur, phosphorus, etc. It may be produced by working pig iron, which contains 4 or 5 per cent of carbon, in a suitable furnace until the amount of carbon is reduced to about 1 per cent, the average carbon in good steel. This is a decarbonizing process. In the other process, which is directly opposite to this, iron bars, freed of carbon, are heated in contact with charcoal until they have absorbed the necessary per cent of carbon. The steel, in the form of ingots, is brought to a proper heat and welded together in proper quantity to make a rail of given length and weight. This is then rolled into proper shape by immense rollers, grooved so as to give the right shape to the rail. Bessemer steel rails can be cast in molds.

SETTLEMENT OF THE CAROLINAS.

BURLINGTON, Iowa.

When and by whom were the States of North and South Carolina settled?

AMERICUS.

Answer.—A company of Huguenots, many of them soldiers and men of rank, with Ribault as their leader, while on an exploring tour, entered a harbor, which they named Port Royal, and being much pleased with the country, thirty were chosen to begin a colony. Their object was to search for gold, but failing to discover any they built a rude ship and put to sea in it. In 1650 a settlement was started upon the Chowan River by emigrants from Virginia and England, which was afterward called Albemarle County Colony, and another settlement near Wilmington, made by planters from Barbadoes, was named Clarendon County Colony. In 1670 a colony settled upon the banks of the Ashley River, but ten years later it removed to the present site of Charleston, S. C. These three colonies were similar in origin

and under the same Governor until 1729, when the two Carolinas were erected into distinct provinces.

THE GREATEST OF VALLEYS.

BRIGHTON, Cal.

Is there any valley in the world larger than the Mississippi Valley?

C. C. HARRIS.

Answer.—The Valley of the Amazon is larger than that of the Mississippi, the former river draining 2,330,000 square miles, the latter 1,244,600 square miles. The Amazon drains a greater area than any other river on the globe.

UNITED STATES MINTS AND ASSAY OFFICES.

FARRAGUT, Iowa.

How many mints are there in the United States, and where are they? What are assay offices, and where are they?

ADA A. HALL.

Answer.—This government has coinage mints in Philadelphia, San Francisco, New Orleans, and Carson City, and a mint at Denver used at present merely as an assay office. This last and the assay offices at Boise City, I. T., Helena, M. T., and Charlotte, N. C., are limited by law to melting and assaying gold and silver bullion and paying for the same from Treasury funds. There is an assay office at New York for the testing of foreign coin or bullion bought by the government to be coined or recoined. All the precious metal purchased for mintage is computed at the value given it at these assay offices. The single letters, O., S., C., etc., stamped under the eagle on American coin indicate where the pieces were minted.

POLITICAL AND GOVERNMENT TOWNSHIPS.

WINDSOR, Ill.

Is there any difference between political and "government" townships? If so, what is it?

A SUBSCRIBER.

Answer.—1. A full township, according to the United States Government land survey, is six miles square and contains thirty-six sections. This is often called a "Congressional township," sometimes a "government township." Along the borders of large lakes and navigable rivers, and particularly next to State boundaries, fractional Congressional townships are common. For purposes of township government, fractional townships are in many cases united with adjoining townships, or two full townships may be joined under one town organization. In other cases three or more Congressional townships organize under one or two political town governments, according to the convenience and wishes of a majority of the inhabitants. 2. For an explanation of the United States Government Land Survey, including definition of base lines, ranges, and names and location of all the principal meridians, see Our Curiosity Shop of last year.

INTRODUCTION OF POSTAGE STAMPS.

HORTONVILLE, Wis.

When were postage stamps first used, and by what Nation?

P. G. M.

Answer.—The use of postage stamps, one of the great reforms advocated by Rowland Hill, was introduced into England through his efforts May 6, 1840. They began to be used in this country in 1847.

TIMES THAT TRY MEN'S SOULS.

ROCKFORD, Ill.

Who was the author of the expression, "These are times that try men's souls?"

E. D. H.

Answer.—Thomas Paine, who professed to believe that men had no souls. During the Revolutionary war, soon after the British captured Philadelphia, and when the cause of independence was shrouded in gloom, Paine, who was certainly one of the most spirited, brilliant, and effective knights of the pen that championed independence, wrote in "The American Crisis," "These are times that try men's souls."

WHO BURNED MOSCOW?

ALMA, Wis.

Did Napoleon burn Moscow, or was it burned by the Russians on his approach?

INQUIRER.

Answer.—It is not certain that Moscow was set on fire by official order. If so, it was by command of Count Rostoptchin, who claimed that honor after he saw the result, the forced evacuation of the city by Napoleon and the French army, which had taken possession of it on Sept. 14 and 15. Some say that it was fired by Russian fanatics when they knew that Napoleon had taken up his headquarters in the Kremlin, which they regarded as sacred. The French endeavored to extinguish the conflagration, which was ruinous to them, as it was their reliance for winter quarters.

GRADES OF BARLEY.

OOSTBURGH, Wis.

1. What constitutes the difference in grades of barley? 2. Wherein does the color of barley affect the quality of the grain? 3. How, except to gouge the farmer, did the custom of making fifty pounds of barley for the bushel originate, the legal standard being forty-eight pounds? 4. Are farmers under obligation to conform to board of trade rules, contrary to law?

QUIZ.

Answer.—1. The following are the rules governing the State inspection of barley in Chicago: "No. 1 barley shall be plump, bright, clean, and free

from other grain. No. 2 barley shall be sound, of healthy color, bright or but slightly stained, not plump enough for No. 1, reasonably clean, and reasonably free from other grain. No. 3 barley shall include slightly shrunken and otherwise slightly damaged barley, not good enough for No. 2. No. 4 barley shall include all barley fit for malting purposes, not good enough for No. 3. No. 5 barley shall include all barley which is badly damaged, or for any cause unfit for malting purposes, except that barley which has been chemically heated shall not be graded at all." 2. The color of barley is an indication of its age and condition in several respects. 3. The legal bushel by weight is different in different States. In California and Nevada it is 50 pounds; in Wisconsin and most other States it is 48; in Pennsylvania, 47; in Oregon, 46; in Louisiana it is only 32. Boards of trade make rules for themselves, one object being uniformity for the whole country. 4. As a rule, statutes fixing the weight per bushel of various commodities specify that this is to apply only in cases where contracts fail to specify the weight to be given. When grain is sold on 'Change the rules of the board determine the weight to be delivered. Since seller and purchaser are presumed to be acquainted with these rules, it is hard to imagine how either can justly complain of being "gouged."

HERODOTUS.

CROMWELL, Iowa.

Please give a short sketch of Herodotus, the father of history.

FRANK SMITH.

Answer.—Herodotus, called the "Father of History," was born at Halicarnassus, a Dorian city of Asia Minor, B. C. 484. In his youth he became disgusted with the tyrannical rule of Lygdamis, and abandoned his home for the island of Samos, upon which he acquired the Ionic dialect, which he used in writing his history. After remaining there some time he began his famous travels, visiting Greece, Asia Minor, Syria, Babylon, and Northern Africa. Returning to his old home he assisted in the expulsion of Lygdamis and the establishment of a new ruler. The latter, however, became nearly as tyrannical as the former, so that Herodotus again looked abroad for a home. Hearing that a colony was about to leave Athens for Italy, he

joined it and settled, B. C. 443, at Thurrii in that peninsula. At that place he lived the remainder of his life, writing the history which has been a lasting monument to his name. It is not known in what year he died; but it is supposed that he lived to be a very old man.

A PENSION QUERY.

IOLA, Ill.

Please answer the following: A soldier applies for a pension because of a disease contracted while in the service, but dies of said disease before action is taken by the department, leaving no wife but one child, a daughter, under 16 years of age, who dies before the claim is allowed; who, if anybody, is entitled to the pension?

J. ROBINSON.

Answer.—Section 4,718 of the Revised Statutes of the United States reads as follows: "If any pensioner has died or shall hereafter die; or if any person entitled to a pension, having an application therefor pending, has died or shall hereafter die, his widow, or if there is no widow, the child or children of such person under the age of 16 years shall be entitled to receive the accrued pension to the date of the death of such person. Such accrued pension shall not be considered as a part of the assets of the estate of deceased nor liable to be applied to the payment of the debts of the said estate in any case whatever, but shall inure to the sole and exclusive benefit of the widow or children; and if no widow or child survive no payment whatsoever of accrued pension shall be allowed, except so much as may be necessary to reimburse the person who bore the expenses of the last sickness and burial of the decedent in cases where he did not have sufficient assets to meet such expenses." According to Section 4,707 pensions may be granted to relatives who were dependent upon the disabled soldier, but these are limited to the mother, father, or orphan brothers and sisters under 16 years of age, named in the order of precedence.

SPORTING FEATS.

CHAMPAIGN, Ill.

Please answer the following questions: 1. What is the fastest time in which dashes of 100, 150, and 200 yards and one mile have been made by athletes? 2. What is the greatest record for running long and running high jumps without weights or spring-boards? 3. What is the longest base-ball throw on record? 4. What is the longest foot-ball kick?

S.

Answer.—The fastest time for a dash of 100 yards was made by George Seward, an American, at Hammersmith, England, Sept. 30, 1844, say 9¼ seconds; the fastest 150 yards was run by George Forbes, at Providence, R. I., Dec. 20, 1869, say 15 seconds; the fastest 220-yard dash was run by L. E. Myers, at New York City, Sept. 15, 1881, say 22½ seconds. The fastest mile run on record was made by William Cummings, at Preston, England, May 14, 1881, say 4 minutes 16⅕ seconds. The fastest mile run in this country was made by W. G. George, at New York City, Nov. 11, 1882. 2. The longest running long jump, without artificial aid, was made by J. Lane, at Dublin, Ireland, June 10, 1874, say 23 feet 1½ inches; the greatest running high jump in Great Britain, 6 feet 3¾ inches, was made by P. Davin, at Carrick-on-Suir, Ireland; the greatest in America, 5 feet 11 inches, was made by E. W. Johnston, Belleville, Ont. 3. The longest base ball throw on record was made by John Hatfield, at Brooklyn, N. Y., Oct. 18, 1872, say 133 yards 1 foot 7½ inches. 4. The longest foot-ball "place kick," with a run, is 187 feet 10 inches, made by R. Young, at Glasgow, Scotland, July 2, 1881.

THE COLOSSEUM.

LAMONI, Iowa.

When was the Colosseum at Rome built, and for what purpose? What were its dimensions; what is its present use, and who owns it?

E. B. T.

Answer.—The Colosseum, or Coliseum, as it is sometimes spelled, was a colossal amphitheater constructed by the Emperors Vespasian and Titus. It was in the form of an oval, the longer diameter being 612 feet, the shorter diameter 515 feet, and the height of the walls from 160 to 180 feet. It contained seats for 87,000 persons, and standing room for 15,000 more. The arena, or oval in the center, where the gladiators fought and the deadly conflicts with wild beasts took place, was 281 feet by 176. The walls were of marble, the external face consisting of four stages, or offsets, adorned with engaged columns of the three orders of Grecian architecture, Doric, Ionic, and Corinthian. The lowest three were arcaded, having each eighty columns and as many arches. Statues, sculptures, figures of chariots, metal shields, and other embellishments adorned the niches and salient points. What was the internal structure of this vast building is not fully understood. The tiers of seats above referred to only rose to one-half the height of the stupendous walls. Whether there were hanging galleries above these marble seats is now only a matter of conjecture. Over 2,000 wild beasts were killed in the dedicatory service. There were means by which, when the combats were ended, the immense arena could be filled with water for the exhibition of sea fights. During the various persecutions of the early Christians, many of these were thrown to the wild beasts in this amphitheater. One of the first of these was St. Ignatius, who was torn to pieces by lions. In the sixth century, when Christianity gained the ascendency, the church put an end to the use of the Colosseum. It still stood entire in the eighth century, but subsequently large quantities of the marble was used in the construction of public and private buildings. Pope Benedict XIV., in commemoration of the martyrs who had suffered within its walls, consecrated the Colosseum as a monument to them, erected crosses and oratorios within it, and so put an end to the process of destruction. Ever since it has been regarded as sacred to the martyrs and subject to the church.

WARMING ARCTIC DWELLINGS.

JOHNSONVILLE, Ill.

Do inhabitants of the Arctic regions use fire as a means of heating their ice or snow-block houses, and for cooking? If so, what kind of fuel do they use?

H. E. T.

Answer.—The ordinary means of lighting and warming Esquimaux igloos, or winter huts, is a large basin of oil furnished with moss wick. These basins are scolloped from soapstone or similar material. The oil is the product of the whale, seal, or other fish, or of the white bear, but usually the former. Igloos are huts usually a half or more underground, and finished above ground with stones, bones, turf, and moss, and finally with ice and snow. Sometimes they are constructed of blocks of ice and compact snow, with transparent ice windows. The igloo is reached by a long tunnel-like entrance, is unventilated, and soon after the great lamp is lit the heat from this and the warmth from the bodies of the inmates render the mephitic air almost suffocating. These people, generally, eat their food raw or but half cooked.

GOTHAM.

CHICAGO, Ill.

Why is New York City called "Gotham?" What is the origin and meaning of Gotham?

J. C. STARR.

Answer.—In "Salmagundi," a humorous work written by Washington Irving, his brother William, and James K. Paulding, this name is applied to New York, to suit the purpose of the authors in representing the inhabitants as given to undue pretensions to wisdom. Of course, the allusion is to the inhabitants of Gotham, a parish in Nottinghamshire, England, who were as remarkable for their stupidity as for their conceit. All the follies of English wiseacres were attributed to them. Fuller says: "The proverb of 'as wise as a man of Gotham' passeth publicly for the periphrasis of a fool; and a hundred fopperies are forged and fathered on the townsfolk of Gotham." It was said that when King John was about to pass through Gotham toward Nottingham he was prevented by the inhabitants, who thought that the ground over which a king passed became forever a public road. When the King sent to punish them they resorted to an expedient to avert their sovereign's wrath. According to this, when the avengers arrived they found the people each engaged in some foolish occupation or other, so that the

King's messengers returned to court and reported that Gotham was a village of fools. In time a book appeared, entitled "Certain Merry Tales of the Mad Men of Gotham," compiled in the reign of Henry VIII., by Andrew Borde, a sort of traveling quack, from whom the occupation of the "Merry Andrew" is said to be derived. Among these tales is the story of "The Three Wise Men of Gotham," who went to sea in a bowl. The book had a wonderful sale. Walpole attributed it to Lucas de Heere, a Flemish painter, resident in England in the time of Queen Elizabeth, but the weight of evidence is in favor of Borde's being the author, or compiler, it being mostly a compilation of popular legends even then from four to five hundred years old.

ST. PETER'S AND COLOGNE CATHEDRAL.

Fox Lake, Wis.

Which is larger, St. Peter's Cathedral or the cathedral at Cologne? Please give the dimensions of both.

Ella Lyle.

Answer.—The dimensions of St. Peter's at Rome, the largest cathedral in the world, are as follows: Length of the interior, 613½ English feet; of transept, 446½ feet; height of nave, 152½ feet; and the diameter of cupola, 193 feet. The height of the dome from the pavement to the top of the cross is 448 feet. Cologne cathedral is 511 feet long, and 231 feet broad. The towers are 511 feet high. This famous building, founded by Archbishop Conrad, designed by Architect Gerhard von Riehl, and commenced Aug. 15, 1248, was not completed until Aug. 14, 1880. It was solemnly opened with august ceremonies, Oct. 15, of the same year.

ORIGIN OF CHESS.

Farmington, Minn.

Please state the origin of the game of chess.

O. H. Baker.

Answer.—Chess is such an ancient game that its origin is unknown. Many of the most learned Oriental scholars have written upon the subject, appealing to history and philology to support their theories. It has been ascribed to a Chinese mandarin by the name of Han-Sing, who, it is said, invented it as an amusement for his soldiers when in winter quarters, about 174 B. C. They call it "the play of the science of war." Sir William Jones, the great Sanscrit scholar, claimed that Hindu traditions, the names of the pieces, and other particulars indicate that chess was played in India in the earliest times. He writes that a learned Brahmin assured him that it was mentioned in several of the oldest books of India, where it was declared that it was invented by the wife of one of the most ancient kings of Ceylon to amuse that monarch while Rama was besieging his metropolis. This, by their reckoning, was 2,000 to 3,000 years before the commencement of our era. On the other hand, several later scholars of Sanscrit think it was invented in India by Buddhists some time between the third and ninth centuries, A. D., a theory inconsistent with the unwarlike nature of Buddhism and the fact that the Hindu name of the game, "chaturanga," is a military name, signifying the game of armies, corresponding with the Chinese name for chess, given above. Others have ascribed this game to the Babylonians, Persians, Scythians, Egyptians, Jews, Greeks, or Romans, according to their several theories, but the weight of evidence is in favor of its being of Indian or Chinese origin, and this is now the generally accepted belief.

STATE SECRETARIES.

CHICAGO, Ill.

Oblige us with a list of the names of Secretaries of State for the principal Western States.

B.

Answer.—Since the names of the Secretaries of State for Texas, Oregon, and Washington Territory are called for by another correspondent, and such information is not within convenient reach of most persons, we give below a full list of Secretaries of all the States and Territories. Persons wishing information in regard to State inducements to immigration, State resources,

taxation, etc., can usually obtain it by writing to the Secretary of State, who will transmit the question to the proper officer for the reply called for.

Alabama—Ellis Phelan.
Arkansas—Jacob Frolich.
California—T. L. Thompson.
Colorado—Melvin Edwards.
Connecticut—D. Ward Northrop.
Delaware—William F. Cansey.
Florida—John L. Crawford.
Georgia—N. C. Barrett.
Illinois—Henry D. Dement.
Indiana—William R. Meyers.
Iowa—John A. T. Hull.
Kansas—James Smith.
Kentucky—James Blackburn.
Louisiana—William A. Strong.
Maine—Joseph O. Smith.
Maryland—James T. Briscoe.
Massachusetts—Henry B. Pierce.
Michigan—Henry A. Conant.
Minnesota—F. Von Baumbach.
Mississippi—Henry C. Meyers.
Missouri—Michael K. McGrath.
Nebraska—Edward P. Roggen.
Nevada—J. M. Dormer.
New Hampshire—A. B. Thompson.
New Jersey—Henry C. Kelsey.
New York—Joseph B. Carr.
North Carolina—Wm. L. Saunders.
Ohio—Sames W. Newman.
Oregon—R. P. Earhart.
Pennsylvania—Wm. S. Stenger.
Rhode Island—J. M. Addeman.
South Carolina—R. M. Sims.
Tennessee— ——.
Texas—Thomas H. Bowman.
Vermont—George Nichols.

Virginia—Wm. C. Elam.
West Virginia—Randolph Stalkner, Jr.
Wisconsin—Ernst G. Trimme.
Arizona—George H. Hand.
Idaho—Thomas F. Singiser.
Montana—L. D. McCutcheon.
New Mexico—Wm. G. Ritch.
Utah—Arthur L. Thomas.
Washington—N. H. Owings.
Wyoming—Elliott S. N. Morgan.

CONGRESSMEN-AT-LARGE.

NEWTON, Iowa.

Explain what is to be understood by "Congressmen-at-large."

INQUIRER.

Answer.—The act of Congress of February, 1882, provided for a reapportionment of the membership of the House of Representatives, based on the census of 1880, provided that in the cases of States entitled under this apportionment to additional representation, the additional members in the Forty-eighth Congress might be elected on a general State ticket; also, that in all cases where the number of representatives was reduced, as in Maine, New Hampshire, and Vermont, the whole number for such State should be elected at large, "unless the Legislatures of said States have provided or shall provide before the time fixed by law for the next election of Representatives therein." Kansas, for example, which is entitled by this act to four additional representatives, did not redistrict before the last Congressional election, and so she elected four Congressmen at large, viz., Edmund W. Morrill, Lewis Hanback, Samuel R. Peters, and Bishop W. Perkins. Maine did not redistrict, so all her representatives were elected at large, instead of by districts.

CONTESTANTS OF SEATS IN CONGRESS.

BLOOMINGTON, Iowa.

To settle a dispute between me and a Greenbacker, who claims that when a seat is contested in Congress the contestant doesn't draw any pay if he fails to get the seat, except his expenses, while I contend that both draw pay until the contest is decided, state which is right.

JOHN TAYLOR.

Answer.—Section 2 of chapter 182 of "Supplement to the Revised Statutes of the United States," par. 15, says: "That hereafter no contestee or contestant for a seat in the House of Representatives shall be paid exceeding $2,000 for expenses in election contests; and before any sum whatever shall be paid to a contestant or contestee for expenses of election contests he shall file with the clerk of the Committee on Elections a full and detailed account of his expenses, accompanied by the vouchers and receipts of each item, which shall be sworn to by the party presenting the same." Nevertheless it is customary for Congress to vote compensation to contestants by appropriations in the nature of "relief bills," where each case is presumed to stand on its own merits.

BALLOONS AND THEIR PERFORMANCES.

AUBURN, D. T.

Please give some facts as to the capacity of balloons; what is used to fill them, and what are some of the greatest balloon performances?

L. J. SWARTZ.

Answer.—The buoyancy of a balloon depends on the weight of the gas with which it is inflated compared with the weight of common air, bulk for bulk. Hydrogen is the lightest of all known substances. A cubic foot of atmospheric air at a temperature of 34 degrees weighs 527.04 troy grains, while a cubic foot of hydrogen is about fourteen and a half times lighter than this. Coal gas is about two and a half times lighter than air. If a balloon would contain 1,000 pounds of atmospheric air at temperature of 34 degrees Fahrenheit, but filled with coal gas would weigh, all told—covering, gas, and appendages—600 pounds, it would rise with a force equal to the

difference of these two numbers, or 400 pounds. Mr. Glaisher, not long since, constructed a balloon containing 90,000 cubic feet of coal gas, that carried 600 pounds, and rose to the unsurpassed height of 7½ miles, where the barometer, which stands at about 30 at sea level, sank to only 7 inches, showing an atmosphere of only about 22 per cent of the weight at sea level. The longest balloon trip on record is that of the late Professor J. Wise and Mr. La Mountain. Starting from St. Louis for New York City, they traveled 1,150 miles in a little less than twenty hours, when, being caught in a contrary current, they were compelled to desist. Mr. Lowe's mammoth balloon was said to contain 700,000 cubic feet of coal gas and have a lifting power of 22½ tons; but it was badly constructed and accomplished nothing remarkable. In some 10,000 recorded ascents made since the Montgolfiers invented their famous balloons, just 100 years ago this year, there have been but fifteen deaths among 1,500 aeronauts; which indicates less danger in this business than is generally supposed.

JEFFERSON DAVIS.

FERRY, Mich.

1. Give a short biography of Jefferson Davis.

G. F. PAGE.

Answer.—Jefferson Davis was born in Kentucky in 1808; first became prominent in politics as a member of the House of Representatives, and later as Senator from Mississippi. He served in the Mexican war, having been educated at West Point. During President Pierce's administration Davis was Secretary of War, and was said to rule both President and Cabinet. In 1857 he was returned to the Senate, where he remained until chosen President of the Confederacy in 1861. This office he held for four years. In 1865, after the fall of Richmond, Davis was captured and imprisoned in Fortress Monroe for two years; was released on bail in 1867, and finally liberated by the general amnesty, Dec. 25, 1868. He is still disqualified from holding any office of honor or emolument under the General Government.

GOVERNMENT PUBLIC LAND SALES.

SHELDON, Iowa.

I have heard on good authority of the sale, by officers of public land offices, of timber claims at public auction to the highest bidder for cash. Is there any authority of law for such a proceeding?

C. H. COTTLE.

Answer.—Where large bodies of land are to be sold, a proclamation is issued in the name of the President, describing the tracts, and specifying the time and place of sale. When only a few isolated tracts of land, not embraced in the regular proclamations, are to be disposed of, notice is given in a local newspaper. The land is then sold to the highest bidder for cash only. Purchasers are not compelled to reside on or cultivate such lands. As the present policy of the government is to encourage pre-emption and homestead settlement and timber culture there are now few public land sales. Lands that have been offered at public sale but not sold may be bought at any time thereafter at the local land office if not withdrawn from market. This is called a private sale or entry.

MAGGIE MITCHELL.

VICKSBURG, Mich.

Please give a short biography of Maggie Mitchell. What is her present age?

S. C. VAN ANTWERP.

Answer.—Maggie Mitchell, one of the best-known of American actresses, was born in New York City in 1832 of Scotch parents, in very humble circumstances. When very young she was employed in simple child parts in the old Bowery Theater, for a pittance, which went to help support the family. When not more than 19 years of age, she had advanced to playing parts of some importance, and about this time, 1851, she made her first appearance at Burton's Theater as Julia, in the "Soldier's Daughter," which was her first capital success. Soon after this she went on a "starring tour" that proved profitable and widely extended her reputation. She made her

first appearance in Philadelphia at the Chestnut Street Theater on March 20, 1854, as Constance in "The Love Chase." Up to 1862 Miss Mitchell was content to appear in amusing characters, earning the reputation of a clever comedienne, but about this time she got hold of a clumsy, heavy dramatization of George Sand's popular novelette, "La Petite Fadette." She applied herself to the animating and popularizing of this play, and the result is her now famous drama "Fanchon," many of the most charming and pathetic parts being entirely of her own creation. Since June 9, 1862, when she first produced "Fanchon" on the stage at Laura Keene's Theater, New York, it has maintained a living interest which never fails to draw a house. Other plays of her composition or dramatization have followed, including "Jane Eyre," "The Pearl of Savoy," and "Mignon," a stage rendering of an episode in Goethe's "Wilhelm Meister," but none have equaled, in popular esteem, Fanchon. Miss Mitchell was married Oct. 15, 1868, to Henry Paddock, of Cleveland, her present popular stage manager. Although she is now 51 years of age, she impersonates the girlish characters of her repertory with all the sprightliness and youthful vivacity that won the hearts of her auditors twenty years ago.

ARCHBISHOP LAUD—WHY BEHEADED.

Please give an account of the life, character, and death of Archbishop Laud.

C. P. B.

Answer.—William Laud, Archbishop of Canterbury, the son of a Berkshire clothier, was born in 1573. He was ordained priest in 1601, and became vicar of Stanford in 1607. From this position he rose rapidly in power, by his executive ability and manifestation of hatred of Puritanism, until in 1628 he was appointed Bishop of London. Early in his career he had won the favor of the King, who thought he saw in him a powerful advocate of the doctrine of the divine right of kings, though Laud was really more interested in maintaining the divine right of Episcopacy. In 1617 he attempted, with the aid of King James, to establish the Episcopacy in Scotland, but in vain. In 1630 he was made Chancellor of Oxford, the center of high-church loyalty, and, according to the wish of his sovereign, attempted to repress Puritanism by slitting noses, clipping ears, fines,

branding, and imprisonment. In the high-commission and star-chamber courts his power was almost absolute. But gradually he won the bitterest hatred of the English people, until in March, 1640, seven years after his appointment to the Archbishopric of Canterbury, he was imprisoned in the Tower by order of the House of Commons. He was brought to trial in the House of Lords, Nov. 13, 1693, on charge of treason and other crimes, of which they acquitted him; but they soon afterward gave their assent to the ordinance for his execution, passed by the Commons. He had lived until the Puritans, whom he had despised and persecuted, had come into power, he had made the Scots his implacable foes, and nothing less than his blood would satisfy them. Despite of a royal pardon, by an act of arbitrary power on the part of Parliament, overriding all constitutional precedents, he was beheaded Jan. 10, 1644.

VICTORIA'S CHILDREN AND CHILDREN-IN-LAW.

BATTLE CREEK, Mich.

Please name Queen Victoria's children and their husbands and wives, and stations in life.

BELLE SHIPMAN.

Answer.—The eldest child of Queen Victoria is Victoria Adelaide Maria Louise, Princess Royal, married to the Crown Prince, Frederick William, of Germany, Jan. 25, 1858. Her eldest son, the second child, is the Prince of Wales, Albert Edward, heir-apparent to the throne; married to the Princess Alexandra, eldest daughter of the King of Denmark, March 10, 1863. Her third child was Alice Maud Mary, married to Louis IV., Grand Duke of Hesse-Darmstadt, July 1, 1862; died Nov. 15, 1878. Her fourth child is Alfred Ernest Albert, Duke of Edinburgh, married Jan. 23, 1874, to the Grand Duchess Maria of Russia. Her fifth is Helena Augusta Victoria, married July 5, 1866, to Prince Frederick Christian, of Schleswig-Holstein. Her sixth is Louise Caroline Alberta, married March 21, 1871, to John, Marquis of Lorne, present Governor General of Canada. Her seventh is Arthur William Patrick Albert, Duke of Connaught, married March 13, 1879, to Princess Louise Margaret, daughter of Prince Frederick Charles of Prussia. Her eighth is Leopold George Duncan Albert, Duke of Albany,

married April 27, 1882, to the Princess Helen, daughter of the Prince of Waldeck. Her ninth is Beatrice Mary Victoria Feodora, still unmarried. We are not prepared to publish their pictures.

ROUTE TO SINALOA, MEXICO.

BALDWIN, La.

What is the route from here to Sinaloa, Mexico? Is the Northern part of that State good for the culture of sugar cane? To what market would one ship from there?

M. D. G.

Answer.—The most direct route from New Orleans would be via the Southern Pacific and Sonora Railways to Guaymas, 353 miles southwest of Benson, on the Southern Pacific, where one can take steamer about the 15th or 16th of each month for Mazatlan, the principal port of Sinaloa, on the Gulf of California. Sugar cane, oranges, figs, and other semi-tropical and tropical fruits flourish in Sinaloa; particularly in the Valley of the Rio del Fuerte. Mazatlan furnishes a market for the products of the country, or one can ship to San Francisco or New York direct, via the California and Panama steamers.

FUSIBILITY OF ALLOYS.

HUDSON, M. T.

Why does it takes a hotter fire to melt pewter than lead?

J. B. L.

Answer.—Pewter is an alloy, composed of tin and lead, sometimes with a little copper or antimony or bismuth, combined in different proportions, according to the purposes it is to serve. Plateware, which has a bright, silvery luster when polished, is composed of 100 parts of tin, 8 parts of antimony, 2 parts of bismuth, and 2 of copper. Brittannia ware is said to be an alloy of equal parts of brass, tin, antimony, and bismuth. Now it is characteristic of alloys that they are always more easily fusible than the least fusible metal entering into their composition, and some of them,

strange to say, are more fusible than the least fusible of their constituents. For instance, although bismuth alone requires a heat of 476 degrees Fahrenheit to fuse it, lead 600 degrees, and tin 442 degrees, an alloy of these metals composed of five or eight parts of bismuth, two or five parts of lead, and three of tin, melts at 198 to 200 degrees; and an alloy of sodium composed of sodium and potassium in certain proportions melts at 80 degrees, although sodium alone requires 194 degrees and potassium 124 degrees to fuse them. The explanation is not fully determined, but it is to be found in the laws of chemical affinity. Different metals expand at different rates in the same degree of heat, which tends to separate the atoms; and electrical currents are produced which magnify the heat applied externally.

AUTHOR OF SCHONBERG-COTTA FAMILY.

LAKE CITY, Iowa.

Who is the author of "Schonberg-Cotta Family?" Give a short sketch of the same, and tell the correct pronunciation of Schonberg-Cotta.

AGGIE.

Answer.—The authoress of "Schonberg-Cotta Family" is Mrs. Elizabeth Rundle Charles, only child of the late Hon. John Rundle, member of Parliament for Tavistock. She was born about 1826; received a liberal English education; was encouraged in literary work by her father; and has written a number of works of fiction of high moral tone, including the two historical fictions "Schonberg-Cotta Family" and the "Diary of Kitty Trevylyan," intended to recall the early struggles of the two great reformers, Luther and Wesley. Among her other works are "The Martyrs of Spain and Liberators of Holland." It is almost impossible to denote the German pronunciation of "o" in Schonberg without oral illustrations. Webster says that to utter this sound one must place the organs in the position for o long and then try to utter the sound of e in met. All the other syllables in the compound word, Schonberg-Cotta, are to be pronounced nearly as in English, except that the e in berg is almost like a long.

GOLD AND SILVER IN THE SEA.

PEORIA, Ill.

Is the expression, "There is gold in the sea," only a poetic fiction or is it true? As a friend says that there is gold and silver in some kinds of sea water?

A CONSTANT READER.

Answer.—Sea water is impregnated with certain chemical salts, including chlorides, sulphates, bromides, iodides, and carbonates, some of which have the power of dissolving gold and silver or holding them in solution. The chemist Sonstadt has recently shown that sea water contains nearly one grain of gold to the ton of water, held in solution by iodide of calcium; and it has been known for some years that the old copper stripped from the bottoms of ships is often so rich in silver taken from the sea that it pays a profit on the cost of smelting it. It is estimated that the ocean holds in solution at least 2,000,000 tons of silver. Assuming this to be the metric ton of 2,204.6 pounds, the above total is equivalent in weight to 77,448,000,000 American standard dollars—nearly seven times the total silver product of the world from the earliest times to the close of 1879, or $11,315,000, as estimated by that eminent statistician, the Russian councillor, Otreschkoff. A large discount might be made from these estimates, and yet there would be enough left, aside from all the treasures of sunken Spanish galleons and oriental argosies, to demonstrate that the saying, "There is gold in the sea," is not merely a poetic fancy.

FRENCH POOLS—PARIS MUTUALS.

CHICAGO, Ill.

Kindly explain "French pools," or "Paris mutuals," as used in horse-racing circles.

R. L. K.

Answer.—"French pools" are sometimes called "Paris mutuals." This system of betting consists of selling tickets on each horse at a certain price. On the race-courses of this country the "mutuals" are $5 each. When the race is started the tickets are all added up in one large pool, and those who

hold tickets on the winning horse divide the total pool, less 5 per cent to the pool-seller. For example, in a Paris mutual, tickets in the pool were sold as follows:

Horse.	Tickets.	Price.	Total.
No. 1	10	$5	$50.00
No. 2	9	5	45.00
No. 3	4	5	20.00
No. 4	7	5	35.00
No. 5	8	5	40.00
Total			$190.00
Less 5 per cent			9.50
Net amount for winners			$180.50

Here there is a net amount of $180.50 to be divided equally between holders of tickets on the winning horse. In this case, if horse No. 3 wins, each of the four ticket-holders receives $45.12.

THE WIVES OF COLUMBUS.

CORTLAND, N. Y.

When was Columbus married and whom did he marry?

B. S.

Answer.—Christopher Columbus was twice married. His first wife was Felipa Munnis Perestrelle, daughter of an able Captain of Prince Henry of Portugal, called the "Navigator." He married her in 1471. His father-in-law's charts, globes, etc., helped to mature his plans of discovery. Diego, who accompanied his father on the occasion when they were reduced to such straits that Columbus begged at the monastery of La Rabida for bread and water for the child, was the only issue of this marriage. This wife died in 1483 or thereabout. He next married Beatriz Enriquez, at Cordova, in 1487. She was the mother of his second son, Fernando Columbus, who in time became his father's biographer.

POSTAGE ON MANUSCRIPT.

COOKSVILLE, Wis.

What is the postage rate on manuscript for books or newspapers?

INQUIRER.

Answer.—Ruling 264, page 683 of the Postal Guide for 1883 says: "All manuscript matter designed for publication in books, magazines, periodicals, or newspapers is subject to letter postage, unless accompanied by proof-sheets or corrected proof-sheets of such manuscript, or of which such manuscript is a correction or addition." Ruling 508, page 711, says: "'Book manuscript' is a term no longer used in the postal law. Manuscript accompanied by proof-sheets, and corrected proof-sheets relating to it, may pass in the mails as third-class matter in unsealed packages." The rate for third-class matter is "1 cent for each two ounces or fractional part thereof."

PERPETUAL ALMANACS.

BLOOMINGTON, Ill.

Please give a rule for finding the day of the week on which any historical event occurred when only the day of the month is given.

CHRONOLOGIST.

Answer.—This is too much like a question in arithmetic for these columns, from which all arithmetical problems are ruled out. Several distinct classes of questions might come up under "Chronologist's" query. One of the first considerations is to determine whether the historical date is given in "old style" reckoning or "new style," as a separate rule must be applied in each of these cases. Another rule applies to dates before the Christian era. Leap years are taken into account in all these rules. Every example involves an arithmetical computation. There are "perpetual almanacs" that contain tables and rules for all such computations. There is a chart published in this city entitled "Almanac for All Time, Past and Future," which answers all queries of this nature.

CHICAGO FLOWER MISSION.

CANTON, Ill.

What is the Flower Mission of Chicago? State the nature of its work, and how to reach it by letter or express.

MRS. J. D.

Answer.—The object of the Chicago Flower Mission is to collect and distribute flowers among the charitable institutions of the city; chiefly through the wards of hospitals. The influence of these cheery tokens of loving sympathy is believed to be most wholesome. The condition of the mind has, in most cases of disease, a great effect on the body. Nothing does more to recuperate the sick than a hopeful, cheerful spirit, and a lively love of life and earnest wish to recover. Flowers and their associations are delightful reminders of the world in its fairest phases, and woo the sick back to life with a tender eloquence akin to love. Letters or offerings of flowers addressed to the "President of the Chicago Flower Mission, Atheneum Building, Chicago," will reach the mission.

LAND ENTRIES BY MARRIED WOMEN.

ROCHELLE, Ill.

Please tell whether a married woman can take up government land in place of her husband, and oblige at least one of your readers,

C. A. REYNOLDS.

Answer.—Under the pre-emption laws, which restrict the pre-emption privilege to heads of families, widows, or single persons over the age of 21, who are citizens of the United States or who have declared their intention to become such, it has been judicially decided: 1. That if a single woman marry after filing her declaratory statement, she thereby abandons her right as a pre-emptor, although it is not so in the case of timber-culture claim or homestead entry; 2. The "head of a family" means the actual, living head of a family; hence, that "a deserted wife or one whose husband is a confirmed drunkard may be the head of a family;" also, that "a married woman who has minor children and has been abandoned by her husband without cause

and left to support and maintain herself and children, is the head of a family and entitled to pre-empt in her own name." Under like circumstances married women may make homestead and timber-culture entries. Otherwise a married woman cannot pre-empt government land or make a homestead or timber-culture entry.

CASUALTIES OF THE CIVIL WAR.

CHICAGO, Ill.

Will you please settle a dispute by telling how many lives were lost in our civil war; and how many were so wounded as to seriously cripple them for life?

A READER.

Answer.—According to the Provost-Marshal General's report, the casualties in the Union army from the commencement of the late civil war to its close, or say until Aug. 1, 1865, were as follows:

Killed—	
Volunteer officers, white	3,357
Volunteer enlisted men, white	54,350
Officers of colored troops	124
Enlisted men of colored troops	1,790
Regulars	1,355
Total	60,976
Died of Wounds—	
Volunteer officers	1,595
Volunteer enlisted men	32,095
Officers of colored troops	46
Enlisted men of colored troops	1,037
Regulars	1,174
Total	35,959
Died of Disease—	
Volunteer officers	2,141
Volunteer enlisted men	152,013

Officers of colored troops	90
Enlisted men of colored troops	26,211
Regulars	3,009
Total	183,467
Discharged for Disability—	
Volunteer officers	3,058
Volunteer enlisted men	209,102
Officers of colored troops	166
Enlisted men	6,889
Regulars	5,091
Total	224,306

The report of the Adjutant General of the army about five years later, Oct. 25, 1870, puts the total number of deaths in the Union army during the rebellion at 303,504, while the Surgeon General of the army reports the number at 282,955. The Adjutant General reports the total number killed in battle as 44,238; the Surgeon General reports 35,408; the former reports the total number who died of wounds as 33,993; and the latter as 49,205; the former reports the number who died of disease as 149,043; the latter as 186,216. The Quartermaster General reports the total number of graves under his supervision as 315,555; only 172,309 of which have been identified. Taking all things into consideration, the differences, according to these several reports from officers of different departments, are, in most instances, readily accounted for.

According to the only data at hand, the total Confederate losses in action are estimated as follows: Killed, 51,525; wounded, 227,871. The number who died of wounds and disease is not stated; according to a “partial statement” in the American Almanac for 1883, was 133,821. It is not clearly stated whether this includes those killed on the field.

To the above should be added the losses in the Union and Confederate navies, amounting in the case of the former to 4,030 killed and wounded in action; 2,532 died of disease; and 2,070 other casualties.

THE CHURCH OF ENGLAND.

INDEPENDENCE, Iowa.

Will the Curiosity Shop please to give the origin of the Church of England, and an outline of its history?

H. N. BAKER.

Answer.—The history of the Church of England previous to the Reformation is closely connected with that of the Roman Catholic Church. Tradition states that some of the Apostles first carried Christianity to Britain, and the later work was carried on by Sts. Augustine, Aidan and Chad. From the eighth till the sixteenth century the English Church was subject to Rome, and the final separation was due to the extreme measures adopted at the Council of Trent. But for 200 years the seed sown by Wycliffe had been bearing fruit and preparing the people for the great work of Luther. From 1066 to 1356 there was a constant struggle between the civil and ecclesiastical powers. Then came Wycliffe's translation into English of the Bible, and his continued war against some of the leading doctrines of the Romish Church, which led to the formation of a new sect called the Lollards, holding views similar to those of the present church. Despite persecution the new doctrines spread, encouraged by Cranmer, and later by Queen Elizabeth, until in 1562 the thirty-nine articles of faith were finally reviewed and adopted, and Protestantism was recognized as the religion of England. In 1801, by the "Act of Union," the Episcopal churches in England and Ireland were united but the latter church was disestablished and disendowed in 1869.

WILLIAM WALLACE—ROBERT BRUCE.

VALLEY, Wis.

1. Will you please give a few of the principal facts in the life of Sir William Wallace? 2. Where and when did Robert Bruce die?

E. F. MARSHALL.

Answer.—1. Wallace was the younger son of a Scottish knight of good family in the southwest of Scotland. Neither the date nor the place of his birth is definitely known, but the former must have been about 1270. There

is nothing certain known of his early life. He first comes into notice as the leader of an insurrectionary movement against Edward I. who had usurped the regal rights of John Baliol, King of Scotland, and held him a prisoner in the Tower of London. In 1297 the rebellion against Edward had become general, and Wallace, resolved to force the liberation of Baliol and the independence of Scotland, made preparations to invade England. On the 11th of September he defeated the English forces under the Earl of Surrey at Sterling Castle with great slaughter, and, pursuing them into Cumberland and Northumberland, ravaged that portion of England. On his return he was made Governor of Scotland, or Regent, in the name of the imprisoned monarch. This elevation of a man of comparatively humble birth over the nobility of Scotland excited fierce jealousy among the latter, which undoubtedly had much to do with the defeat of the Scots the subsequent year by the English King and an overwhelming army at Falkirk, July 22. The war was continued with varying fortunes for seven years, but in 1304 Edward compelled the Scots to submit, granting amnesty to all the insurgent nobles. Wallace, however, was excepted from amnesty, and, having been betrayed into the hands of Edward by his own countrymen, he was carried to London, where, after a mock trial on the charge of treason, and the endurance of barbarities of the most savage nature, he was executed Aug. 23, 1305. His name is held in reverence by all true Scots, who now concede to him the glory of having roused the Scotch love of country, and led the way to that sturdy resistance of English oppression which finally resulted in averting the fate that overtook Ireland. A monument to Wallace was erected at Abbey Craig, near Stirling, at a cost of £13,000, and inaugurated Aug. 27, 1869. 2. Robert Bruce, King of Scots, died at Cardross Castle, on the firth of Clyde, June 7, 1329.

ANNUAL EXPENDITURES OF THE UNITED STATES.

DIXON, Ill.

What has been the least expenditure of the United States Government in any single year since it was established; also what has been the greatest, and what has been the annual expenditure of each year since the war?

A SUBSCRIBER.

Answer.—The gross expenditures of the United States Government in 1791 amounted to $3,797,436.78. This is the lowest sum, and the next lowest was in 1793, $6,479,977.97. The greatest amount any year before the great rebellion was in 1859, during Buchanan's administration, when his Secretary of War was so busy arming the South, $83,678,642.92. The largest amount expended by the government in any single year was in 1865. Beginning with that year the table below shows the gross expenditures of the government year by year down to June 30, 1882:

1865	$1,906,443,331.37
1866	1,139,344,081.95
1867	1,093,079,655.27
1868	1,069,889,970.74
1869	584,777,996.11
1870	702,907,842.88
1871	691,680,858.90
1872	682,525,270.21
1873	524,044,597.91
1874	724,698,933.99
1875	682,000,885.32
1876	714,446,357.39
1877	565,299,898.91
1878	590,641,271.70
1879	966,393.692.69
1880	700,233,238.19
1881	425,865,222.64
1882	529,627,739.12

TRUMAN HENRY SAFFORD.

AURORA, Ill.

What has become of that wonderful mathematician, T. H. Safford? Does he still retain those remarkable powers which distinguished him as a boy? Oblige several readers with a few facts as to his life.

F. Stringer.

Answer.—Truman Henry Safford, once widely noticed as "the remarkable boy mathematician," was born at Royalton, Vt., Jan. 6, 1836, and graduated at Harvard in 1854. He compiled an almanac when he was 9 years old, making all the astronomical and other calculations. When he was but about 14 he calculated the elliptic elements of the first comet of 1849. He was appointed in 1863 Adjunct Observer in the Cambridge University, and two years later made Acting Director. While at this observatory he determined the right ascension of 1,700 stars and the declination of 450, and made 6,000 transit observations, besides completing Professor Bond's report of discoveries in the constellation Orion. On Dec. 28, 1865, he accepted the post of director of the Chicago Observatory, where he remained until 1878, making many observations of similar nature to the last above named. He is now connected with Williams College.

HERO AND LEANDER.

Chicago, Ill.

Please tell the story of Hero and Leander, illustrated in the picture displayed in a window on State street, corner of Adams.

Ignoramus.

Answer.—Hero was a priestess of Venus. Leander was a youth of Abydos, a famous city on the Asiatic side of the strait of the Hellespont, nearly opposite the city of Sestos on the European coast, where he first saw Hero. It appears to have been a case of love at first sight, and an intensely ardent case at that. Hero's office as priestess, and the resolute opposition of her parents stood in the way of their union, cold and strong as the swift current of the Hellespont, which at this its narrowest point, is swift and deep, and about one and a quarter miles wide. Undaunted by all these obstacles, Leander swam across the strait every night to visit his beloved, who directed his course by holding a torch from the upper window of a tower on the shore. After many delightful meetings, the dauntless lover was drowned one stormy night, and his body was washed ashore at the foot of the tower where Hero stood, expecting him. Heartbroken at the sight, she flung

herself from the tower into the sea, and passed with her lover into the immortality of art and song.

XENOPHON AND GROTE.

PETERSBURG, Ill.

1. Please give a sketch of the lives of the historians, Xenophon and Grote. 2. Describe the scythed chariots of the Greeks and Persians.

CONSTANT READER.

Answer.—Xenophon, son of the Athenian, Gryllus, was born B. C. 445-4. He was a pupil of Socrates. He joined the expedition of Cyrus against Artaxerxes, King of Persia, and in the retreat of the ten thousand, following the battle of Cunaxa, became the leader of the Greeks, after the treacherous execution of their former generals. A full account of the expedition and retreat is given in his "Anabasis." Being banished from Athens soon after his return, he joined the Spartan army, in which he fought against his own countrymen at Coronea. He lived at Scillus, in Elis, for more than twenty years (until driven thence by the Eleans), hunting, farming, and writing. It was there that he wrote the "Anabasis" and the "Hellenica." The last years of his life were passed at Corinth, where he died about 356 B. C. George Grote, politician, historian, and philosopher, was born at Clay Hill, Beckenham, Kent, Eng., in 1794. As a statesman he was in sympathy with the leading reforms of his time, and made several effective speeches in their behalf. His first work as an author was upon parliamentary reform. The preparation of his history of Greece occupied thirteen years, and the last two volumes were published in 1856. In 1865 appeared his work on Plato. Thereafter he devoted himself to the study of Aristotle. 2. The scythed chariot was used by the Britons and Persians. It had two wheels connected by an axle, upon which rested, without springs, the body of the chariot, consisting of a floor with a semi-circular guard in front about three feet high. It had no seat, and was open at the back. In it stood the warrior and his charioteer. Attached to the rims of the wheels projecting on each side and bristling from the axle were scythes or blades of swords for cutting down those who came in the way.

FLORENCE NIGHTINGALE.

ROBERTS, Ill.

Tell us something of the birth, education, and work of Florence Nightingale, the famous hospital nurse.

JAMES BOND.

Answer.—She was born at Florence, Italy, in 1823, being the daughter of William Shore Nightingale, Embly Park, Hampshire; she was educated with great care, and was rather notable for her brilliant accomplishments. Very early she showed great interest in all institutions for the alleviation of suffering, and later visited and inspected hospitals throughout Europe. She studied with Sisters of Charity in Paris their system of nursing in the hospitals of that city, and was trained also in the institution of Protestant Deaconesses at Kaiserwerthen, on the Rhine. Later she organized the Sanitarium for Governesses in London. Soon after the breaking out of the Crimean war she offered to organize a nursing department at Scutari, and with the consent of Lord Herbert left England Oct. 21, 1854, reaching Constantinople in time to take charge of the wounded from the battle of Inkerman. In 1855 she was prostrated by a fever, the result of overwork, but refused to rest, and remained in Scutari until the English evacuated Turkey, July 28, 1856. The British army almost idolized her. For some years Miss Nightingale has been an invalid, but she has never ceased to plan and work for the welfare of soldiers. At the close of the Crimean war a fund of $250,000 was subscribed to enable her to establish a school for the training of nurses, which is doing a noble work. She has published several books bearing upon the work to which her life has been devoted.

ARTIFICIAL POULTRY BROODERS.

WICHITA, Kan.

What is an “artificial mother” or chicken brooder? Please tell us what it looks like and how to use it?

AN OLD SUBSCRIBER.

Answer.—There are two or three illustrations and descriptions of chicken brooders, but they are all essentially the same thing. Of course the nearer it comes to being a good substitute for the hen mother the better it will be. Make a box about three or four feet square and five or six inches deep, with a board top and a sheet-iron, or, still better, a zinc bottom. Some tack a lamb skin, drooping nearly to the bottom, to the top of this box and do not use artificial heat; but the generally approved plan is to use one lamp and tin flue like those used in the artificial incubator, hitherto described, for warming a brooder of this size. Bore several small auger holes through the top as escape flues for the heat; or, still better, arrange three or four tin escape pipes of an inch diameter, as was done in the "heater" of the incubator, dropping them down to within a couple of inches of the bottom of the box. Next cut a strip from some old blanket, or other coarse, soft woolen stuff, and tack it around the lower edge of the box so that it will hang down about four inches all round. Slash this at intervals of three or four inches, so that the chicks can push through it. Now set blocks two inches thick under two corners and three inches thick under the other two corners, and your brooder is ready for use. Keep the temperature up to 80 or 90 deg. Keep the box thoroughly clean, and move it from one dry place to another every day or so. Dust the chicks occasionally with sulphur or pyrethrum, to keep off vermin, and smear their feathers here and there with paraffine. On one side of the brooder there should be a "run" for the chicks to exercise in, which may be a box covered with laths on top and sides, but with space next the ground to allow them to run out. For protection against rats at night cover the whole brooder with a close box perforated with small auger-holes for ventilation.

RELIGIOUS STATISTICS OF CHICAGO.

ROCKFORD, Ill.

What is the present number of churches in Chicago? Does the increase of churches and church membership keep pace with the increase of population?

MRS. W.

Answer..—Mr. E. F. Cragin, one of the officers of the Congregational Club of this city, has given some attention to this subject, and at the last meeting of the club presented the following figures, based on the census and the number of churches and church members, computed from the best data at hand:

Year.	Churches and Missions.	Year.	Population.	Ratio of Members to Pop.
1840	6	1840	4,479	1 to 747
1851	28	1850	28,269	1 to 1,009
1862	84	1860	109,260	1 to 1,301
1870	187	1870	298,977	1 to 1,599
1880	242	1880	503,185	1 to 2,079

These figures include Protestant and Roman Catholic churches, Jewish synagogues, two Mormon churches, several Spiritualists societies, and indeed, every society listed in our city directory as religious organizations. There are 188 of the 242 churches given for 1880, which are classed by Mr. Cragin as Evangelical Protestants, of which 38 have services conducted in foreign languages. The population between 6 and 21 years is given as 155,000, while the total membership of Sunday schools is but 81,289. By way of postscript Mr. Cragin remarks that the number of arrests in 1882 was over 33,000, or 1 to 18 of the population.

BRUNO, THE PANTHEIST.

NORTHWOOD, Iowa.

Who was “the Philosopher Bruno?”

L. O. HARMON.

Answer.—Giordano Bruno, the leader of the modern school of pantheistic philosophy, was born at Nola, Naples, about the middle of the sixteenth century. He joined the order of the Dominican Monks, but becoming dissatisfied with some of their doctrines, was expelled. He fled first to Geneva, thence to Paris, and finally to England, meeting with opposition and persecution. In 1585 he returned to Paris, and in the next year went to Germany, where he studied and taught. Becoming dissatisfied there, he settled in Padua, Italy, but was soon after arrested in Venice by officers of

the Inquisition, and burned at Rome in 1600. 2. A sketch of Socrates has rarely been given. 3. The Credit Mobilier is also fully explained in the bound volume of "The Curiosity Shop" for 1880.

CITIZENS' LEAGUE—TEMPERANCE ARGUMENTS.

MOUNT MORRIS, Ill.

> Favor us with a statement of the precise objects and scope of the Citizens' League of Illinois, and the chief provisions of its constitution and by-laws: as we may conclude to form a branch organization here.
>
> W. P. J.

Answer.—The organization is called "The Citizens' League of the State of Illinois." Its objects are the suppression of the sale of liquors to minors and drunkards, and the enforcement of the liquor laws. These objects it aims to effect (1) by enforcing all existing laws and ordinances, prohibiting the selling or giving of intoxicating liquors to minors or drunkards, and prohibiting minors from playing games in places where liquors are sold, (2) by adopting from time to time such other means as may be deemed necessary, or as may in experience be found advisable for the accomplishment of the general purposes of the organization, which is the saving of our youth from habits of dissipation and vice, and, (3) by organizing and fostering, especially in every county seat in Illinois, local leagues, having the same object in view.

Any local league in Illinois, the name of which contains the words "The Citizens' League" in addition to words of distinction, and the constitution of which is in harmony with the object of the above association, as expressed in section 2 of article 1 of its constitution, may become a constitutional branch of this league on the payment of $10 per annum, with power to send three delegates to each league meeting.

This organization was founded Nov. 25, 1877, immediately after the riots that were so prevalent throughout the country, commencing with the terrible outbreak at Pittsburg, Pa., in July of that year. Prominent citizens of Chicago observed that nearly all the actors in the gangs of rowdies and

loafers that entered manufactories and other business places, commanding employes to stop work, were youths under 20 years of age. An investigation of the causes of juvenile depravity was instituted. They learned that of the 28,035 persons arrested for crime in Chicago in the year 1877 no less than 6,818 were under 20 years of age, and that 1,782 of these were committed to the Bridewell. They also learned that in that year the arrests of minors had increased 720, and the commitments of minors to the Bridewell had increased 200 over the number in the preceding year. With a view of verifying these figures and learning the causes of this wholesale demoralization of the young, they made extensive tours of observation through the city by day and by night, and they soon satisfied themselves that it was the liquor and beer saloons that were transforming the youth of Chicago into vagrants and desperadoes. They found scarcely a saloon in which there were no juvenile customers, while in one of them they found 78, in another 93, and in another 147 children, patronizing the bar like adults. Subsequently detectives were posted at the doors of six prominent concert saloons on the same evening, with instructions to count all the people who entered them between 7 p. m. and midnight. At one door there were counted 1,680 males, 290 females, total, 1,979; at another, 1,423 males, 58 females, total, 1,741; at another, 2,609 males, 254 females, total, 2,863; at another, 2,658 males, 148 females, total, 2,806; at another, 1,657 males, 163 females, total, 1,820, and at another, 1,591 males, 94 females, total, 1,685. It was found impracticable to make a separate count of the minors who entered these places on that evening, but it was plainly seen that of these 11,618 male and 1,007 female customers an astonishingly large proportion were boys and girls. And as there were at that time about 3,000 saloons in the city, it was estimated that not less than 30,000 of the children of Chicago were their regular patrons. The police confirmed this estimate and asserted that, in face of State laws and city ordinances positively prohibiting the sale of beer and liquor to minors, which were regarded as dead-letter laws, there were saloon keepers who made a practice of tempting children into saloons and making them drunk. The first overt act of the league was the arrest of one of these monsters named Baker Born, who had been guilty of enticing into his saloon nine little boys, who were on their way home from Sunday school, and making them drunk. He was arraigned before Justice Daniel Scully and promptly fined $25 and costs. The league drew great inspiration from the public indignation which Born’s

crime excited, and from the promptness with which he was punished; and from that time to the present it has gone steadily forward, increasing every year in activity, influence and popularity. The following table contains a succinct statement of its operations (prosecutions and outlay) for the first four years of its existence;

	1878.	1879.	1880.	1881.	Total.
Saloon-keepers	241	166	96	233	736
To Grand Jury	81	90	50	60	281
Fined by Justice	83	85	13	83	264
Annual Outlay	$1,400	$1,600	$1,240	$1,542	$5,781

During the first five months of 1882, 500 saloon-keepers were prosecuted. Of this number, 40 were sent to the Grand Jury, 294 were fined by justices, and 35 held for trial.

The effect of the operations of the league on the morals of the youth of Chicago was instantaneous and permanent. In 1876 the arrests of minors increased 960, and in 1877 they increased 720; but in 1878, the first year of the league's existence, they decreased 1,418, and in 1879 they decreased 139. And although they have increased slightly in the last two years, the increase is amply accounted for by the policy of the city government and the increase of the population, which increased 204,208 in the last decade, against 188,004 in the previous decade. But notwithstanding both of these adverse influences, there have never been as many minors arrested in Chicago in any year since 1877 as there were in that year. The reduction in the commitments of minors to the Bridewell was even more marked. In 1876 these commitments increased 192, and in 1877 they increased 255. But ever since the league was organized they have constantly decreased. They decreased 211 in 1878; 324 in 1879; 23 in 1880; and 17 in 1881.

For a pamphlet containing an address detailing the origin, operations, and successes of this league, and a copy of its constitution and by-law, address the Citizens' League of Illinois, 127 LaSalle street, Chicago.

HOW TO SECURE A COPYRIGHT.

CHICAGO, Ill.

I desire to copyright a play. How shall I proceed? What length of time will it require, and what will it cost? State any other particulars that are important.

U. R. AKERSTROM.

Answer.—Every applicant for a copyright must state distinctly the name and residence of the claimant, and whether right is claimed as author, designer, or proprietor. A printed copy of the title of the book, map, chart, dramatic or musical composition, engraving, cut, print, or photograph, or a description of the painting, drawing, chromo, statue, statuary, or model or design for work of the fine arts, for which copyright is desired, must be sent by mail or otherwise, prepaid, addressed, "Librarian of Congress, Washington, D. C." This must be done before publication of the book or other article. Publication in this connection means the giving to the public or vending of the article. A fee of 50 cents for recording the title of the book, dramatic composition, or other article must be inclosed with the title and application, and 50 cents in addition for each certificate of copyright under seal of the Librarian of Congress, which will be transmitted by early mail. One certificate being all that is usually needed, $1 is the total necessary inclosure. Within ten days after publication of the book or other article, two complete copies must be sent prepaid to the Librarian of Congress, to perfect the copyright. Without the deposit of these copies, not only is the copyright void, but a penalty of $25 is incurred. No copyright is valid unless notice is given by inserting in every copy published the following words: "Entered according to act of Congress in the year 18—, by ——, in the office of the Librarian of Congress, at Washington;" or else the words: "Copyright, 18—, by ——." The law imposes a penalty of $100 upon any person who inserts the above words or others of the same import, in or upon any book or other article before he has obtained copyright. Each copyright secures the exclusive right of publishing the book or article for twenty-eight years. Six months before the end of that time, the author or designer, or his widow or children, may secure a renewal for the further term of fourteen years.

NIHILISM.

ATHENS, Tenn.

What is the true meaning of Nihilism?

S. C. Bruner.

Answer.—There is no authoritative definition of Nihilism. Certain of their leaders define it very differently from others. All of them seem to be pretty well agreed that society as now constituted is utterly wrong from foundation to turret, and most of them are in favor of overturning existing governments, casting to the winds the prevailing conceptions of individual, family, and social rights, and returning to a state of anarchy, if need be, to begin the work of reconstruction anew. *Nihil* is a Latin word signifying *nothing*, and the name Nihilists is applied to these radical revolutionists by the world at large as indicative of the tendency of their doctrines and political operations, including as they do the assassination of rulers, the springing of mines, and the firing of palaces, government offices, and even towns and cities, in the effort to annihilate all existing doctrines and systems of government. Communism and Socialism were defined in these columns but a week or two ago.

CLYDESDALES AND NORMANS.

Oskaloosa, Iowa.

State the origin of the Clydesdale and Norman breeds of horses, and whether it is proper to call them thoroughbreds?

T. J. Casto.

Answer.—The Norman horses are named from Normandy, France, and, although distinguished by different names, are probably all of one blood, the names only being of local origin. James M. Hiatt, in the "National Register of Norman Horses," maintains that the Percherons are derived from the Boulonnais and the Breton horses, the former of Bourbourg, France, and the latter of Bretagne. The Clydesdale horse takes its name from a district on the Clyde, in Scotland, where it was introduced by one of the dukes of Hamilton, who crossed the native Lanark mares with fine heavy Flemish stallions. It is proper to speak of "thoroughbred Norman horses," or "thoroughbred Clydesdales," but when the term thoroughbred is

used without any qualifying word it is understood to refer to horses bred for speed, with undisputed pedigree in the Stud-book.

DESERT LAND ACT.

RAPID CITY, D. T.

Is there a "Desert Land Act" under which our government disposes of public lands? If so, please explain it.

A. F. COFFEY.

Answer.—Desert lands are such as will not produce crops without artificial irrigation. The act of March 3, 1877, provides that persons may make entry of such lands in the States of California, Oregon, and Nevada, and the Territories. The applicant for such land must file a declaration that he is a citizen, that he intends within three years to reclaim the said tract of desert land by conducting water thereon. It must be shown by two witnesses, in writing, that the tract comes within the statutory description of desert lands. At the end of three years, on proof that the land has been reclaimed by irrigation, a patent will issue for it on payment of 25 cents an acre.

REDUCTION OF THE NATIONAL DEBT.

VALLEY CENTER, Kan.

At the present rate of reduction how long will it take to extinguish the public debt?

W. W. TURNER.

Answer.—There never has been any uniform rate of reduction of the National debt. It varies with the changes in the revenue laws, the business of the country, and appropriations from the Treasury for other purposes. The pension arrears act has already retarded the payment of the debt by over $100,000,000, and will continue to be a heavy drain for years to come. The recent reduction of the tariff and internal revenue taxes will reduce the National income greatly. The total debt at the highest point, Aug. 31, 1865, was $2,844,649,626; on Aug. 31, 1880, fifteen years later, it was

$2,105,386,267. This shows an average reduction of nearly $50,000,000 a year. For the two years ending June 30, 1882, the reduction was $202,103,376, or over $101,000,000 per annum. With the recent reductions of the tariff and internal revenue and the heavy drafts for pensions it is not likely that this rate of debt reduction will be maintained, a rate which would extinguish the whole debt by the year 1900. It is proper to add that, deducting cash in the Treasury August 31, 1865, amounting to $88,218,055, the net debt at the highest point was $2,756,431,571.

ELECTRIC TELEGRAPHING.

KANKAKEE, Ill.

When, where, and by whom was the first electric telegraphing done?

A. B. DALE.

Answer.—Professor Morse sent the first message by the electric telegraph, from Washington to Baltimore, May 27, 1844. The printing telegraph was suggested in 1837 by Alfred Vail, and a model was made by Wheatstone four years later, but this process of telegraphy has never gone into general use.

NORDENSKJOLD, THE DISCOVERER.

HOLLAND CITY, Mich.

Please give a short sketch of Professor Nordenskjold, giving date of his discoveries in the Arctic regions.

SUBSCRIBER.

Answer.—Adolph Eric Nordenskjold (born 1832), was educated at the University of Borgo, and afterward studied at Helsingfors, an important naval station on the Baltic. After teaching mathematics for two years, he was cashiered for his political opinions in 1855, but returned in the following year only to be again driven from the country. In 1858, however, he was appointed State Mineralogist at Stockholm, and in 1867 he married Countess Anna Mannerheim, a Finnish lady—an event that led him to seek

an appointment to the chair of Mineralogy and Geology at Helsingfors, but the government again refused for political reasons. Nordenskjold now obtained naturalization papers as a Swedish citizen, and entered Swedish politics. He sailed in the Vega, to find a northeast passage, July 4, 1878, and reached Yokohama, via the discovered passage, in September, 1879.

COMMUNISM AND SOCIALISM.

ATHENS, Tenn.

What is the meaning of communism and socialism as used in the newspapers?

A READER.

Answer..—Communism is the doctrine that society should be reorganized on the basis of abolishing individual ownership of property and control of wages, and most of the now generally admitted rights of individuals in their private and domestic relations, and substituting therefor community ownership and control of every person and everything. Socialism is a sort of limited communism. It would not entirely abolish individual rights of property and personal self-control, but seeks to force a more equitable distribution of property, and level the present extreme distinctions between men of various classes. To effect their purpose radical socialists have rendered themselves obnoxious to many who would accept most of the principles laid down by their great leader, Saint Simon, by advocating resort to revolutionary methods of the most reprehensible kinds, including in some places the use of dynamite and the assassin's dagger.

BISHOP FALLOWS.

EARLVILLE, Ill.

Please give a brief outline of the life of Bishop Fallows.

S. C. HILTON.

Answer.—Samuel Fallows, D. D., born in England in 1835, was in 1859 ordained to the ministry of the M. E. Church. During the civil war he was promoted to the rank of Brigadier General. He was for seven years Regent

of Wisconsin University; later President of Illinois Wesleyan University, and, while editor of the *Appeal*, was chosen Bishop of the Reformed Episcopal Church, July 1, 1876, of which he is now recognized as one of the ablest prelates and most eloquent orators.

MUSHROOM AND TOADSTOOL.

RAVANNA, Mo.

What is a mushroom, and what is the difference between it and a frogstool? Give a description of each.

A READER.

Answer.—A mushroom is a genus of fungi, including many species, edible and poisonous. It grows in marshy places during the warm months. Often the name is restricted to the species used as food, which is regularly convex, fleshy, dry, and white, with a tinge of brown or yellow. It is smooth or scaly on the upper surface, never warty; on the under side the gills are pink when young, and later turn brown. Toward the top of the fleshy stem is a white, membraneous ring. The plant is best for food when young, being then in the form of a ball, covered with a thin membrane. The toadstool ("frogstool") resembles the mushroom, but the top is shiny, white, or dark red, and the gills are perpendicular. This species is poisonous.

STATE SECURITY FOR UNITED STATES LOANS.

MOULTRIE, Ohio.

Was there a time in the history of our General Government when its credit was so low that it was necessary for one or more States to go security for a loan made by it?

S. R. ROOSE.

Answer.—There has been no such time since the adoption of the present Constitution. The nearest the Federal Government ever came to such a humiliation was in 1860, when, through the cutting down of the tariff in 1857 and the outrageous expenditures during President Buchanan's administration, the National debt had swelled to over $64,000,000, and money could not be raised on United States Treasury notes at less than 10, 11, and finally 12 per cent interest. Then John A. Dix, who succeeded Cobb as Secretary of the Treasury, about the close of 1860, found the public credit so low that, in desperation, he recommended to the Committee of Ways and Means that the States be asked to secure the repayment of money which the government should borrow, by pledging the repayment for this purpose of the public deposits received by them in the distribution of the surplus in the

United States Treasury in 1836. However, Congress did not adopt this recommendation.

During the revolutionary times, before and under the old Articles of Confederation, Congress had no authority to levy and collect taxes and customs dues, as it has now. Various plans for raising money were discussed, all dependent on the sanction of the several colonial or State Legislatures. The first plan resorted to for using the credit of the General Government was to issue paper money. Three modes of doing this were considered: First, "That every colony should strike for itself the sum apportioned by the Continental Congress; secondly, that the Continental Congress should strike the whole sum necessary, and each colony become bound to sink its proportionable part; thirdly, that the Continental Congress should strike the whole sum, and apportion the several shares to the different Colonies," every Colony becoming bound to discharge its own particular part, and all the Colonies to discharge the portion which any particular Colony should be unable to pay. The views of the delegates were widely divergent, but Congress decided, June 22, 1775—more than a year before the Declaration of Independence—to issue bills of credit, not exceeding 2,000,000 Spanish milled dollars, pledging the faith of the twelve Confederate Colonies for their redemption. The sum was subsequently increased to $3,000,000, and apportioned, on the basis of population, among the Colonies that had joined the confederation—not then including Georgia—as follows:

Colonies.	Amount.
New Hampshire	$124,069.50
Massachusetts Bay	434,244.00
Rhode Island	71,959.50
Connecticut	48,139.00
New York	245,139.00
New Jersey	161,290.50
Pennsylvania	372,208.50
Delaware	37,219.50
Maryland	310,174.50
Virginia	496,278.00
North Carolina	248,139.00

South Carolina 248,139.00

Each Colony was to pay its respective quota in four equal annual installments, commencing on the last day of November, 1779; and for this purpose each was to levy and collect taxes. But, though from first to last the States insisted upon retaining the power to tax, and Congress was obliged to trust wholly to them for funds raised in this manner, they did not tax themselves, as they were in duty bound to do, and neither contributed as they should have done to sustain the National Government, nor raised much to sustain their own organizations, civil and military. "Throughout the entire period from 1774 to 1789," says Bolles, "only very small sums flowed into the general treasury from the State treasuries."

In the spring of 1780 Congress resolved, after a great many whereases, "to receive silver and gold in payment of the quotas assigned to the States, at the rate of one Spanish milled dollar in lieu of $40 of the bills then in circulation." Subsequent loans were made, and the debt apportioned among the several States; but the latter paid but a trifling part of their assessments, as shown by the following table, giving the assessment on each State on account of the requisition of Congress for $8,000,000 in November, 1781, and the amount actually paid to the end of 1783, as given in "Bolles' Financial History of the United States," vol. I.:

State.	Assessment.	Am't paid.
New Hampshire	$373,598	$3,000.00
Massachusetts	1,307,596	247,676.66
Rhode Island	216,684	67,847.95
Connecticut	747,196	131,577.83
New York	373,598	39,064.01
New Jersey	485,679	102,004.95
Pennsylvania	1,120,794	346,632.98
Delaware	112,085	
Maryland	993,996	89,302.11
Virginia	1,307,594	116,103.53
North Carolina	622,677	
South Carolina	373,598	344,301.57
Georgia	24,905	

$8,000,000	$1,486,154.71

On the other hand, in justice to the "Fathers," it should be stated that the several States expended large sums on their individual accounts, for sustaining the common cause against Great Britain, aggregating, it was estimated, about $25,000,000; $18,271,786,47 of which Congress assumed in 1790, after the States had surrendered to the Federal Government the right to levy and collect all tariffs on foreign imports. The indebtedness incurred by the States for the Revolutionary cause and thus assumed by the United States is shown in the following table:

New Hampshire	$282,595.51
Rhode Island	200,000.00
Massachusetts	3,981,733.05
Connecticut	1,600,000.00
New York	1,183,716.69
New Jersey	695,202.70
Pennsylvania	777,983.48
Delaware	59,161.65
Maryland	517,491.08
Virginia, including Kentucky	2,934,416.00
North Carolina	1,793,803.85
South Carolina	3,999,651.73
Georgia	246,030.73
	$18,271,786.47

The foreign loans made by the United States during the revolutionary war pledged the faith of all the States. These amounted in toto to $150,000 from the Spanish Government; about 8,000,000 guilders by subscription in Holland, and 18,000,000 livres from the French Government, besides the free gifts of the French King, "forming an object," wrote Franklin, "of at least 12,000,000 livres, from which no returns but that of gratitude and friendship are expected. These, I hope, may be everlasting."

ORIGIN OF JOURNALISM.

PARIS, Texas.

1. Were any newspapers or periodicals published before the invention of printing? 2. Give a short sketch of the advancement of journalism.

FRANK LEE.

Answer.—1. At a very early period daily news letters were circulated, concerning public and official acts, in Rome, Venice, and China. 2. The first printed newspaper was the *Gazette*, published in Nuremberg in 1457, and the oldest paper extant is the *Neue Zeitung aus Hispanien und Italien*, printed in the same city in 1534. Other countries followed Germany in issuing printed newspapers in the following order: England in 1622; France, 1631; Sweden, 1644; Holland, 1656; Russia, 1703; Turkey, 1827. The progress of journalism has been most rapid in America. The first American newspaper consisting of three pages of two columns each and a blank page, was published in Boston, Sept. 25, 1690, under the name of "Publick Occurences, both Foreign and Domestic," but it was immediately suppressed. In 1704 the Boston *News Letter* appeared, printed on one sheet of foolscap paper. It flourished for seventy-two years. The following data will show the advancement in the United States:

First printing office in 1639.
First newspaper in 1690.
First political newspaper in 1733.
First daily paper in 1784.
First penny paper in 1833.
First illustrated paper in 1853.

In 1880 there were published in America (United States and Canada) 10,131 newspapers and periodicals—899 dailies, 8,428 weeklies, tri-weeklies and semi-weeklies, and 804 monthlies and semi-monthlies. More than 6,000 of this number belong to the United States, and the annual circulation is about 1,500,000,000.

WHO VOTE IN GREAT BRITAIN.

GLENVILLE, Minn.

What class of persons are allowed to vote for members of Parliament in Great Britain?

T. W.

Answer.—The "Commons of England" consists of the representatives of shires or counties, representatives of cities, and representatives of boroughs. For representatives of boroughs every man is entitled to vote who is of full age and not subject to any legal incapacity, provided he is on the last day of July in any year, and has during the whole of the preceding twelve months been an "inhabitant occupier," as owner or tenant, of any dwelling-house within the borough; has during the time of such occupation been rated (or taxed) "as an ordinary occupier in respect of the premises so occupied by him within the borough to all rates made for the relief of the poor in respect of such premises," and has paid the said rate; or has occupied as a lodger in the same borough separately, and as sole tenant for the time above designated, "a part of one and the same dwelling house, of a clear yearly value, if let unfurnished, of £10 or upward." For representatives of counties any man may be registered as a voter who is of full age, and not subject to any legal incapacity, who shall be in possession at law or in equity of any lands or tenements, of copyhold, or any other tenure whatever, except freehold, for his own lifetime or for the life of another or for any larger estate of the clear yearly value of not less than £5 over and above all rents and charges, who is on the last day of July of any year (and has been during the preceding twelve months) the occupier as owner or tenant of lands or tenements within the county of the ratable value of £12 or upward, and has paid all poor rates rated to him. The qualifications of city electors are not materially different from those above given. Of the 487 members for England and Wales, 187 represent counties, 295 cities and boroughs, and 5 represent the three universities.

The qualifications of electors in Scotland and Ireland are somewhat different. In Scotland, the burgher franchise is given to every man of full age who has been for twelve months an occupier, as owner or tenant, of any dwelling, and has paid his poor rates, and not been in receipt of parochial relief during that time. The lodger franchise consists in the permission of any lodger to vote who has occupied in the same burgh separately, and as sole tenant for twelve months, a lodging worth £10. In the counties the ownership franchise requires the property to be worth an annual net rental

of £5, and a residential qualification of six months. In Ireland the borough franchise requires a lodging of the value of £4, where in England it must be at least £10, the other qualifications being similar to those required in England.

TYPE-WRITERS.

CHAPIN, Iowa.

What are the advantages gained by the use of type-writers? By whom were they invented, and where?

G. W. ADAMS.

Answer.—Perhaps the earliest form of a type-writer is a rude machine invented in England in 1714, without any practical fruits. M. Foucault, sent to the Paris Exposition of 1855 a writing machine for the blind; but the first of what are now popularly known as type-writers was patented in 1868, by C. L. Sholes, of Wisconsin. This has been improved until now it is possible to attain a speed of seventy-five to eighty words a minute in writing with this machine, which is fast enough for reporting speeches. The principal advantages gained are rapidity of execution and legibility. A type-writer can write with both hands and several fingers in instant succession, every letter being made with a single light touch instead of requiring from three to seven distinct strokes and dots, as in ordinary script.

NOT ONE CENT FOR TRIBUTE.

EAU CLAIRE, Wis.

By whom and when was the remark used: "Millions for defense, but not one cent for tribute"?

JOHN J. MAGINNIS.

Answer..—An ill-feeling grew up between the United States and France soon after the breaking out of the great French revolution, near the close of the last century. France seemed determined that our government should take active part with it in hostilities against Great Britain. Washington and the Federal party insisted on strict neutrality. The French Minister, Citizen

Genet, encouraged by the strong French sympathies of the Republicans of those days and the almost universal ill-feeling toward Great Britain, undertook to set President Washington's proclamation of neutrality at defiance by an appeal to the people, encouraged the organization of secret political societies opposed to the administration, and even instituted recruiting for the French army on American soil. His course became so obnoxious that Washington demanded his recall. M. Fauchet was sent to succeed him, but the ill-feeling rather increased than diminished. In 1796 Charles C. Pinckney, of South Carolina, one of our revolutionary heroes, was sent to France as United States Minister, charged, among other matters, to negotiate a settlement of all differences, on the basis of American neutrality. The French Directory treated him with an incivility almost unbearable, and finally ordered him to quit the country. He withdrew to Amsterdam for a time, but, on some change of affairs in France, returned in the early part of 1797, when Talleyrand, the French Minister of Foreign Affairs, declined to treat further until his government had received a payment from the United States in the nature of a present or tribute, and threatened war as the consequence of a refusal. Thereupon Pinckney gave utterance to the patriotic exclamation, "War be it then; millions for defense, sir, but not a cent for tribute." These words were caught up by the administration party at home and echoed and re-echoed throughout the land until, in 1798, Congress was nerved to provide a strong naval armament. Later Washington, who had been succeeded in the Presidency by John Adams, was called to the chief command of the army, several French vessels were captured in reprisal for damages inflicted on American citizens, and an open declaration of war was daily looked for, when Napoleon I. came into power, and France, satisfied that the United States was in stern earnest, made overtures for reconciliation, which resulted in the treaty of 1800, honorable to all concerned.

RAINFALL OF THE UNITED STATES.

Mason, Ill.

Please give the rainfall in different portions of the United States.

T. M. Triplett.

Answer.—There is a small circle in Central Florida where the annual rainfall ranges from sixty to seventy inches. There is a belt covering Western Alabama, Eastern Mississippi, also Southern Louisiana for fifty to sixty miles on either side of the Mississippi River, where it measures from sixty to sixty-four inches. But the heaviest rainfall in the United States is in Alaska, where it is over eighty inches, and along the western coast of Oregon and Washington Territory, between the Cascade Range and the Pacific, increasing from sixty-eight inches south of the Columbia River to eighty inches on Puget Sound. In Central Georgia and South Carolina it is fifty-two to forty-eight; in Central North Carolina and Virginia, diminishing northward, it is forty-eight to thirty-six. Along the Atlantic coast, for about seventy-five miles inward, it ranges from forty-four inches at Savannah to forty in Connecticut, and thence increases to forty-four in Northern Maine. Along both flanks of the Alleghanies and Blue Ridge it is nearly uniform at 40. In most of the region south of the Ohio and Missouri, from Eastern Tennessee to Eastern Texas, it ranges from 48 inches in the south to 44 in the north, and the latter is about the average for Southern Indiana and Southwestern Ohio. The average for Illinois and Northern Indiana and Pennsylvania is about 40. For Western New York, Northern Ohio, lower Michigan, Wisconsin, Southeastern Minnesota, and most of Iowa it ranges from 40 to 32, diminishing toward the great lakes. West of the Missouri it ranges from 30 inches in Eastern Kansas to 26 in Dakota, and diminishes toward the Rocky Mountains. In Southern Texas it ranges from 48 near the southeastern corner to 28 on the Rio Grande, and diminishes to 34 in the northeastern, and 29 in the northwestern corners. In California the rainfall ranges from 60 inches on the northern coast to 9 or 10 in the south, and diminishes inland to 8 or 10 in the mountain districts, and still less in the desert regions. As for the greater part of the region embracing all the Territories except Alaska, Washington, and Southeastern Dakota, all of Colorado and Nevada, the western parts of Kansas, Nebraska and Dakota, and the eastern portion of Oregon, the rainfall varies between 10 inches and 22. Here and there within this region there are districts almost rainless. This is most common in Northern Arizona and Utah.

PESTALOZZI AND FROEBEL.

DUNLAP, Iowa.

Please give a short sketch of the lives of the three noted educational reformers, Pestalozzi, F. Froebel, and Horace Mann.

JOHN KEITGES.

Answer.—Pestalozzi, the famous Swiss educator, was born at Zurich Jan. 12, 1746. In his youth he was evidently undecided as to what profession to follow. He was first a theological student and then a law student. Having purchased some waste land, he turned from the law to farming, where he became interested in the welfare of the masses and devoted himself, during the intervals of his work, to promoting their elevation. Convinced that a rational system of education would remedy many of the evils of society, he converted his own house into an orphan asylum, and strove, by judicious blending of industrial, intellectual, and moral training, to illustrate his theory of a sound system of national education. The great idea at the basis of his system of instruction was the necessity of teaching by object lessons. Objects themselves, and not lessons about objects, were the means that he used to develop the observing and reasoning powers. He gave special attention to the moral and religious training of children, as something distinct from mere instruction in morals and religion. For two years Froebel, the father of the kindergarten system, was his pupil and assistant teacher. He died at Brugg, Switzerland, in 1827. Friedrich Wilhelm A. Froebel, to whom reference has just been made, was born at Ober-Weissbach, Germany, April 21, 1782. When sent to school he was so dull that his father, growing discouraged, took him from study and sent him to work among the wood-cutters in the forest. Here he became a student of nature and advanced, as Pestalozzi, upon his farm, to the idea of teaching from nature. In 1799 he went to school again, but falling into debt, was imprisoned by his creditors. Soon after his release he became a pupil and assistant of Pestalozzi, remaining with this great master from 1807 to 1809. He then began the study of the natural sciences, but was interrupted by the German and French war of 1813, in which he enlisted for fatherland. On the restoration of peace he became curator of the Museum of Mineralogy, under Professor Weiss, at Berlin. A few years later he began his life as a teacher, which, in 1826, the year previous to the death of Pestalozzi, he varied by publishing a work entitled “The Education of Man.” In this book he declared that man’s life was a succession of stages, each of which should be progressive. He was especially impressed with the importance of the first

years of childhood as the period in which to give shape to all their after development. In 1837 he established the first kindergarten school, at Blankenburg. Having noticed the restlessness of children, and tendency to finger everything, he took advantage of these traits to arouse in them a spirit of intelligent inquiry and investigation. Much of his time was given, in schools of Germany and Switzerland, to training primary teachers. In the latter part of his life he gave special attention to the training of young female teachers, believing them to be best calculated by nature for the care and management of young children. During the revolutionary period of 1848, at a time when, through the influence of the great Middendorff, who had become interested in his kindergarten work, he hoped to enlist the support of the German Parliament in his system of teaching, he and his brother Karl were charged with socialistic tendencies, and an edict was issued forbidding the establishment of schools "after Friedrich and Karl Froebel's principles" in Prussia. This blow utterly disheartened the veteran educator, and he died in June, 1852, at Marienthal.

A sketch of the life of Horace Mann will be found in Our Curiosity Shop for 1882.

GENERALS A. S. AND JOSEPH E. JOHNSTON.

BLAINE, Iowa.

Please give a brief outline of the lives of General A. S. Johnston and Joseph E. Johnston.

READER.

Answer.—Albert Sydney Johnston served honorably in the United States army in Mexico and Utah, and at the outbreak of the civil war was appointed General in the Confederate army. He was killed in the battle of Shiloh, April 6, 1862, at the age of 59. His native State was Kentucky. General Joe Johnston was born in Virginia in 1807, and, after completing the course of study at West Point, fought in the Seminole and Mexican wars. Receiving the position of Major General in the Confederate army, he proved himself a dangerous foe in the Peninsular campaign, in Tennessee, and Carolina. He surrendered to General Sherman April 26, 1865.

COLD IN DAKOTA.

CHICAGO, Ill.

In the interview with Mr. Geo. B. Armstrong, Register of the Government land office at Huron, D. T., recently published in THE INTER OCEAN, he asserts, substantially, that it is colder in Chicago with the mercury 5 deg. below zero than it is in Huron with the mercury 35 to 38 deg. below. A number of us, who swear by the Curiosity Shop, have got into a dispute over this statement and all agree to leave it to the editor of "the shop" to decide the matter. The question is: Is it as cold in Huron, D. T., as in this city, on the average?

G. H.

Answer.—In one sense of the word, it is unquestionably colder in Huron than in Chicago. But Mr. Armstrong has not left our readers in doubt as to his meaning. He distinctly says: "With the mercury in the thermometer as low as 35 and 38 degrees below zero, we do not suffer so much as the people in Chicago with the thermometer at 5 degrees below zero. The air is dry and comfortable." Here he clearly discriminates between the cold of the atmosphere and the sense of cold experienced by human beings. There is no ground for dispute as to the comparative average winter cold of the climate of Southern Dakota in and about Huron, and the same at Chicago. The thermometer shows that the former is several degrees greater than the latter. But taking cold in the second sense of the word, "the sensation produced by the escape of heat" from the body; "chilliness or chillness"—see Webster's second definition—every one knows by actual experience that this depends to a considerable degree upon the dryness and stillness of the atmosphere and the state of the body. Exposed to a high wind in humid atmosphere not more than 5 or 6 degrees below zero, a person may freeze to death, when he would endure 35 or 40 degrees below zero in a dry, still air without serious suffering. Such air is classed among the poorest of all heat conductors; it belongs rather to non-conductors. The sensation of cold is due to the conduction of heat from the body more rapidly than the vital forces can replace it. Moist air in rapid motion carries off heat with great rapidity. When the skin pores are open a considerable part of the fluids of the body exudes through them, dampens the garments, and so renders them better

conductors. The cold and wind evaporate this moisture in the garments. Evaporation is a cooling process; so when the pores are not kept almost sealed up by steady cold the body suffers loss of temperature both by increased conduction and evaporation. Observations of the United States Signal Service denote that the atmosphere of the region of Dakota under consideration is dryer, stiller, and less subject to extreme changes than that of Chicago; so that it is possible that, while in one sense of the word cold, it is certainly colder in Huron than it is in Chicago, in the other sense it may be no colder or not so cold there as here. This is plainly a question of personal experience, and the best that Our Curiosity Shop can do to settle this dispute is to give the above facts, and add that the testimony of many credible witnesses who have tried both climates is to the effect that, taking the winter through, one feels the cold there no more, or not so much as here. If a wager turns on our decision, taking the word cold in its first sense, the answer given above is definite and positive; taking it in the second sense, it is indecisive; a case for "a draw."

ANCHOR ICE.

LAPORTE CITY, Iowa.—In the Curiosity Shop for June 14 I see a correspondent asks an explanation of ice forming at the bottom of rivers and remaining there. I saw this ice for the first time three years ago the past winter, at Waterloo, in this State, where business kept me most of the time. It excited my curiosity, and I studied it until satisfied of its origin. The Cedar River runs through the city, and a dam is built across it giving a power of about eight feet fall. A short distance below this is a bridge over 600 feet long. The space between the dam and the bridge is a rock-bottom rapids. Having occasion to cross the bridge frequently I noticed this ice attached to the rocks under water after the weather became cold, but not cold enough to form a solid sheet of ice on the pond. It disappeared and came again as the weather changed to warm or cold, but ceased to be formed after the pond was covered with a solid cake of ice, always forming at the beginning of cold weather. I concluded it was caused by the formation of fine crystals of ice on the pond not yet frozen together, which, as they were carried over the dam, were mixed in the surf below and driven against and stuck fast in the fine moss covering the rocks, always attached to the side of the rock facing the fall, the first crystals presenting points to

catch the next, and so the mass, which appeared like water-soaked snow, grew under the water by accretion, the water being as cold as the ice itself could not thaw it. I think if the correspondent will examine he will find anchor ice is formed in rapids or at the foot of falls draining a smooth expanse of water before the water becomes covered with a solid sheet of ice, and always on the up-stream side of the rocks in the bottom.

T. A. KELLETT.

CHIEF RULERS OF THE WORLD.

WINDSOR, Ill.

Please give in "Our Curiosity Shop" the names of the principal rulers of the world, with the countries over which they rule.

M. J. S.

Answer.—The following table embraces the chief rulers of the world:

Countries.	Rulers.	Crowned or inaugurated
Great Britain	Queen Victoria	1837
Germany	Emperor William I	1871
France	President Grevy	1879
Denmark	Christian IX	1863
Sweden	Oscar II	1872
Spain	Alphonso XI	1875
Portugal	Luis II	1861
Russia	Alexander III	1881
Turkey	Abdul Hamid	1876
Austria-Hungary	Francis Joseph	1848
United States	Chester A. Arthur	1881

PASSION FLOWER.

BURLINGTON, Iowa.

Why is the passion flower so called?

FLORA.

Answer.—It was called by this name by the Spanish settlers of the West Indies and South America, its native region, because they fancied it to be a representative of Christ's passion or sacrificial death. According to this fancy, the leaf symbolizes the spear that pierced the Savior's side; the anthers, the marks of the five wounds made by the spear; the tendrils, the cords or whips with which He was secured; the column of the ovary, the upright of the cross; the stamens, the hammers; the three styles, the nails; the filamentous processes, the crown of thorns; the calyx, the glory or halo; the white tinge, purity; the blue tint, heaven; and the fact that it remains open three days typifies his three years' ministry.

ASBESTOS.

ABERDEEN, D. T.

What is asbestos, where is it found, and what valuable properties has it?

H. T. MCLANE.

Answer.—Asbestos is a fibrous, white, gray, or green mineral, not easily fusible. The most beautiful specimens come from Corsica and Savoy, though some are found in the Alps, Pyrenees, and Ural Mountains, and in North America and New South Wales, while commoner varieties, such as mountain cork and mountain wood, are found in Lanarkshire, Tyrol, Dauphiny and parts of Scotland. Its chief value is its infusibility, and though it possesses little consistency, it was by the ancients woven into garments, towels, and handkerchiefs, and has in later times become useful as fireproof roofing, flooring, and packing in safes, journal boxes, and around steam pipes. Paper has been made of it, but though at red heat the paper remains uninjured, the writing disappears. As cloth it is desirable, needing only to be thrown into the fire to be cleansed. It is said that Charlemagne had a table cloth of asbestos, which he was wont to throw into the fire at the close of the meal for the amusement of his guests.

HOW TO USE AN INCUBATOR.

ELK GROVE, Wis.

Our Curiosity Shop has explained how to make an artificial incubator; how do you use one after it is made?

"I."

Answer.—Mrs. P. G. Gilman, Paola, Kan.; Mrs. L. R. Stanley, Cameron, Neb.; C. D., Kalamazoo, Mich., make substantially the same inquiry.

In the first place be sure to get fresh eggs, which have not been chilled to death in the nest, and sort out all unfertile ones. After the eggs have been in the incubator two, or at most three days, you can tell every egg that is not fertile. By placing the small end to the eye, looking toward the sun, and moving the head up and down, you will see a dark spot floating on the top of every fertile egg. Any egg that remains perfectly clear after being in the incubator until the fourth day may as well be taken out for use or for market, since it will never hatch. Some persons recommend the use of a cheap egg-tester, which can be got by writing to the Secretary of the National American Poultry Association, New Concord, Ohio, but others think this is not needed. The eggs must be kept at a regular heat of between 102 and 105 degs. After the third day take out the egg-drawer once a day and let the eggs cool down to about 70 or 80 degs., but not below 65 degs. Turn the eggs every four or five hours during the day, by moving the muslin frame on which the eggs rest backward or forward a couple of inches, as indicated in the instructions for making the incubator. It is all done in a trice; it will be well to do this once during the night, and see that the temperature is up to proper grade. Be careful that it does not rise above 105 degs., as there is even more danger of killing the eggs by over-heating than by letting the temperature run a little low. After the third day set two or more soup-plates or tin pie-pans on the sawdust in the ventilator, under the eggs to moisten them; and from the ninth to the twelfth day sprinkle a little tepid water on the eggs by hand, in addition to the evaporation from the water in the pans. From the twelfth to the fifteenth day hand-sprinkle them twice a day, and thereafter three times a day until they hatch. The water acts on the lime of the shells to make it brittle. Perhaps it is best not to have any fire in the incubator-room, which may be a cellar, wood shed, or unoccupied room in the house. A writer in the *American Agriculturist* says:

"If any one doubts that pine sawdust in an incubator will kill his eggs let him try it." There may be something in this warning, but it is doubtful. Study your lamps to learn about how high to turn the wicks, in order to keep the temperature just right, and observe the thermometers in the front and back of your egg drawer frequently. See that the escape pipes in the heater do not slip down so close to the zinc as to check the draft. Better keep them from one to two inches above the zinc. Keep the ventilators open.

When the eggs are hatched keep the chicks in the incubator till dried, anywhere from twelve to eighteen hours, but not longer. Put them in the brooder, or "artificial mother," which will be described hereafter. Give them their first food when they are about 18 or 20 hours old. Use bread crumbs wet with milk, or corn meal thoroughly soaked, or hard-boiled eggs, and feed regularly at intervals of three or four hours from 5 o'clock a. m. to 9 o'clock p. m. Do not over-feed; give them only what they will eat clean. When old enough give them dry grain.

CERTAIN LUMBER GRADES.

Dows, Iowa.

Please give the inspection rules for grading flooring, fence-boards, siding, and six-inch, half-round, live cedar posts.

H. H. Oberton.

Answer.—There are different inspection rules at nearly all the great centers of the lumber trade. There are the "Albany Inspection," governing the lumber product of Northern New York, the "Maine survey," the "Boston inspection," the "Saginaw inspection," the "Chicago cargo inspection," "Chicago yard grading," "St. Louis inspection," "Minneapolis inspection," and several others. The differences at the several Western centers do not differ very greatly. The following grading is according to the rules of Chicago yard grading:

Flooring—A, or firsts, should have one face nearly clear, with but one or two small, sound knots; the other side may have more knots or sap. B, or seconds, may have two to four sound, medium knots, and bright sap equal

to 1 or 1¼ inches width. C, or thirds, will allow of three to six small, sound knots, or 1½ to 2 inches of bright sap.

Fencing flooring is good common flooring from selected fence boards, and may have a large number of small, sound knots, but the general character of the piece must be such as to make a good, tight floor, practically free from "shake" and loose knots.

Fencing—No. 1, or common, contains sound knots only, not to weaken the piece, and may have considerable sap, bright, dull, or stained. No. 2 contains black sap, coarse knots, and boards shaky or otherwise defective, provided they are not unfit for coarse fencing.

Strips and Siding—First and second clear, No. 1, must be perfect in thickness, width, and quality, as clear lumber, free from knots and sap. No. 2 will admit of a narrow, bright sap on one side, or one or two knots. A, or first common, if free from knots, may have two or three small sound knots, or bright sap, one-half or three-quarters of an inch wide. B, or second common, may have three or four medium-sized sound knots, or bright sap of 1 to 1½ inches wide. C, or third common, may have two to six medium knots, 2 to 3 inches of sap, or both sap and knots to equal these. Six-inch half-round live cedar posts must be of trees alive when felled, free from rot or decay of any kind, and not less than six inches at small end.

The St. Louis inspection rules for white pine lumber are almost identical with those of Chicago. Minneapolis rules allow 1 inch sap and three small knots, but no other imperfections in first flooring; six small knots and 1½-inch sap in second flooring; 1-inch sap on thin edge, but no other imperfections in first siding, dressed; three small knots and 1-inch sap on either side in second siding. Grading in the Upper Mississippi River towns is influenced strongly by the Minneapolis rules.

HOMESTEAD RIGHTS OF WOMEN.

FORT COLLINS, Col.

1. Does the homestead law allow single men and women to leave their claims to earn their living? 2. If a woman holding land under the homestead and timber-culture laws marries a man

holding land in the same way, does she forfeit her right to either claim?

M. Soper.

Answer.—A single woman who makes a homestead or timber-culture entry, or both, does not forfeit her rights by marriage, provided the requirements as to residence and cultivation are complied with; but if a single woman marry after filing her declaratory statement under the pre-emption laws, she abandons her rights as a pre-emptor. A party, while having an actual residence on his or her claim, may work elsewhere for other people a few weeks at a time.

BLACK LETTER BOOKS.

Precept, Neb.

1. I saw an account of a black letter Bible recently and should like to know the reason for its value. 2. Please explain the expression "court in banc."

Constant Reader.

Answer.—The type commonly known in this country as black letter, or Gothic, was the first used in printing, being a copy of the letters used in Germany and the Netherlands during the fifteenth century. In the next century the Gothic style was superseded by the Roman. Books in black letter are highly prized because of their antiquity and rarity. 2. The meaning is that all of the judges of the court in question hear and decide the case: that is, occupy the "banc," or bench, together.

BIBLE QUESTIONS.

Chicago, Ill.

1. How many days were the Israelites in gathering manna? 2. How many furlongs is Bethany from Jerusalem?

A. Lewis.

Answer.—In Exodus, xvi., we read that for forty years the children of Israel gathered manna daily, excepting the seventh or Sabbath, a double allowance being granted on the sixth day. 2. The distance is three miles or twenty-four furlongs.

MRS. MARY ASHTON LIVERMORE.

OXFORD, Ind.

Please give a short biography of Mrs. Mary Livermore.

JOHN MORGAN.

Answer.—Mrs. Mary Ashton Livermore, the popular platform orator and reformer, is the daughter of Timothy Rice. Esq. She was born in Boston in 1821, educated in the Baptist Seminary for Girls at Charlestown, Mass., where she gave brilliant promise of a useful future. She married the Rev. D. P. Livermore, of the Universalist Church, and assisted him in editing a paper of this denomination in Chicago. She was in this city during the late civil war and took a prominent part in the various movements to ameliorate the sufferings of soldiers on the field, in hospitals and prisons. She was an ever active, devoted and most efficient worker in the cause of the U. S. Sanitary Commission, and was one of the ablest associates of that eminent philanthropist, Mrs. A. C. Hoge, in the organization and marvelous success of the Chicago Sanitary Fair near the close of the war. She is now undoubtedly one of the ablest leaders in the cause of woman, in the various movements of the times. An eloquent speaker, a brilliant and powerful writer, a remarkable organizer and parliamentarian, she never fails to command respect and carry a strong influence. She is one of the associate editors of the Boston *Woman's Journal*, and is recognized as one of the most eloquent lecturers in the cause of temperance, woman suffrage, and other social reforms.

POINTS IN THE ROAD LAW.

SOMONAUK, Ill.

1. The law of Illinois says that any one who forbids or hinders a person while he is working on the public road shall be fined

$2. I quote from memory. Who should make the complaint and before what court? 2. What rights, exclusively his own, has a man to one-half of the road adjoining his farm, and what rights have the public?

AMASA C. LORD.

Answer.—Section 33 of chapter on roads and bridges, Revised Statutes, says: "If any person, after appearing (to work on the roads), remain idle, or do not work faithfully, or hinder others from working, such offender shall, for every offense, forfeit to the town the sum of $2." It is the duty of the overseer of highways to make the complaint, in case of a violation of this law, before a justice of the peace. 2. In case of the vacation of a road, the title to the land reverts to the original owner, his heirs, assigns, or grantees. If the roadway was condemned for highway purposes, and damages for public appropriation of the same paid to the owner, several nice legal questions would be likely to arise in case of vacation of the road. When land has been given or legally taken for a highway, the abutting owner has the right to insist that it shall be used for no other purpose. The tree-culture laws of most States give him the right to plant trees along it, subject, however, to State, county, and town regulations. These can hardly be called "exclusive rights;" it can scarcely be said that he has any such, so long as the land is used as a highway; but the public have no right to use it for any other purpose, or do anything therewith inconsistent with such use.

FIELD MARSHAL SCHWERIN.

FAIRMONT, Neb.

Who was "Field Marshal Schwerin"?

W. P. JACKS.

Answer.—He was a distinguished military commander, born in Swedish Pomerania, in 1684. His full designation is Count Kurt Christian von Schwerin. He entered the Dutch army as ensign when only 16 years of age, fought under the famous Prince Eugene and the great Marlborough against the French in the "War of the Spanish Succession," and subsequently entered the service of Frederick the Great of Prussia. He won the decisive

victory over the Austrians at Mollwitz in 1741 which resulted in the cession of Silesia to Prussia; and Frederick signalized his admiration of the great captain by conferring on him the title of Count and making him a Field Marshal. He fell in battle before Prague in 1757, during the Seven Years War, better known to Americans as the French and Indian war, which was a part of the same general war.

CANADIAN TARIFF ON BRITISH GOODS.

CHICAGO, Ill.

Does Canada collect import duties on goods that are received from England?

A CONSTANT READER.

Answer.—The Canadians did not wait long after securing their virtual commercial independence, through the establishment of the present Dominion Government, before resolving to foster home manufactures by means of a tariff which should serve the double purpose of public revenue and protection to home industry. This tariff by no means exempts goods of British manufacture; indeed, such goods pay much the larger share of the total duty, as is shown in the following table, stating the value of goods entered for consumption in the Dominion of Canada, that paid duty, the countries whence imported, and the amount of duty collected thereon during the fiscal year ending June 30, 1882:

COUNTRIES.	Dutiable goods.	Free goods.	Duty collected.
Great Britain	$41,459,730	$9,137,611	$10,011,811.00
Brit. W. Indies	1,765,024	83,700	662,514.52
Brit. Guiana	198,979	4,379	117,655.12
Brit. E. Indies	61,403	12,279	24,774.20
Australia	1,895	262	519.36
British Africa		204,745	
Total British	$43,487,031	$9,442,916	$10,817,274.20
United States	32,941,061	15,347,991	7,073,912.49
France	1,988,698	108,660	742,774.93

Germany	1,331,271	148,733	338,691.39
Span. W. Indies	2,122,373	13,795	943,791.41
Brazil	1,068,876	259,440	491,556.26
All other countries	2,818,123	1,569,959	1,292,016.95
Grand total	$85,757,133	$26,891,494	$21,700,027.63

From which it appears that Canada collects over a half more duties from British goods than she does from American goods, while the total value of her imports from the United States is over six millions greater than that of her British imports.

TELEPHONING.

ALEDO, Ill.

How is the telephone operated in the city of Chicago? Give an illustration of how messages are conveyed by telephone. Is electricity used on all telephone instruments? Does each person having an instrument have a separate wire at the central office?

S. GRADY.

Answer.—In telegraphy the wire between stations is a magnet only so long as the electrical current is passing over it, which is the case so long as the wire is connected with the battery. This connection is made or broken by means of a small lever under the finger of the operator at the transmitting station, known as the transmitting key. While the current is on and the wire is a magnet it attracts to itself a piece of soft iron at the receiving station, known in the Morse writing telegraph as the recording style. The instant the connection between the battery and the wire is broken the latter ceases to be a magnet, and the soft iron at the receiving station springs back to its old place. By this means every movement of the transmitting key is instantly repeated at the receiving station. In the telephone two thin metallic plates or diaphragms are substituted for the key and the soft iron recording style. The undulations of the air produced by the voice of the speaker cause the thin plate in the transmitting instrument to vibrate more or less violently, in harmony with the voice. This plate is so connected with the wires running between the battery and the receiving station that the electrical current over

the circuit is entirely closed or broken, or varied in intensity, according to the degree of vibration, while the receiving plate, at the other end of the wire, vibrates in unison with the transmitting plate, reproducing undulations in the air at that end of the wire directly corresponding with the undulations made by the voice of the speaker—that is, reproducing the sounds of his voice. Electricity is used in all telephones of any practical value. In Chicago the main wires and the branches from the down-town offices center at a common office, known as the central station, where, by means of couplings made by the movement of certain keys, separate wires are instantly joined or disconnected. Any one wishing to communicate by telephone turns a small crank, which rings a bell at the central office. The operator at the latter place responds by signal. The person who wishes to communicate generally inquires, "Is this the central office?" Having received an affirmative reply, he requests to be put into communication with the number in the telephone register corresponding to the office or residence of the person with whom he wishes to speak. He may now sit down until signaled that some one at the place called for is ready to communicate with him, or the operator at the central office notifies him that he can get no response from the number called for. Besides the main central office there is a district center in each of the principal divisions of the city, North, West, and South, all under the control of the former. It is not necessary for a separate wire to run from each instrument in the city directly to one of these centers. Several individual wires may unite with one common wire before reaching either the central office or a district center.

THE ALHAMBRA—MUNICH.

MARENGO, Ill.

1. Will you please give me some information respecting the Alhambra? 2. For what is the city of Munich celebrated?

RAY.

Answer.—1. The Alhambra is the fortress of Grenada, within which is the ancient palace of the Moorish kings. The most of it was built between 1248 and 1354, and though defaced and ruined, the wonderful beauty and skill of its workmanship is still apparent. It is one of the finest examples of Moorish

architecture, remarkable for peculiar grace and delicate elaboration. It stands on a terraced hill north of Grenada and overlooking the city, surrounded by a strong wall, nearly a mile in circumference, studded with towers. Passing through the Gate of Pomegranates and the neglected gardens, the visitor finds himself surrounded by beautiful arches and open courts, all leading to the chief object of attraction, the Moorish palace. Though severely plain upon the exterior, within it is exquisitely beautiful, with floors of the choicest marbles, "fretted ceilings, partitions colored and gilt, and filigree stuccos of veil-like transparency." Slender columns support the galleries, and gracefully bending palm leaves of marble form the arches, while beautiful fountains are scattered here and there. Besides the halls, courts, reception rooms, and sleeping apartments, the building contains a whispering gallery, a labyrinth, and vaulted sepulchers. After the expulsion of the Moors from Spain their conquerors took pleasure in defacing and destroying their works of art, and the Alhambra was remodeled and partly blocked up. In 1812 the French blew up a portion of it, and in 1821 it was shaken by an earthquake. Attempts have been made to restore it, but the sums of money contributed have been too small to accomplish much. 2. Munich is noted for the variety and elegance of its architecture, for its schools of art and music, and for possessing a larger and more valuable collection of art treasures than any other city in Germany. Nearly all its magnificence in architectural splendor and elegance, sculpture, painting, and music, date from the reign of Ludwig I., who ascended the throne in 1825 and during his reign spent nearly 7,000,000 thalers in the embellishment of his capital.

NAVY STATISTICS OF 1865.

WAUKEGAN, Ill.

1. What was the increase of the United States navy during the civil war? 2. How many naval officers deserted to the Confederate cause?

CONSTANT READER.

Answer.—1. According to the annual report of the Secretary of the Navy, for 1865, there were at the outbreak of the war 7,600 men in the United

States navy, and at its close there were 51,500. The force in the navy yards increased from 3,844 to 16,880. This latter was exclusive of about an equal number employed in private ship yards under contracts with the government. During the war 208 vessels were commenced for the navy and most of them completed; and 418 vessels were purchased (of which 313 were steamers), at a cost of $18,366,681.83; and of these 340 vessels were sold during and immediately subsequent to the war, for $5,621,800.27. 2. There were 322 commissioned officers of the navy who "traitorously abandoned the service" at the beginning of the conflict.

ARKANSAS.

MINNEAPOLIS, Minn.

Please give a description of Arkansas and Washington Territory, climate, price of cattle, horses, sheep, and farm products. 2. Which is best adapted to Northerners?

A. H. CHASE.

Answer.—A description of Washington Territory was given in answer to another subscriber a week ago. In Arkansas the land gradually rises from the Mississippi westward, reaching its greatest elevation in the Ozark Mountains. Unlike the Eastern portion of the State, which is alluvial in character, the country near these mountains is high and the climate is healthful. Throughout the State the soil along the river "bottoms" is rich and deep, producing large crops of corn, wheat, cotton, and tobacco. The river surface is 540 square miles, and the area covered by lakes and ponds 265 square miles. The temperature varies in the southern part from 20 degrees to 94 degrees; in the north from 10 degrees to 92 degrees. The rainfall in the south is 48-56 inches; in the north 42 inches. Below we give the average prices in Oregon, being unable to obtain them in Washington Territory. In Oregon the average price per bushel of Indian corn is 82 cents; of wheat, 78 cents; rye, 82 cents; oats, 40 cents; potatoes, 59 cents; hay, $12.14; horses, $56.22; milch cows, $21.17; oxen and other cattle, $13.72; sheep, $1.46. In Arkansas corn is 49 cents; wheat, $1.02; rye, 86 cents; oats, 53 cents; potatoes, 74 cents; hay, $11.50; cotton, 10 cents per pound; horses, $49.36; milch cows, $14.56; oxen and other cattle, $10.11, and sheep $1.48. 2. The

effects of climate depend largely upon individual peculiarities, but, generally speaking, the heavy rains of Western Washington and the malaria of Eastern Arkansas are about equally injurious. Western Arkansas and the Eastern part of Washington Territory are favorable to consumptives.

DR. KANE, THE EXPLORER.

NORMAL, Ill.

1. Please give a sketch of the life of Dr. E. K. Kane. 2. Are any members of his expedition still living?

F. A. WALKER.

Answer.—1. This celebrated explorer was born in Philadelphia in 1820. When about 25 years of age he visited China, India, and the East Indies as surgeon in the navy, and later traveled through Arabia, Egypt, Greece, and Western Europe. He acted as surgeon, naturalist, and historian to the first Grinnell expedition, in 1850, which led to the discovery of Grinnell Land, and in 1853 himself commanded the second expedition in search of Franklin. Returning home in 1855 he published the account of his travels, and in the following year went to England for his health. Thence he sailed to Cuba, where he died, at Havana, Feb. 16, 1857. 2. Dr. Hayes, who subsequently commanded another American Arctic expedition, died in New York Dec. 17, 1881. Several of the men are still alive.

RESTORING THE FLAG ON FORT SUMTER.

GALVESTON, Texas.

On what occasion was the flag of Fort Sumter restored to its place, and how?

SUBSCRIBER.

Answer.—General Sherman, on his march to join General Grant near Richmond, captured several rebel strongholds, and among them Charleston, which was evacuated by the rebels on Feb. 17, 1865. On April 14, 1865, the identical Union flag which had been hauled down at the time of the

surrender, exactly four years before, was formally restored with befitting ceremonies.

THE OLDEST AMERICAN MINE.

CHICAGO, Ill.

What is the oldest mine of any kind in the United States?

C. D. ADAMS.

Answer.—It is generally conceded by those who are read up in the history of mining and metallurgy in this country that the oldest mining enterprise of the United States, still active, is the Mine La Motte, in the lead district of Eastern Missouri, opened about 1720 under Renault, of Law's notorious Mississippi Company. It was named after La Motte, the mineralogist of the expedition. It has been worked at intervals ever since it was opened, and is in successful operation now. There are silver mines in New Mexico and Arizona, some of which may have been opened by the Spanish adventurers of the latter part of the sixteenth century and the beginning of the seventeenth. Some of these ancient mines were operated by the Toltecs and Aztecs years before the Spanish invasion, but it is not easy to identify them. So there are copper mines in the Lake Superior region in which the tools and mining marks of ancient miners of pre-historic times were found by the pioneers of the present American mining companies. Where the first colonists of Virginia got the ship-load of "fool's gold" which they sent back to England, to the great disgust of the London company, is not certainly known; but it is known that at the same time, in 1608, they shipped a quantity of iron from Jamestown, which yielded seventeen tons of metal, the first pig iron ever made from American ore. There are diggings in North and South Carolina and Georgia, now overgrown with forests, which are supposed to have been excavated by the followers of De Soto and his immediate successors between 1539 and 1600. The first recorded account of the discovery of coal in the United States is contained in Hennepin's narrative of his explorations in the West, between 1673 and 1680, when he saw the coal outcrop in the bluffs of the Illinois River, not far from Ottawa and LaSalle; but coal was first mined in the Eastern States in the beginning of this century.

LAWYER PRESIDENTS AND CONGRESSMEN.

WILMINGTON, Ill.

What per cent of our Presidents and representatives in Congress have been professional lawyers? Is it growing more or less common to elect lawyers to these places?

L. F. HAZELTON.

Answer.—Of the Presidents, John Adams, Jefferson, John Quincy Adams, Jackson, Van Buren, Tyler, Polk, Fillmore, Pierce, Buchanan, Lincoln, Hayes, and Garfield were lawyers; and Arthur was a successful legal practitioner until appointed Collector of the Port of New York by President Grant. Washington was a surveyor until he entered the army. Madison was studying law when elected to the Virginia Convention of 1776, after which he became absorbed in political life. Monroe studied law under Jefferson, but did not really enter the profession, being called off into military and political affairs. Harrison entered military and political life early, and was kept in it most of his days. Taylor and Grant rose to the Chief Magistracy by distinguished military services. Johnson was a tailor until he got into political life. As to Congress, its membership has been too numerous for a full investigation. The proportions indicated below will hold good, in all probability, for the whole of the last or Forty-seventh Congress. The two Senators and six of the eight Representatives from Alabama, both Senators and three of the five Representatives from South Carolina, one Senator and seven of the nine Congressmen from Virginia, both Senators and all the four Representatives of Arkansas, in that Congress were lawyers, or, at least, had been admitted to the bar; so were both Senators and twelve of the nineteen Representatives from Illinois, the two Senators and six of the nine Representatives from Iowa, both Senators and eight of the eleven Representatives of Massachusetts, one Senator and sixteen of the thirty-three Representatives of Pennsylvania. The South is more given to the practice of choosing lawyers, or persons with a smattering of the law, to represent them in Congress and the Legislature than the North. Planters, who never seriously expected their sons to practice, educated them in the law formerly, as one of the qualifications for political life. The olden prestige of the law as one of the learned professions, and the one that led

most directly to political promotions, had its influence on the sons of the wealthy and their sires, not in the South only, but in the North; nor on them only, but on the people. There is some rational force also in the popular conception that lawyers are or should be peculiarly fitted to be law-makers. The tendency in the North for some years past, as indicated by the above statistics, is to choose fewer lawyers and have commerce and the great industries of the country represented by their conspicuous leaders.

SCHOOLS FOR THE COLORED RACE.

GONZALES, Texas.

How many institutions of learning for the colored race are there in the United States, and how many persons attending them?

JOHN CRAWFORD.

Answer.—According to the report of the Commissioner of Education, for 1880, the educational institutions for the colored race in the United States were then in number and attendance as follows:

Class of Institutions.	Schools.	Enrolled.
Public schools	17,081	806,106
Normal schools	44	7,408
High schools and academies	36	5,237
Universities and colleges	15	1,717
Schools of theology	22	800
Schools of law	3	33
Schools of medicine	2	87
Schools for deaf, dumb, and blind	2	122
Total	17,205	821,570

Besides this there are a number of colored public schools in States that fail to report them separately from the white schools; and there are many colored children attending the same schools with the whites.

THE WYOMING MASSACRE.

Chicago, Ill.

To settle a dispute, please give the particulars of the massacre of the Wyoming colonists during the revolutionary war, together with the names of the military commanders and Indians, and oblige

A Constant Reader.

Answer.—In the summer of 1778 the beautiful valley of Wyoming, Penn., was invaded by a band of tories and Indians, and in the battle that followed, on July 3, the American patriots, commanded by Colonel Zebulon Butler, were defeated with horrible slaughter. Then followed a general massacre, which some escaped by fleeing to the mountains, while a few took refuge in Fort Forty (now Wilkesbarre). This fort was besieged the morning of the 4th by the tories and Indians under Colonel John Butler, and ordered to surrender; and being without any means of defense, Colonel Dennison yielded to the entreaties of the women and children to enter into articles of capitulation. It was agreed upon the surrender of their arms, and the destruction of the fort, the inhabitants of the valley should return peaceably to their homes, but no sooner was the fort surrendered than the Indians fell upon the houses, which they plundered and burned, killing all the women and children who had not escaped to the mountains. The entire village of Wilkesbarre was burned to the ground.

THE ILLINOIS BLACK LAWS.

Western Springs, Ill.

What were the "black laws" of Illinois?

J.L. Wells.

Answer.—Under the Territorial laws of Illinois persons were allowed to bring slaves into the Territory under the name of indentured servants. As such they might be held in bondage for a term of ninety-nine years or less. This was in direct violation of the spirit of the ordinance of 1787, which interdicted slavery or involuntary servitude in all the territory north of the Ohio River. The first State constitution, adopted in 1818, prohibited the further introduction of slaves, but did not abolish this species of slavery by

liberating the victims of the barbarous Territorial enactments. Thus slavery existed in Illinois in defiance of the ordinance of 1787 until the adoption of the constitution of 1848, which contained the following provision: “There shall be neither slavery nor involuntary servitude in this State, except as a punishment for crime.” After the adoption of the constitution of 1818, the first Legislature re-enacted the wicked law “respecting free negroes, mulattoes, servants, and slaves” of Territorial times. No severer law was to be found in any slave State. It forbade negroes or mulattoes to settle in the State without certificates of freedom. No person was to employ any negro or mulatto without such certificate, under a penalty of $1.50 for each day. To harbor any slave or servant, or hinder the owner in retaking a slave, was made a felony, punishable by restitution or a fine of two-fold value, and whipping not to exceed thirty stripes. Every black or mulatto without a proper certificate was subject to arrest as a runaway slave, to be advertised for six weeks by the sheriff, when, if not reclaimed or his freedom established, he was sold for one year, after which he was entitled to a freedom certificate. Any slave or servant found ten miles from home without permit was liable to arrest and thirty-five stripes, on the order of a justice. For misbehaving to his master or family he was punishable with the lash. Indeed, punishment with the lash to the number of thirty-nine and forty stripes was prescribed for each of a long list of offenses, real or of legal construction. Even after the adoption of the constitution of 1848, which required the General Assembly at its first session to pass such laws as would effectually prohibit free persons of color from immigrating to, or settling in this State, and prohibit the owners of slaves from bringing them here for the purpose of setting them free, the Legislature passed an act, Feb. 12, 1853, which imposed on every such colored person a fine of $50. If the fine was not paid forthwith, he was to be advertised and sold to any one who would pay the fine and costs for the shortest period of such person’s service. A case under this law was carried up to the Supreme Court, and decided so late as 1864, to be valid. Other provisions of these enactments were almost equally detestable. Such were the infamous “black laws” of Illinois, which were continued, with slight modifications, from Territorial times down to 1865, when by act of Feb. 7, of that year, they were repealed. Had it not been for these black laws the census of Illinois would not be blotted with an enrollment of “168 slaves” in 1810; 917 in 1820; 747 in 1830; and 331 in 1840—the last census that carries such a stain.

Fortunately, the masters and people at large were better than their laws. The horrors of Southern slavery would not have been tolerated here. During the last twenty-five years of their existence the black laws were practically a dead letter, being retained upon the statute book more out of opposition to abolitionism, and deference to the pro-slavery sentiment of the dominant parties than for any other reason.

FIRST EXPLORERS OF THE FAR WEST.

KILL CREEK, Kan.

Is it a fact that early French explorers were the first to cross the continent through the northern part of what is now the United States?

SAMUEL RITTER.

Answer.—No French explorers, known as explorers, traveled farther West than Minnesota, but doubtless the French trappers reached the head waters of the Missouri, if they did not go even farther. These, however, have left no record of their wanderings, and we know nothing of what they discovered. To Lewis and Clarke who in 1804-5 ascended to the head waters of the Missouri and descended the Columbia to the Pacific Ocean, belongs the honor of having given the first written account of the far West.

PENNSYLVANIA WHISKY WAR.

PRAIRIE CITY, Ill.

Did the distillers of Pennsylvania at one time create an insurrection on account of certain excise laws? If so, please state the facts, and what means was used by the government to quell the disturbance?

S. T. YOUNG.

Answer.—In 1791 a tax was imposed upon domestic liquors. This created especial dissatisfaction in Western Pennsylvania, where, in 1794, the distillers rose en masse and refused to pay the duty. But upon the approach of militia sent by Washington, they yielded.

GAY-LUSSAC—BALLOONS.

Pawnee Rock, Kan.

1. Who was Gay-Lussac? 2. Who invented balloons? 3. Why was Sir Walter Raleigh executed?

Stephen J. Willard.

Answer.—Louis Joseph Gay-Lussac was one of the most eminent chemists of this century. He was born at St. Leonard, France, Dec. 6, 1778. He distinguished himself as a student in the Polytechnic College, Paris, and was selected to become the assistant of the great French physicist and chemist, Berthollet, who was so impressed with his originality and skill in research that on a certain occasion he exclaimed: "Young man, it is your destiny to make discoveries. You shall be henceforth my companion. I wish —it is a title of which I am sure I shall have cause to be proud—I wish to be your father in science." While investigating terrestrial magnetism he was led to make a balloon ascent, on Aug. 24, 1804, when he reached an altitude of about 13,000 feet. Not satisfied, he procured a greater balloon, and on Sept. 16 of the same year rose to an altitude of 23,000 feet, a height never before reached in a balloon, and seldom exceeded since then. He made many valuable observations before descending. Together with the famous Alexander von Humboldt, he made the discovery that hydrogen and oxygen unite in the proportions of two of the latter to one of the former, by bulk, to form water; also that when gases combine with one another, either by weight or by volume, they do so in very simple proportions, as 1 to 1, 1 to 2, 2 to 3, and so on. He analyzed many chemical compounds, proved the elementary nature of several substances, such as iodine, to which he gave the name it now bears, and he formed by chemical combinations many valuable compounds. The French Academy elected him a member of that distinguished body of savants; the French Government honored him with important and highly honorable appointments; he became a member of the Chamber of Deputies in 1831, and in 1839 was made a peer of the realm. He devoted himself to scientific research to the last, and was associated with the distinguished scientist Arago, in the editorship of the Annals of Chemistry and Physics. He died in 1850. 2. Stephen and Joseph Montgolfier, of Annonay, France, a town about forty miles from Lyons,

were the inventors of hot air balloons, just one hundred years ago, and the same year two brothers of the name of Robert made and charged the first hydrogen gas balloon, under the superintendence of Mr. Charles, a professor of natural philosophy, in Paris. 3. Sir Walter Raleigh was executed under a trumped up charge of conspiracy against the life of James I., of England; but really at the instigation of certain rivals and to gratify the king of Spain, toward whom he had always manifested the greatest hostility.

QUARTER SECTIONS, SHORT OR LONG.

ORLEANS, Neb.

> There is a case in dispute here in regard to the government survey. They say that the government surveyor who ran the section lines here started at the Kansas line from the wrong corner, and, running north, made one tier of sections fifteen or twenty rods too narrow and the next tier as much too broad. Now, after twenty years, when the land is all occupied and more or less improved, can the line be moved? All the old corners are plainly defined and recognized as government corners.
>
> B. F. POLHUMUS.

Answer.—In the case of Peder O. Aanrud (see Copp's Land Owner) the Commissioner of the General Land Office made the following ruling: "The term 'quarter-section' is used to designate a certain legal subdivision of the public land ascertained by official survey. It generally contains just 160 acres; but, through unavoidable inaccuracy of surveys in adjusting meridians etc., it often exceeds or falls below that amount. It is still, however, the technical legal quarter section defined by law and ascertained by official survey. A homestead settler may enter 160 acres in legal subdivisions lying contiguous to each other without reference to the quarter-section lines, or he may enter a technical quarter-section as such, in which case he can take the amount of land contained therein, as shown by the official survey. In entering a quarter section he cannot depart from the ascertained lines, but must take 160 acres, more or less, as the case may be." The case stated in this question is extraordinary, and may not be fully covered by the above ruling, but it is almost certain that in all cases where

patents have issued and owners have been in undisturbed possession for sixteen years or more the titles cannot be disturbed.

ATCHISON, THE BORDER RUFFIAN SENATOR.

TISKILWA, Ill.

Kindly inform us who Dave Atchison, of Kansas and Missouri notoriety, was.

G. S. BATTERY.

Answer.—He was a politician of the desperado order, who figured in an unenviable light in the early days of Kansas. Born in Fayette County, Ky., in 1807, he removed to Missouri in 1830. In 1841 he was appointed by the Governor to fill an unexpired term in the United States Senate, of which, through re-election, he continued a member until 1855. For some time he acted with the Benton wing of the Democratic party, which accepted the Jacksonian doctrine as opposed to pro-slavery radicalism. In time, however, he adopted Calhounism, including the doctrine of secession, and during the early Kansas troubles devoted himself to making Kansas a slave State. In 1854-56 he encouraged and abetted the outrages committed by the bands of Missouri border ruffians, who repeatedly invaded that Territory, taking an active part in driving free-soil voters from the polls and instigating the bloody attacks on Lawrence and Ossawatamie, and in other villainies of those terrible times preceding the triumph of the Free State party in Kansas.

MURDERS AND SUICIDES.

MELROSE, Wis.

Give, if you can, the number of murders and suicides in the United States in the course of a year.

IRA JONES.

Answer.—According to the census for 1880 there were 1,336 cases of homicide, or murder, and manslaughter, and 2,517 cases of suicide, of which 472 were by self-shooting, 155 by drowning, 340 by poison, 1,550 by other means.

RAINFALL IN NEBRASKA.

VAN CLEVE, Iowa.

What part of Nebraska has the greatest rainfall? What parts have the second and the third largest average rainfall? In what month is this fall the greatest?

J. W. JOHNSON.

Answer.—During the ten years from 1869 to 1879 the average annual rainfall in that part of Nebraska lying between the Missouri River and a line drawn to where Blue River crosses the Kansas-Nebraska Line, was thirty-eight inches. In the extreme southeastern corner of the State, near the Missouri River, it was nearly forty inches. West of the line above described to a line starting from the Missouri River a little south of the mouth of Bow River, running with a slight eastern curve to Kearney and then southwesterly to the State line, the average rainfall was thirty-two inches. From this last line to another starting near the mouth of the Niobrara, curving southwesterly to a point a little east of North Platte, and thence curving slightly to the southwest to a point a little west of Culbertson, the rainfall averaged twenty-six inches. Between this last line and another starting on the State line at the mouth of the Keya Paha and running southwesterly to a point on the Kansas-Nebraska line, midway between Culbertson and the southwest corner of the State, the average was nineteen inches. West of this section the rainfall is not well determined, but it diminishes from nineteen to less than seventeen inches. The heaviest rainfall is in June.

THE SIRENS.

I have an engraving representing a lady about to go into a boat, or a sailor about to land. It is entitled, "The Siren." What is the story?

BACHELOR.

Answer.—Among the old Greek legends is one that near the island of Caprera, in the Mediterranean Sea, there dwelt two—some versions say

three—damsels whose music was so sweet that no one who heard it could resist its seductive charms. The passing sailor, listening to it, forgot his country, home, and all former friends, and, unable to escape the entrancement of their songs, remained on the barren rocks until he died of starvation. It is further related that Ulysses, one of the most crafty of the Greek heroes of the olden time, by the advice of Circe, filled his sailors' ears with wax before passing the rock and had them lash him to the mast until the danger was passed. When he heard the music he struggled hard to free himself and escape to the rock, but his companions only bound him the more firmly until their ship had passed out of hearing, whereupon the fated sisters hurled themselves into the deep and were changed into two great rocks. The whole legend may be regarded as an allegory, the sirens personifying seductive pleasures.

THE FIVE POINTS IN CALVINISM.

MICHIGAN CITY, Ind.

What are the "Five Points" considered essential to pure Calvinism? Did not the Pan-Presbyterian Council held at Philadelphia a few years ago indorse them all?

FREEMASON.

Answer.—The "Five Points" in the confession of the Synod of Dort, generally regarded as the essentials of Calvinism, are the following doctrines: 1. Predestination; 2. The atonement; 3. The total depravity of the natural man; 4. That salvation is purely of the grace and free will of God; 5. The final perseverance of all who have once experienced justification by faith. For a more extended presentation of these five points see Our Curiosity Shop for 1881, page 91. These doctrines are differently construed by Presbyterian divines; so that in fact they are held in quite different senses by organizations usually classed together as Calvinists. The Pan-Presbyterian Council recognized the rights of the several bodies represented in it to construe the Scriptures as regards these doctrines according to their own judgments so long as they subscribed to the general declarations of the Westminster Confession of Faith, or the confession of the Synod of Dort.

CLAUDE DE BONNEVAL.

KILL CREEK, Kan.

Please sketch briefly the career of Claude de Bonneval.

SAMUEL RITTER.

Answer.—Count Claude Alexandre de Bonneval, born at Limousin, France, began his eventful career as a soldier in the French army, but being condemned to death for insolence toward the Minister of War, provoked by being refused promotion, on account of bad conduct, he fled to Germany. He entered the Austrian army, and in 1723 was appointed Master of Ordnance to the Netherlands. But he became involved in a disgraceful quarrel with the Governor, and was sentenced to death. The sentence was, however, commuted to a year's imprisonment. Upon his release he went to Constantinople, and under the name of Achmed he entered the service of the Porte, who made him Pasha, and gave into his hands the organizing of the artillery after the European manner. In the Turco-Russian war he achieved great success, and won the appointment of Governor of Chios, but soon lost the position through his imprudence. His death occurred at Constantinople in 1747.

TO FIND THE DAY OF THE WEEK.

BATH, Ohio.

I am puzzled. Please give me a rule for ascertaining the day of the week on which any day of the year comes.

SELIVA Q. YOLVARE.

Answer.—To find the day of the week on which any particular date of the current year will fall, divide the whole number of days from the time when computation is made by 7. If there is no remainder the day sought will be the same day of the week as the day when the computation is made. If there is a remainder of one it is the next day of the week, and so on. Illustration: Suppose it is Monday, July 9, and the question is, what day of the week will Aug. 10 be, proceed as follows: In July after July 9 there are 22 days. Add 10 days in August, making 32 days. Divide 32 by 7, and the quotient is 4 and 4 remainder. Now July 9 was Monday, so Aug. 10 will be the fourth

day of the week after Monday, or Friday. To find the day of the week for dates in other years than the current one is a much more serious matter. It involves many elements, and is, withal, an arithmetical problem, and therefore excluded from Our Curiosity Shop by one of its standing rules. There are tables for this class of questions, as explained in an answer given not long ago.

SUPPORT OF PAUPER RELATIVES.

LONGMONT, Col.

What States, if any, require persons to support their pauper parents and other near relatives?

C. WATSON BROWN.

Answer.—The statutes of Illinois require "that every poor person who shall be unable to earn a livelihood in consequence of any bodily infirmity, idiocy, lunacy, or other unavoidable cause, shall be supported by the father, grandfather, mother, grandmother, children, grandchildren, brothers or sisters of such person, if they, or either of them, be of sufficient ability; provided that when persons become paupers from intemperance or other bad conduct they shall not be entitled to support from any relative except parent or child." These relatives are to be called on in the following order: Children are to be first called on for parents, if the children are of sufficient ability, and, if not, then the parents of the poor person; next brothers and sisters; next grandchildren; next grandparents. Married females cannot be required to support their poor relatives unless they have property in their own right. Similar laws exist in most if not all the other States of the Union. Not having the statutes of Colorado at hand, we must refer you to them, at the nearest justice's office or at the county court house, for definite information as to your own State.

THE FIRST RAILROAD IN ILLINOIS.

ALTONA, Ill.

In a recent answer in Our Curiosity Shop it was asserted that "a section of the Northern Cross Railroad, from Naples to Springfield, was the first

railroad in this State; also, that it was operated by mule power until 1849." Now let me say: 1. That the road was built from Meredosia toward Jacksonville and Springfield in 1838. [It was begun in 1837, and was opened through to Springfield in 1838—Editor.] 2. A locomotive was shipped by way of the rivers to Meredosia, where it arrived and was placed on the track in November, 1838. I went from Peoria, June 15, 1839, by steamboat to Meredosia, where I saw the locomotive on the new railroad, coupled to a train of cars ready to pull out. A few years later there was a branch constructed from the bluff, four or five miles from Meredosia, to Naples. The road from Naples to Jacksonville and Springfield became the main line, and the spur to Meredosia was regarded as the branch. [The use of steam was very soon abandoned, as the road was operated at a loss, and mule power was resorted to until 1849—Editor.]

A. G. Little.

DU CHAILLU, THE TRAVELER.

Postville, Iowa.

Please give a short sketch of the life of Paul B. Du Chaillu. How is his name pronounced?

Maud Mayo.

Answer..—Du Chaillu, a great African explorer, began his travels when but a boy, with his father. For many years they lived upon the Gaboon River, and in 1855, after spending some years in New York, he returned to Western Africa, where he devoted four years to travel and discovery. During this time he traveled about 8,000 miles on foot, and collected many valuable specimens in natural history. His works contain the result of his study during this and a later expedition, their chief interest and value being due to the account they contain of many hitherto strange tribes, and to his description of the gorilla and many curious apes. Du Chaillu was born in France about 1820. His name is pronounced Du Sha-yu, with accent on second syllable, and sounding a as in far.

SALE OF TOBACCO BY PRODUCER.

ORLEANS, Ind.

Has Congress changed the internal revenue laws so as to allow the producer to sell to the consumer?

A. N. W.

Answer.—Yes, within a narrow limit: as shown by the following communication from Mr. Milton C. Springer, the efficient and obliging Chief Deputy Internal Revenue Collector of this district, showing changes in the law relating to the sale of leaf tobacco by the producer:

"The law (see section 3.244, United States Revised Statutes, paragraph 7) defines a retail dealer in leaf tobacco as a person whose business it is to sell leaf tobacco in quantities less than an original hogshead, case, or bale; or who sells directly to consumers; or to persons other than dealers in leaf tobacco, who have paid a special tax as such, or to manufacturers of tobacco, snuff, or cigars who have paid a special tax, or to persons who purchase in original packages for export.

"Section 2 of the act of March 3, 1883, provides that on and after May 1, retail dealers in leaf tobacco shall pay two hundred and fifty dollars ($250), and thirty cents for each additional dollar on the amount of their monthly sales, in excess of the rate of five hundred dollars ($500) per annum. Provided that farmers and producers of tobacco may sell at the place of production tobacco of their own growth and raising, at retail directly to consumers to an amount not exceeding $100 annually. This proviso, as in the case of all provisos to general provisions of law, must be construed literally:

"1. The sales must be made at the place of production.

"2. They must be made strictly to consumers and to no other persons.

"3. The tobacco must be of the growth and raising of the farmer or producer who makes the sales.

"4. The sales must be of leaf tobacco in the form and condition of leaf as it is ordinarily dried and cured for the market. If the tobacco is 'twisted by hand or reduced into a condition to be consumed, or in any manner other than the ordinary mode of drying and curing prepared for sale or consumption, even if prepared without the use of any machine or

instrument and without being pressed or sweetened,' it is liable to a tax of 8 cents a pound. (See section 14, act of March 1, 1879).

"5. If the farmer or producer sells ordinary leaf at retail directly to consumers, as hereinbefore stated, to an amount exceeding $100 annually, he becomes liable to pay a special tax as retail dealer in leaf tobacco. He also becomes liable if he violates any of the conditions of the said proviso, as herein stated."

RAIN-GAUGE AND TEMPERATURE.

OSBORNE CITY, Kan.

1. How should a rain-gauge be set in order to register rainfall correctly? 2. At what hours per day are the observations of thermometer taken to get a mean temperature?

S. B. F.

Answer.—There are different kinds of rain-gauges, and instructions for using accompany each instrument. As a rule the mouth of a rain-gauge is larger than the graduated chamber which measures the fall. For special observations different forms of gauges are used, horizontal, inclined, or vertical. For ordinary observations the mouth of the instrument should be horizontal. Instructions of the United States Signal Service direct observers to set the rain-gauge "whenever practicable, with the top of the funnel-shaped collector twelve inches above the surface of the ground, firmly fixed in a vertical position. When a position at the level of the ground cannot be found with a sufficiently clear exposure, the gauge will be placed on the top of the instrument-room or roof of the building occupied by the observer, who will measure the height above the ground and report it to the Chief Signal Officer. The measuring-rod is graduated in inches and tenths of an inch, and the proportion between the cylinder and funnel is as ten to one, so that ten inches upon the rod correspond to one inch of actual rainfall." "Snow will be melted and measured, and reported in the same manner as rain. If for any reason it cannot be melted, the depth will be measured, and ten inches of snow reported as one inch of rainfall." There is a great difference in measure of rain at several elevations above the ground, not wholly explainable. Professor Phillips found the fall of rain at York,

England, for the year 1833-34 to be 14.16 inches at 213 feet from the ground; 19.85 inches at 44 feet; and 25.71 on the ground. Daily mean relative humidity observations, according to the United States Signal Service, are obtained by dividing 7 a. m., 2 p. m., and 9 p. m. observations by three; the monthly means by dividing the sum of the daily means by the number of the days in the month. 2. The daily mean temperature is obtained by dividing the sum of the 7 a. m., 2 p. m., and twice the 9 p. m. observations by four.

When a rain-gauge is not at hand, a perfectly cylindrical pan or tub may be used to measure the rainfall, but it should be elevated at least a foot above the level lawn or roof.

NEAREST APPROACH TO THE POLE.

CHICAGO, Ill.

What is the nearest that any explorer has got to the north pole?

SUBSCRIBER.

Answer.—The nearest approach to the north pole, 83 degrees 20 minutes 26 seconds was made May 12, 1876, by a sledge party sent off from one of the two vessels of the Nares expedition, fitted out by the British Government. The point is almost exactly half the distance from Chicago to New York City by the shortest railroad route.

OUR BROAD REPUBLIC.

GARDEN CITY, Kan.

Has the United States any territory outside of the States and Western Territories, Alaska, and District of Columbia?

E. C. W.

Answer.—No; unless this government should conclude to reduce to possession the lands discovered in the Arctic and Antarctic regions by Dr. Kane, Dr. Hayes, Commodore Wilkes, and other American explorers.

Several of these bold discoverers planted the American flag in the ice of those inhospitable lands and gave names to coasts and islands of large extent, so situated that if "Uncle Sam" insists on his title he can now boast, with "John Bull," that the sun never sets on his possessions.

JOHN RUSKIN'S ST. GEORGE'S COMPANY.

PETOSKEY, Mich.

Be kind enough to give a sketch of the life of John Ruskin. Did he not attempt to found a society or colony on a novel plan and fail of success?

E. I. L.

Answer.—John Ruskin, the eminent English art critic, commenced the publication, in 1871, of a monthly periodical, entitled *Fors Clavigera*, addressed particularly to workingmen, and urging them to join him in forming an organization to be known as "St. George's Company," for the purpose of developing among the working classes a greater love of the beautiful and raising the common standard of architecture and home surroundings in rural life. He protested against "the tyranny and defilement of machinery" in country life. He set apart about $35,000 (£7,000), the tenth of his private fortune, to promote the success of this society, of which he was chosen Grand Master. The workingmen responded but poorly to all his appeals, and the undertaking is regarded as a failure. A sketch of Ruskin's life is contained in Our Curiosity Shop of 1880, page 85.

AN EXCEPTIONAL VICE PRESIDENT.

ANN ARBOR, Mich.

What would be done in case of the failure of the people to elect a Vice President?

A POSSIBLE CANDIDATE.

Answer.—Just what was done in the only instance since the adoption of the twelfth amendment to the Constitution when such a failure has occurred. In 1836, no one having received a majority of the votes cast for

Vice President, Richard M. Johnson, of Kentucky, was chosen by the United States Senate, he being one of the highest on the list of persons voted for by the people.

CENTRAL AMERICA.

BLALOCK, Ore.

1. What is the present political condition of Central America? 2. Are the States united under one federal government, or are they independent of each other?

W. MARIMER.

Answer.—After much civil strife the people are becoming accustomed to republican forms of government, and educational and commercial advantages are increasing; though it must be said that the progress is not rapid. At present the country is quiet. 2. Until 1839 the republics of Central America were united into a confederation; but now each is an independent republic, governed by a president and at least one legislative body, chosen by universal suffrage. As a rule the president is elected for four years, but few have held this office for an entire term. These States consist of Guatemala, Costa Rica, Nicaragua, San Salvador, and Honduras.

EXPLORERS OE THE SOUTHWEST.

WICHITA, Kan.

Our Curiosity Shop has told us of the first American explorers who crossed the Northern part of the United States, now please tell us who were the first Americans to cross the continent on or about the line of the Union Pacific Railroad, or south of that? Name some work on the explorers of the Southwest that is instructive and reliable, but not expensive.

A SUBSCRIBER.

Answer.—It was long believed, and is still generally supposed, that, after Lewis and Clarke, General John C. Fremont, then a Captain of Engineers in the United States Army, with a small force, guided by the famous Kit

Carson, was the first explorer who crossed the continent within the present boundaries of the United States. This he did in 1843, following much of the way the route afterward adopted by the Union and Central Pacific Railroads. However, Mr. William E. Curtis, in his intensely interesting little book entitled "A Summer Scamper Along the Old Santa Fe Trail, and Through the Gorges to Zion," shows conclusively that, while the world is indebted to Fremont for the first maps and published descriptions of the country between Central Colorado and the California coast, hunters and trappers had wound their way through these savage wilds years before him, and that as early as Jan. 20, 1824, a bold adventurer by the name of Sylvester Pattie, a Virginian, and his son, with a party of five other men, left the Missouri River in company with a trading party for Santa Fe, and some three years later groped his way down the Gila River into California; where he visited San Francisco, then an insignificant Mexican trading post and Jesuit mission station. Arrested as spies by the jealous Mexicans, and imprisoned, it was some time before these daring adventurers obtained their release and secured a passage from San Diego to Vera Cruz, whence they got back to the United States. "The Summer Scamper" and another book by the same author, "Children of the Sun," both by The Inter Ocean Publishing Company, are full of spirited sketches of the early explorers of the Southwest, graphic descriptions of the scenery of this wonderful region, and observations on its natural resources and the progress of the civilization which is invading it from all directions.

LIVINGSTONE, THE EXPLORER.

Albia, Iowa.

Please give a brief account of Dr. Livingstone's life and explorations.

J. H. Rowles.

Answer.—David Livingstone was a Scotchman, born in Lanarkshire in 1817, and when a boy worked in a cotton factory. In 1840 he landed in Port Natal, Africa, as a medical missionary of the London Missionary Society, and became an associate of the Rev. Robert Moffat, whose daughter he afterward married. For sixteen years he labored earnestly in the mission

work, and during that time discovered Lake Ngami (1849), and crossed the continent from the Zambesi to Loando, a journey which occupied eighteen months. While in England, in 1857, Livingstone published his "Missionary Travels and Researches in South Africa." Returning to Africa he devoted himself to exploration, and in 1865 resolved to find the source of the Nile. During the remainder of his life he was often not heard from for months, and it was during one of these protracted absences that Mr. Stanley began his travels to search for him, and found him in great destitution at Ujiji. Dr. Livingstone died while exploring the river system of the Chambeze in the belief that these were the head waters of the Nile, having reached Ulala, beyond Lake Bemba, in 1873. In 1874 his body was interred in Westminster Abbey.

SUBDIVISIONS OF GOVERNMENT SECTIONS.

VENTURA, Mich.

1. In subdividing a township into sections, to what part of the township do the fractional sections belong? 2. Sections sometimes overrun or fall short in the subdivision of quarter sections into "forties" by the County Surveyor: Is this overplus or deficit divided equally among the "forties," or is it all thrown into one side?

CHARLES OWENS.

Answer.—1. The sections on the northern and western boundaries of a township are fractional—i. e., they do not contain exactly 640 acres. The small fragments of these fractional sections are called "lots," and they are numbered from 1 upward in each section. 2. The course that surveyors are directed by the regulations of the General Land Office to pursue in the subdivision of sections is to run straight lines from the quarter section corners established by the United States survey to the opposite corresponding corners, and the point of intersection of lines so run will be the common corner to the several quarter sections, or, in other words, the legal center of the section. In the subdivision of fractional sections, where no opposite corresponding corners have been or can be fixed, the subdivision lines should be ascertained by running from the established

corners due north, south, east, or west lines, as the case may be, to the water-course, Indian boundary line, or other external boundary of such fractional section. Where the lines marked in the field by the United States Deputy Surveyors are not due north and south or east and west lines, "mean courses" must be adopted. Where there is no opposite section line the subdivision line must be run parallel to the section line that is marked. The purpose is to divide the overplus or deficit arising from the unavoidable irregularities and errors of the United States survey as nearly equal as possible among the minor subdivisions of the section.

TEA, COFFEE, AND WHISKY.

When and by whom were tea, coffee, and whisky first used as a beverage?

H. G. Clayton.

Answer.—The use of tea among the Chinese, from whom it has extended to all parts of the world, cannot be traced with certainty further back than to 350 A. D., or thereabouts. This use did not become general in China until about A. D. 800. It was first introduced into Europe by the Dutch in 1610. How long coffee has been used in Arabia, its native country, is not certainly known. It was introduced into Egypt in the sixteenth century. The first coffee house in Europe was established in Constantinople in 1551. The first person to make it known to Western Europe seems to have been Leonhard Rauwolf, a German physician, a great traveler. Once introduced, the use of this delightful beverage extended rapidly. Coffee houses sprung up in all the chief cities. The first one in London was opened by a Greek in Newman's court, Cornhill, in 1652; the first one in France was opened in Marseilles in 1671; the first one in Paris in 1672. The earliest manufacture of whisky is generally referred to the middle of the sixteenth century, but there are some reasons for believing that it had an earlier origin. It was made by the Gaels from barley, which still yields the best quality, and was called by them *uisge beatha*, later *usque baugh*, *the water of life*—of which first word "whisky" is a corruption.

CONVICT LABOR.

RUTLAND, Ill.

If convicts can make a better article than those who are not convicts, why should other mechanics complain? At least, why shouldn't the public be permitted to utilize the labor of convicts for its own good?

WM. MARSHALL.

Answer.—No doubt it is sound policy to make use of convict labor for the public good and the improvement of the criminals themselves, but the real question is, How is this to be done? Manufacturers and honest mechanics complain that the present system of hiring out convicts to contractors puts the labor of the untaxed criminals, housed at the expense of the State, without families to support, and free from all social and civil burdens, in unfair competition with the labor or industrial products of honest workmen who have families to maintain, taxes to pay, and social and civil duties to perform. Whether the contract system can be so adjusted as to remove any just ground of complaint of the nature here pointed out is a question that is eliciting the earnest study of some of our most profound social and political economists. We cannot discuss it in this place, nor have we any dictum to proclaim. It must be said for the system that it is the only one, with few, if any, exceptions, that has rendered American penitentiaries self-sustaining.

MUSHROOM GARDENING.

CHICAGO, Ill.

Tell us how to raise mushrooms. Are they produced from seed or not?

W.

Answer.—The mushroom spawn is sold in bricks, and should be used in the following manner: Procure a quantity of good horse dung and make it into a heap, which must be frequently turned for a fortnight, until the rankness has disappeared. Then build it into beds twelve inches in height and four feet wide, under a shed ten feet wide. This will allow room for a walk through the center of the shed. Pack the dung tightly, and cover it with long straw for ten days, when the straw must be removed and an inch of

fine loam spread upon the beds. On this plant the spawn, which has been broken into pieces the size of a walnut, in rows six inches apart, and cover with another inch of mold, over which spread the straw. When the mold is too dry sprinkle it with tepid water. In five or six weeks the young mushrooms should appear.

BATTLE OF THE PYRAMIDS.

RAVANNA, Mo.

I have a picture entitled "The Battle of the Pyramids." Where, when, and by whom was that battle fought?

C. E. J.

Answer.—The "Battle of the Pyramids" was fought at Embabeh, opposite Cairo, Egypt, July 21, 1798, between the French, commanded by Napoleon Bonaparte, and the Egyptian Mamelukes, commanded by Murad Bey. The latter fought with desperate valor, but they were completely bewildered by European tactics. The French infantry, formed into squares, received the fierce charges of the magnificent Mameluke cavalry, which swarmed around them, on their serried bayonets, while a galling fire of grape and musketry virtually annihilated whole divisions of their army. Out of an army of over 60,000 men Murad Bey escaped with barely 2,500 horse, leaving 15,000 men on the field of battle and the rest of his troops, their arms abandoned, fleeing in utter rout in all directions completely disorganized. From the circumstance that this battle was fought within sight of the famous pyramids of Gizeh, near Cairo, it took the name above mentioned.

FIRES OCCASIONED BY LOCOMOTIVES.

ADELINE, Ill.

Are railway companies responsible for damage to farm property occasioned by locomotives or must the farmer bear the loss.

ADELINE READER.

Answer.—State laws require railway companies to use certain precautions against fire from locomotive sparks or coals from ash pan. If it can be shown that damage to property has resulted from neglect of these laws or through culpability of railway employes, the company is responsible. The spark extinguishers on locomotive smoke stacks check the draft and on this account engines frequently run considerable distances with them uncovered. Again they often dump panfuls of live coals on the track, when the prairie grass and stubble are like tinder and the wind is blowing a gale. Damage done through such culpability is fairly chargeable to the railway companies, and, if the facts can be proved, they can be made to pay the loss.

SERGEANT MASON'S SENTENCE.

GALT, Mich.

What was Sergeant Mason's sentence? Please answer and settle a dispute. State main facts.

SUBSCRIBER.

Answer.—Sergeant Mason, one of the soldiers detailed to guard Guiteau, fired into his cell on Sept. 12, 1881, with the intention, as he confessed, to kill him. He was tried by court martial early in 1882, and sentenced to be dismissed from the army, with loss of pay, and to be imprisoned for eight years in the Penitentiary at Albany.

AUTHOR OF DYING CALIFORNIAN.

GRAND DETOUR.

Seeing no response to the question as to who is the author of the poem entitled the "Dying Californian," I wish to say that this poem was written by Kate Harris, of Pascoag, R. I., now Mrs. Charles Plass, of Napa City, Cal. It was suggested by hearing a letter which was dictated by Brown Owens when dying, on his way to California. It was read at his funeral services at Chepachet, R. I.

M. W. GILMAN.

THE CHRISTIAN ERA—WHEN FIRST USED.

1. When was the practice of reckoning time from the birth of Christ instituted, and by whom? 2. What nations now reckon time according to this era?

G.

Answer.—Dionysius the Little, a learned monk, introduced the use of this epoch in Italy in the sixth century. It began to be made use of in Gaul and England about two centuries later. It is now followed in nearly all Christian countries and in several Eastern nations.

THE TWELVE CÆSARS.

SAOPI, Minn.

Who were the twelve Cæsars?

M. H. MILLER.

Answer.—The twelve Cæsars are Julius Cæsar and the eleven Emperors following him, most of whom were from his family. Nerva was chosen by the Senate, and was the first to select a successor without regard to family. Following are the names and dates of the reigns of the twelve: Julius Cæsar, 44; Augustus, 31 B. C.-14 A. D., Tiberius, 14-37; Caius, 37-41; Claudius, 41-54; Nero, 54-68; Galba, 68-69; Otho, 69; Vitellius, 69; Vespasian, 69-79; Titus, 79-81; Domitian, 81-96. The title Cæsar was given to all of the Roman Emperors, until the time of Hadrian, after whom Cæsar was the title of the heir of the throne, and the title of the Emperor was Augustus.

SINKING BRIDGE PIERS.

FREEPORT, Ill.

Please explain the use of compressed air in sinking the caissons of the great Brooklyn and New York bridge.

F. R. SMITH.

Answer.—The method of sinking cylinders by use of compressed air was invented by Mr. Triger, of England, in 1841, but has been carried to greater results in the United States than anywhere else. Tubular cast-iron shells are used to form a large hollow pile, which may be forced downward by its own weight and superincumbent masonry built on it as it descends. Compressed air is employed inside such shells to force the water out at the bottom, where the pile or caisson is open, while it is air-tight and water-tight at all other points. It was formerly supposed men could not work under a pressure of more than three atmospheres, which is required in most cases to keep out water at a depth of sixty-five feet, but in the case of the St. Louis bridge, caissons were sunk a depth of 110 feet below the surface. So, in the case of sinking the Brooklyn bridge piers, the men at work in the compressed air chamber, excavating the earth as the pier descended, worked in an atmosphere from three to four times as heavy as in the open air; a strain which they could endure but a short while at a time, and which proved fatal in many instances.

PROPERTY OF ALIENS.

GRISWOLD, Iowa.

If a Welshman who has not been naturalized dies in this country, who inherits his estate? Would the making of a will make any material difference as to the control of his property?

FLORA K. SMITH.

Answer.—Each of the States has its own laws in regard to the rights of aliens. In Iowa aliens, that is persons of foreign birth who have not been naturalized by their own act or that of their parents, may acquire, inherit, hold, and dispose of property, real or personal, precisely as if they were citizens. The same is true in most of the States. In Pennsylvania alien friends may buy lands not exceeding 5,000 acres, nor in net annual income $20,000, and hold the same as citizens may, but there are certain differences between them and citizens in the matter of real estate conveyances, inheritance, etc. A will prevents the property of an alien from escheating to the State in case of non-appearance of heirs; and, as in the case of citizens,

transcends the statute and common law as to the division of property among the heirs of persons who die intestate, i. e. without testamentary wills.

LAND WARRANTS.

COVE, Oregon.

Is there anything to prevent a person from locating a land warrant on public lands in this State? For what wars were land warrants given, and what are they worth?

JAMES M. SELDERS.

Answer.—Military bounty land warrants are issued by the Commissioner of Pensions for services in the several wars before the year 1855. No warrants are issued for services during the war for the Union; but soldiers can be credited on homestead entries for the terms of their enlistments, up to four years of the time of residence required as a condition of title in cases of ordinary homesteaders. These warrants call for 40, 60, 80, 120, or 160 acres of land, as the case may be, and being assignable can be located by any purchaser. They should be bought only of responsible dealers, with a written guarantee that, in case of error or defect, the settler will not lose anything thereby. The market price of such warrants is from $1 to $1.20 per acre. There is no reason why these cannot be used in paying for public lands in Oregon as well as in other States or Territories. Applications must be made as in cash cases, but accompanied with a warrant duly assigned as payment for the land. Yet where the land is $2.50 per acre, as the warrant pays only for land at $1.25 per acre, the remaining $1.25 per acre must be paid in cash. However, a tract of eighty acres, rated at $2.50 per acre, for example, can be paid for by two eighty-acre warrants without any cash, except fees chargeable by land officers, as follows: For a forty-acre tract, 50 cents each to Register and Receiver; for sixty acres, 75 cents each; for eighty acres, $1; and so on.

NOON BY CLOCK AND BY SUN-DIAL.

SUN RIVER, M. T.

The following rule will enable any one to determine the true difference between noon by clock-time and noon by the sun-dial or noon-mark; which seems to be a vexing question with some of your correspondents: Rule: From any almanac take the time from sunrise to 12 o'clock and from 12 o'clock to sunset. Half of the difference between the two is the number of minutes which the dial shows wrong, either plus or minus. This is called the equation of time and varies about fifteen minutes either way, at its highest.

JOHN KERLER.

THREE AMERICAN AUTHORESSES.

ENGLEWOOD, Ill.

Please name the author of "The Lamplighter"—an old book, but a good one—and who wrote "The Wide, Wide World."

E. O. G.

Answer.—The author of "The Lamplighter" was Maria S. Cummins, born in Massachusetts in 1827; died in 1866. The writer of "The Wide, Wide World," of which there were 500,000 copies sold in the first ten years, and of "Queechey," is Susan Warner, born in New York in 1818. Her sister Anna is the popular author of "The Fourth Watch," "The Other Shore," and other works published under the pseudonym of "Amy Lathrop."

BONANZA FARMS—U.S. MARINE.

PLEASANT PLAINS, Ill.

1. Who owns the largest farm in Dakota and how many acres does it contain? Which is the largest in the United States? 2. How many ships has the United States engaged in commerce?

ALBIN C. DEMARY.

Answer.-The largest farm in the United States is the estate of the late Dr. Glenn, of California, over 60,000 acres. The largest farm in Dakota is the

Grandin Farm, covering about 50,000 acres, and requiring the labor of 150 men at seed time and 250 at harvest. The largest cultivated area under one control is the 28,000 acres farmed by Oliver Dalrymple. 2. June 30, 1880, the shipping of the United States was classified as follows: Sailing vessels, 16,830; steam vessels, 4,717; barges, 1,930, and canal-boats, etc., 1,235; total, 24,712, measuring 4,069,035 tons. In 1882 (June 30) the commercial navy of this country numbered 24,368 vessels, of 4,165,933 tons.

WHERE POSTAL SERVICE IS SELF-SUPPORTING.

LONGMONT, Col.

In what States is the United States postal service self-supporting.

C. WATSON BROWN.

Answer.—In Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Wisconsin, and Alaska, in which States and Territory the excess of receipts over expenditures in the year ending June 30, 1882, amounted to $6,951,696, while the excess of expenditures over receipts in the rest of the Union amounted to $5,114,930, leaving a surplus, for the first time in several years, amounting to $1,836,765.

THOMAS NAST, THE CARICATURIST.

ASHKUM, Ill.

Give a short biographical sketch of Thomas Nast, the great "caricaturist."

C. K. LANGLEY.

Answer.—Thomas Nast is a Bavarian, having been born at Landau, Sept. 27, 1840. At six years of age he came to the United States with his father, and at 15, with six months instruction from Theodore Kaufmann, he began to furnish illustrations for newspapers. His reputation, by the caricatures he made, was won during the civil war.

MAXIMILIAN I.

URBANA, Ill.

Please give me a short biography of Maximilian I., of Germany.

NETTIE AYERS.

Answer.—Maximilian I., one of the greatest German Emperors, was born in 1459, and at the age of 19 married Maria, daughter of Charles the Bold. This union led to war with Louis XI. of France, who tried to seize some of Princess Maria's possessions. In 1486 he was crowned King of the Romans, and in 1493, at the death of his father, Maximilian became Emperor of Germany. Later he married the daughter of the Duke of Milan. He was led to war with the Swiss, Venetians, and French. He died in 1519.

ORPHAN ASYLUMS.

CARTHAGE, Ill.

Is there an asylum for orphan children in Illinois? If so, where is it?

H. L. RAND.

Answer.—The only State orphan asylum in Illinois is the Soldiers Orphans' Home at Normal. There are several orphan asylums in Chicago and vicinity, sustained by churches or by private benefactions. Among these are the Chicago Protestant Orphan Asylum, 2228 Michigan avenue; Chicago Nursery and Half Orphan Asylum, 855 North Halsted street; German Orphan Asylum, at Rose Hill (Havelock Postoffice); St. Joseph's Orphan Asylum, Douglas avenue, corner of Lake; and St. Mary's Orphan Asylum, 2928 Archer avenue; Uhlich Orphan Asylum. There are others of similar nature in other parts of the State, as the German Evangelical Lutheran Orphan Asylum, at Addison; Orphan Home, Jacksonville; Asylum of St. Casimir for Polish children, LaSalle; Home for the Friendless, Peoria; Woodland Home, Quincy. Besides these there are in Chicago several houses for foundlings.

LANGUAGES AND TONGUES.

CHICAGO, Ill.

What is the difference between a language and a tongue? How many languages and tongues are now spoken?

J. G. SMITH.

Answer.—Language is a term that is applicable to any mode of conveying ideas, whether by speech, writing, hieroglyphics, or a system of gestures or pantomime. Even the deaf and dumb have several languages, but cannot be properly said to have "tongues." Tongue is an English term for the spoken language of a particular people, as the French tongue, the German tongue, and so on. The number of languages of all the kinds above designated or the number of tongues in all the world is not known. There are over 6,000 known languages and dialects: how many more will be discovered when we have thoroughly explored Africa and Central and Northern Asia is still a matter of conjecture.

AMERICAN VESSELS SOLD.

SHEBOYGAN, Wis.

What proportion of American shipping was sold to foreigners during the civil war? How much was sold last year?

SUBSCRIBER.

Answer.—During the four years, 1861 to 1865, inclusive, the tonnage of American vessels sold to foreigners, mainly to escape capture, or because it could not be profitably employed while exposed to war risk, compared with our total merchant marine as follows:

Years.	Total tonnage.	Tons sold.
1861	5,539,813	26,649
1862	5,112,164	117,756
1863	5,155,056	222,199
1864	4,986,400	300,865
1865	1,579,994	133,832

Total tons sold	801,301

As the laws of the United States interdict the re-enrollment of any of these vessels, and restoration of the privileges of our flag, this was a permanent loss to the tonnage of our merchant marine, although it is certain that many of them continued to be the property in fact of American citizens, sailing under foreign colors. The sale of American vessels to foreigners in 1879 amounted to 43,312 tons, and in 1880 to 26,883 tons.

QUEEN VICTORIA'S SURNAME.

PANORA, Iowa.

Having noticed in Our Curiosity Shop what is said in regard to the surname of the Queen of England, I send you the following extract from the *Whitehall Review* on this subject: "At dinner the other night the conversation lapsed, as it sometimes will lapse with the best, into questions hardly distinguishable from conundrums. A celebrated historian was present, and I put a question to him which I know has puzzled a great many people at different times: 'What is the surname of the royal family?' 'Guelph, of course.' That is the usual answer, and it was the historian's. I ventured to suggest that although the royal family are Guelphs by descent, her Majesty's marriage with Prince Albert of Saxe-Cobourg must have the effect which the marriage of a lady has in all other cases, and that the surname of the present house must be the Prince Consort's. But what is the surname of the Prince Consort's family? Simple, but staggering. No one knew. All guessed, and all were wrong. I happened to have looked up the subject a few months ago, so I knew that the name was 'Wettin.' Of course no one had heard it before. Every one smiled at the horrible idea of the Guelphs being reduced to Wettins! The point was referred to Theodore Martin. 'You are quite right,' said the graceful biographer of the Prince Consort. 'Wettin is the family name of the house of Saxony, to whom the dominion of Saxony in the year 1420. The king of Saxony and the minor princes of the house are, therefore, all Wettins; or, German, Wettiner.'" [Nevertheless, the fact remains that none of the royal family sign either of the names, Guelph or Wettin, or are addressed by either name in any form of address, oral or written.—ED.]

Mrs. H. R. Bryan.

NATIONAL, STATE AND LOCAL WEALTH AND DEBT.

Sioux City, Iowa.

Tell us what is the total public indebtedness of the United States of all kinds, National, State, county, city, township, district, etc. Also what part of the Union, the East, West, or South, owes the most. Finally, give the wealth per capita East, West and South.

Disputant.

Answer.—According to statistics in "The West in 1880," since confirmed by the census returns, the local indebtedness of the several States (consisting of county, city, town and district debts, bonded and floating) added to State indebtedness, aggregated $1,117,821,671, or $22.28 per capita; and the wealth, measured by the assessed valuation, amounted to $336.89 per capita, distributed by States and Territories as follows:

States and Territories.	Debt.	Per capita.	Wealth per cap.
New Eng. States	$178,654,977	$44.54	$661.27
Mid. States	488,638,655	41.57	473.55
South. States	204,887,805	13.43	155.29
West. States	243,984,183	13.17	333.63
Territories	1,656,051	2.73	211.29
Total	$1,117,821,671	$22.28	$336.89

In some States local indebtedness has diminished since 1880, while in others it has increased. Assuming that the total local indebtedness is about the same, we may add to the above $1,117,821,671, the National debt at close of June 30, 1883, say $1,884,171,728, and it appears that the total public debt of this country is about $3,001,993,399.

PERVERSITY OF THE MISSISSIPPI.

OPDYKE, Ill.

Seeing that the earth's diameter at the equator is greater than at the poles, and Lake Itasca is nearer the center of the earth than the surface of the Gulf of Mexico, why isn't it proper to say that the Mississippi River runs up hill?

HARRY.

Answer.—This notion that the Mississippi, in order to accommodate itself to theories as to the shape of the earth, is performing the remarkable feat of running up hill, is sufficiently prevalent to lead to the iteration and reiteration of the above question as often as once a week at least. Of course we cannot reiterate answers so frequently, and hence generally pass the question unnoticed, as correspondents have passed our by-gone replies. A lengthy answer will be found in Our Curiosity Shop of last year, page 95. Here and now we will merely say that the United States Hydrographical Survey flatly contradicts the notion that Lake Itasca is lower than the Gulf of Mexico. It gives the levels at numerous points between that lake and the mouth of the Mississippi, and, surprising as it may seem, considering that the equator has "got the bulge" on all the rest of the world, this survey demonstrates that this old-fashioned river, following the custom of other rivers, with unyielding perversity, is running down hill; in some places at the rate of twenty-five feet and more per mile, and in others at the rate of only several inches. Perhaps this all comes of its never having been "to high school," or a gymnasium. In fact its education has been totally neglected, except down South, where it has been trained into a bad habit of climbing levees. Whatever the shape of the earth—whether its equatorial diameter is twenty-six miles greater than its axial diameter, or more or less; and whether the waters of the ocean are or are not drawn toward the equator by the centrifugal force of the earth's diurnal motion, until they stand several miles higher there than they would if the globe had no diurnal motion—one fact is established beyond all equivocation, and that is, that tide level at the mouth of the Mississippi is about 1,575 feet lower than Lake Itasca; which entirely relieves this grand old son of Neptune of any necessity for waging war with the laws of nature and fighting his way up hill to revisit the halls of his father, the "Trident-bearer," in the briny chambers of the sea. Probably if the earth's motion on its axis were to cease there would be a reflux of waters from the equatorial region into the Gulf of Mexico, up the

Mississippi Valley, across into the Red River of the North and the Mackenzie, submerging the greater part of North America. Let us hope that the earth will continue to spin on its axis at about the same rate as now, at least until we have sold out all our farms and corner lots and moved to equatorial America, where land will then be considerably higher than it is at present in more senses than one.

FIRST CHAPLAINS OF CONGRESS.

LEIGHTON, Iowa.

When was the first prayer offered in the Congress of the United States and by whom? Is there any official record of the matter? If so, where can it be found?

H. CLEW.

Answer.—The first chaplain of the Senate of the United States was the Rt. Rev. Samuel Provoost, of the Episcopal Church, Bishop of New York. The first chaplain of the House of Representatives was the Rev. Wm. Lynn, D. D., of the Presbyterian Church. Both of these officiated in the first Congress organized under the present Constitution in the spring of 1789. The Congressional proceedings of that time are preserved in the "American State Papers," selected and edited under authority of Congress.

THE HARMONICA.

UNION CITY, Ind.

Please give a history of the harmonica.

FORD A. CARPENTER.

Answer.—The original harmonica consisted of drinking glasses, played with moistened fingers. We read that about 1750 Mr. Packeridge, an Irish gentleman, was noted as a player upon glasses, whose pitch was regulated by the amount of water contained in each. Benjamin Franklin greatly improved the harmonica by making the glasses revolve about a spindle and fixing the pitch by the size of the glass. He also adopted a different color for each note in the scale, and moistened the rims by passing them through

water. Miss Davis, a relative of Franklin, became a celebrated harmonica player, and performed at concerts with great credit. The mouth organ, which is now commonly called the harmonica, is a toy in which the sounds are produced by the vibration of metallic reeds, moved by the breath. Reed instruments essentially similar have been in use in China, Germany, and Holland from very early times. The inventor is unknown.

OREGON AND WASHINGTON TERRITORY.

ALTA, Iowa.

> Please inform your readers about Northern Oregon and Washington Territory. Is any part of them safe from Indian depredations? Is the land mainly government or railroad grants? State chief facts as to soil, climate, and the various kinds of grain raised.

R.

Answer.—The Indians in Oregon and Washington Territory are all gathered into reservations, and are now peaceable. They are not so fierce and restless as the tribes on this side of the Rockies, being more inclined to pastoral life, farming, and fishing. Little trouble is to be apprehended from this source, particularly in Oregon, the Indian population of which is not large. There are great bodies of public lands. The railroad land-grants are not so extensive as in the Missouri Valley States. There are immense quantities of fine timber lands open to purchase at the minimum price of $2.50 per acre under the "timber lands act" of June 3, 1878, which applies only to such lands in Oregon, Washington Territory, California, and Nevada. There are also wide sections in these States for sale at 25 cents an acre under the "desert lands" act of March 3, 1877. Great bargains have been made in lands passed under this description which are capable of easy irrigation, and are then remarkably productive. Oregon is divided into two parts, differing essentially in climate and productions by the Cascade Range of mountains, running nearly parallel with the Pacific coast, with an average breadth of 50 to 60 miles, and an average elevation of 8,000 feet. The portion of the State west of this range, constituting about one-third of its total area, is well watered, is generally very fertile, and, for the most part,

covered with forests of valuable timber. The eastern two-thirds of the State, with the exception of the broad, fertile valleys of the Colombia and Wallawalla Rivers, is mainly made up of elevated plains, with insufficient rainfall for agriculture, except in districts where artificial irrigation is practicable.

The description of Washington Territory corresponds in the main with that of Oregon. The Territory is similarly divided, as regards climate and productions, by the Cascade Range. The rainfall is even greater in the western portion of Washington Territory than in the corresponding portion of Oregon, ranging from 70 inches in the south to the remarkable measure of 125 inches in the north, where it borders on Puget Sound. In this same region the temperature is remarkably equable, varying but 27 degrees during the year between the lowest and highest points. East of the Cascades a narrow strip on the north is mountainous and covered with forests, but south of this lies the Great Plain of the Columbia. Along the western border of this vast region, next the Cascade Range, it is claimed that the rainfall is sufficient for good cereal crops. The same is asserted of its eastern edge, bordering the Coeur d'Alene Mountains of Idaho; but the rest of it, like the southern extension of the same plain into Oregon, is fit only for grazing, except where irrigation is possible. It resembles very much the western portions of Kansas and Nebraska and the western parts of Colorado and Wyoming. In both regions the nutritious, self-curing bunch grasses, which form the chief reliance of the herdsmen east of the Rockies, abound. The grazing and agricultural interests of Oregon and Washington are increasing with great rapidity. The census of 1880 credits Oregon with 500,000 cattle and 1,250,000 sheep, and Washington with 250,000 cattle and 200,000 sheep, and since then the increase has been nearly 100 per-cent. The wheat crop of Oregon, according to the census, was 7,480,010 bushels, the oat crop 4,385,650 bushels, and the barley crop 920,977 bushels. At the same time in Washington Territory the wheat crop was 1,921,322 bushels, the oat crop 1,571,706, and the barley crop 566,537 bushels. Undoubtedly the completion of the Northern Pacific Railroad this year will open an era of marvelous growth in the State and Territory above described.

WILLIAM COBBETT, THE AGITATOR.

ALDER GROVE, Neb.

Who was William Cobbett? He is spoken of as a reformer.

J. M. K.

Answer.—He was an English political writer of the latter part of the last and the first third of the present century. Born at Farnham, Eng., in 1762, the son of a farmer of moderate means, he acquired habits of industry and self-dependence. Not liking rural pursuits, he went to London and engaged as a copying clerk. Soon tiring of this occupation, he enlisted in the British army, where he rose by merit to the rank of Sergeant Major. His spare time in barracks was given to self-education, and on obtaining his discharge, in 1791, he married and emigrated to Philadelphia, where he entered upon his after career as a political writer under the pseudonym of "Peter Porcupine." At this period he satirized American democracy and French republicanism, attacking the inconsistencies and political fallacies of the time in terms of scorn and bitter denunciation. He was denounced by the American press, particularly by the Democrats, or "Republicans" of those times, as a Tory aiming at reviving the royalistic element in this country, not then completely eradicated. Not pleased with the reception of his political diatribes he returned in 1800 to England, and in 1802 began the publication of his *Weekly Political Register*, now famous, which he continued to his death, June 18, 1835. At first Tory, the *Register* gradually changed its politics until it became the most fierce and unrelenting opponent of the government, then conducted by Pitt, and the foremost champion of English Radicalism. He advocated the abolition of flogging in the army, and for strictures on the government and satires and charges claimed to be libellous against certain high officials, he was condemned to imprisonment for two years in Newgate Prison, and to pay a fine of £1,000. He attacked the six acts of the British Parliament for the suppression of free discussion, pouring vials of abuse on the leaders of the government party; and to escape pecuniary embarrassments and the dread of again going to Newgate, he once more came to America, where his change of politics had raised up many friends. He virtually edited his *Weekly Political Register* from this side the Atlantic until some years later when he returned to England. Radicalism had made great strides, and he found himself one of its recognized champions. In 1829-30 he delivered political lectures in several of the principal towns of England and Scotland, and was everywhere met

with enthusiastic welcome as the boldest and most powerful advocate of the people's rights. In 1832 he was elected to the first reformed Parliament as the member for Oldham. He was re-elected in 1834, and continued in this relation until his death the following year. Among his many popular works may be named "Cottage Economy," "Rural Riches," "Advice to Young Men and Women," "The Emigrant's Guide," "Parliamentary History," and an "English Grammar."

CONCRETE OR GROUT HOUSES.

FOUNTAIN, D. T.

> Please describe the method of building houses with concrete walls. What should be used to make the concrete, and in what proportions? Will common lime answer, or must Portland cement or water lime be used? The former comes high here.

WM. M. FISK.

Answer.—For the foundation, especially in sandy or wet soils, it is best to use water lime, or a mixture of Portland cement or water lime and quick lime in the proportions of two shovelfuls of the former and one of quick lime putty to fourteen of fine gravel (or fine and coarse mixed) and one of coarse sand. Above the ground or embankment use quick lime in the proportions of one shovelful of lime putty to six or eight of gravel sand. The proportions depend on the strength of the lime, which varies according to the quality of the stone from which it is made. Slake the quick lime into putty ready for use, mix it partially with the gravel, and only add the water lime at the last moment before filling the barrow or hod. For the foundation dig a ditch of the proper size and dump the concrete into it. Cover it and give it a couple of days to set and harden before starting the upper walls. Take fence boards for mold boards; make clamps of three-quarter inch strips, tapering from two inches to one and one-half inches, so as to drive out of the wall easily before the concrete is hard; bore a half-inch hole in each and two inches further apart than the thickness of the wall, and make half-inch pegs four inches long for these holes. Set one tier of these molds on top of the foundation all around, resting on clamps at distances of five to six feet, and with as many clamps on upper edge to gauge the molds. Now

shovel or dump in the fresh concrete as fast as you can mix it. If the weather is fine you can set a second tier of molds on top of the first, twenty-four hours, or even eight hours, after the first were filled, and fill in at the same rate as before, provided you leave the first molds undisturbed. As soon as the second tier is filled, draw the pegs from the taper ends of the lowest tier of clamps and drive them out. Remove the lower set of mold boards and begin a third tier at once. Leave the holes left by clamps, for the air to circulate through. A foot wall for first story and ten-inch above that, with eight-inch for partitions, will make a good strong building. The outside should have a coat of plaster made of medium fine sand, mixed with equal portions of quick lime and water lime; and this plaster should be marked out, before it becomes fully hardened, into blocks, to resemble stonework. As concrete houses, like brick ones, are apt to be damp if plastered directly on the walls, it is best to run in small blocks or strips sixteen inches from center to center, on top of every third or fourth course, before filling the molds with concrete, keep these flush with the inside of walls. Nail inch strips to these blocks to serve for scantling, and lath and plaster over this "furring," as it is called, and you will have dry walls. Have window and door frames ready to build in as you go; securing them by blocks nailed to jambs, around which pack the concrete to hold them firm. Level up the course of concrete when you reach the height for the first joists, and lay an inch board four inches wide on concrete to rest joists on. Have ends of joists that enter wall cut beveling, so that in case the inside of building burns the joists will drop without prying the walls down. Set joists, leveling them carefully, and go on building wall as before. A concrete house built in this way is as substantial as brick.

LAS VEGAS HOT SPRINGS.

BATAVIA, Iowa.

Are the hot springs of Las Vegas, N. M., beneficial in cases of chronic rheumatism? How far are they from Chicago, and what is the route to them? Also, kindly state the fare.

E. C.

Answer.—The Las Vegas hot springs are reputed to be highly beneficial in cases of chronic and inflammatory rheumatism; particularly in the latter. They are situated on the New Mexico line of the Atchison, Topeka and Santa Fe Railroad, 770 miles from Kansas City, which makes them 1,259 miles from Chicago, via the Chicago and Alton. The regular fare from Chicago to Kansas City is $14.90; from Kansas City or Atchison to Las Vegas and return it is $42.80. It is claimed also that these springs are of great benefit to patients suffering with blood-poisons, paralysis, dyspepsia, and nervous diseases. In the mountain streams the fishing is good, and game is plenty in neighboring localities. From this point to Santa Fe, sixty-five miles, the railroad runs through one of the most interesting portions of this continent, historically considered; a region filled with the wonderful ruins of the old Aztec civilization, the birthplace of the Montezumas.

BASKET WILLOW

LOVELAND, Col.

Is the basket willow marketable in the United States at rates that pay for cultivating it? If so, how is it cultivated, and what soil is best suited for it.

I. H. DAVIS.

Answer.—Repeated efforts have been made to cultivate the osier, or basket willow, in the United States, but the labor of peeling and preparing it for the market costs so much more here than in Europe, where this work is done by women and children at trivial wages, that it has been found difficult to compete with the imported stock. The annual importation of prepared willow during the ten years ending in 1879 averaged $33,000, and the willow-work $170,000 a year. The soils best adapted for the osier are rich alluvions and reclaimed swamps. If liable to overflow in spring floods, the ground should have drainage ditches. It is well to have means of irrigating the land in very dry weather. It is propagated from cuttings, selected from the wood grown the year before, cut smoothly into lengths of about ten inches, thrust into soil butt-end first, so as to leave only about an inch above ground. Care must be taken not to peel the bark in setting these slips, and for this reason it is sometimes best to use a hard wood or iron rod to make

the hole. They should slope at an angle of 45 degrees toward the north. It is best to plant in straight rows from 20 to 28 inches apart, according to whether they are to be cut every year or every other year, and at intervals of six or eight inches. It is sometimes preferable to set in trenches, and, if the soil is poor, to fertilize with leaf-mold, stable manure, or bonedust, and irrigate with the soakings of manure during dry weather. The ground should be kept mellow and well weeded. The time of cutting should be late in the fall or in winter. The rods should be sorted into sizes, tied in bundles, dried in the sun, and stored in a dry place until ready for peeling. When peeled they should be dried for a day or so in the sun, when if properly prepared they will be white and brilliant; otherwise they will look dull, which impairs their value in market. If exposed to cold and dry winds, the growing osier should be protected by wind-breaks. Dr. F. B. Hough, Chief of the Forestry Division of the Department of Agriculture, Washington, D. C., says: "An osier plantation costs about $20 per acre for cultivation and yields about $100 to $125 per acre." If this holds good anywhere in this country, it is strange that osier cultivation is so generally reported unprofitable.

CHEAP PROCESS OF SILVERING METALS.

WEST LIBERTY, Iowa.

Please give us instructions for plating or silvering cups, spoons, and other metal articles.

A. H. COX.

Answer.—Electro-plating is a process that requires apparatus, and a degree of skill in using the same which render it scarcely worth while to enter into a detailed description of it. We outlined the process not long ago, and cannot reiterate it. A cheap and simple method of silvering metals, that any one can put in practice, is as follows:

Clean the articles to be silvered with nitric acid, rub them with a mixture of cyanide of potassium and powdered silver, and wash thoroughly in clear, warm water. Then plunge them into a liquor composed of two parts, by weight, of grape sugar or sugar of milk, two of gallic acid, and 650 parts of distilled water, filtered and kept from the air in tightly-corked bottles until the instant of use. After a few minutes take them out of this liquor and

immerse them in another composed of twenty parts, by weight, of nitrate of silver, twenty parts of ammonia solution, and 650 parts of distilled water. Repeat this process, plunging the articles first into one liquor and then into the other, every few minutes, until they are all well coated. The process can be accelerated by heating either the mixture or the articles to a moderate degree. Some persons prefer to mix the two liquors at the moment of use in equal quantities. In such case, shake the mixture thoroughly and filter before immersing the metals. The ammonia solution should be of standard strength. If there is any doubt of this, dissolve the nitrate of silver for the second liquor in the distilled water, add the first liquor, mix thoroughly, and add only enough ammonia to clear the mixture. This is the process for copper, brass, German silver, and similar articles, but before silvering iron or steel they should be coated with copper by leaving them for a little time in a solution of sulphate of copper.

THE GUILLOTINE.

FAIRMONT, Neb.

I should like to know who was the inventor of the guillotine. How was it constructed and operated.

W. P. JACKS.

Answer.—For many years the invention of the guillotine, the instrument for inflicting capital punishment adopted by the French during the reign of terror, was accredited to Joseph Ignace Guillotine, a French physician, born in 1738, who in 1785 recommended its use in France from motives of humanity, in place of the barbarous gibbet. However, there is in the Antiquarian Museum of Edinburgh a guillotine made before 1581, which served to behead the Scottish Regent, Morton, who had introduced it into use in that country. It was used in Italy in the thirteenth century in a form resembling the instrument now used in France. The guillotine is composed of two upright beams, grooved upon the inside, and surmounted by a cross-beam. Between these beams and sliding in the grooves is a sharp, iron blade, which falls by its own weight with great speed and certainty, severing the head from the body.

ASSESSMENT OF DEPOSITS.

ANDOVER, D. T.

Has an assessor in Dakota any right to assess money on deposit in a bank in Michigan?

SUBSCRIBER.

Answer.—According to the laws of most States and Territories a certificate of deposit is just as assessable as the money it represents. Money is subject to assessment wherever it belongs.

GOVERNORS OF ALABAMA.

GREENVILLE, Ala.

Please give the names of all of the Governors and Senators of Alabama since the admission of the State into the Union, with the years during which they served.

SEA.

Answer.—The Governors were the following: William W. Bibb, 1819-20; Thomas Bibb, 1821; Israel Pickens, 1821-25; John Murphy, 1825-29; Gabriel Moore, 1829-31; John Gayle, 1831-35; Clement C. Clay, 1835-37; Arthur P. Bagby, 1837-41; Benjamin Fitzpatrick, 1841-45; Joshua L. Martin, 1845-47; Reuben Chapman 1847-49; Henry W. Collier, 1849-53; John A Winston, 1853-57; Andrew P. Moore, 1857-61; John G. Shorter, 1861-63; Thomas H. Watts, 1863-65; Lewis E. Parsons, 1865; Robert M. Patten, 1865-68; William H. Smith, 1868-70; Robert B. Lindsay, 1872; David P. Lewis, 1872-74; George S. Houston, 1874-79; Rufus W. Cobb, 1879-81. The present Senators are John T. Morgan, 1883-89; James L. Pugh, 1879-85. For former Senators see "Lanman's Biographical History of the Civil Government of the United States;" it is too long a list to copy here.

BACCHUS—TRADE MARKS.

WILMINGTON, Ill.

1. Explain the use of trade marks. 2. Who was Bacchus?

L. F. Hazelton.

Answer.—1. Trade marks secure a proprietary right of a single firm in the article thus marked. They are intended to prevent an unknown manufacturer from palming off upon the public imitations of goods that have acquired a reputation from the original manufacturer; or they are a certain warrant of the quality of articles bearing them. 2. Bacchus, or Dionysius, was the Greek god of wine, and, according to the myth, the son of Zeus and Semele, the daughter of Cadmus of Thebes. At his birth he was carried by Hermes to Nysa, to be reared by the nymphs. Being struck with madness, at the command of Juno, he wandered from land to land, attended by nymphs having their heads wreathed with vine and ivy leaves and bearing in their hands the thyrsus. To him is ascribed the knowledge of the cultivation of the vine and the manufacture of intoxicating wine, for in his wanderings he carried to men of many lands this information. Those who received him hospitably were rewarded, but all who rejected him brought upon themselves some form of misery. This hero and demigod was worshiped throughout Greece, but chiefly at Thebes, with sacrifices of goats and oxen, and many noisy and indecent rites, until, in 186 B. C., the Roman Senate suppressed the mysteries, which were the principal feature of the worship.

APOCRYPHA AND THE SACRED CANON.

Algona, Ill.

I should like to know in what year the Bishops of the Church of Rome accepted the Apocrypha as a part of the canon.

Laura A. Barslon.

Answer.—As early as the latter part of the first century of the present era discussions arose among Christians regarding the books rejected by the Jews as profane, and at the Council of Laodicea (360 A. D.) the Greek Church rejected all books except those in the present Protestant canon. In 474 Pope Gelasius convened a council of seventy Bishops, which confirmed the opinion of Pope Innocent I., recognizing the Apocryphal books as sacred, and rejecting some of the doubtful books of the New Testament. The Council of Trent (1545-1563) finally settled the mooted question for the Roman Catholic Church, accepting the “Apocrypha” as a

part of the sacred canon. The Greek Church has much the same books, while the Protestants retain only the Hebrew canon of the Old Testament.

CHURCH REFORMATION—PAPAL INFALLIBILITY.

DANVILLE, Ill.

Did any reformatory movements or discussions occur in the Roman Catholic Church before the time of Luther? 2. Are all of the Popes considered infallible?

JOHN SHORT.

Answer.—After the union of church and state, during the reign of Constantine the Great, as the church attained great temporal power and wealth, imposing rites and ceremonies were added to her service, and, with these, abuses and corruption crept in. The first great evil was the assumption by the church of spiritual dictatorship, and to oppose it arose St. Ambrose, St. Martin, and St. Stephen. Then occurred the great reform within the church itself, inaugurated by Pope Gregory III. for the purification of the clergy; and at the same time came Abelard, preaching liberty of thought in theology. But the growth of new sects specially characterized the four centuries immediately preceding the Lutheran Reformation. Of these the principal ones were the Lollards (1324), the Hussites (1373), the Moravian Brethren (1417), and the Mystics (1340-1471). 2. The supreme authority of the Pope in all religious matters has been generally acknowledged in the Roman Catholic Church from very early times, but the infallibility of the Pope, in regard to faith and morals, was not formulated and decreed by the Vatican Council until July 18, 1870.

A COMPARISON OF NATIONS.

MEDIA, Kan.

What effect does the present system of tariff have upon American commercial and industrial interests of the United States? How do the commerce and industrial products of the United States compare with those of other countries?

Answer.—There are several articles on the tariff in Our Curiosity Shop for 1880, to which we must refer you; particularly one on page 149, entitled "The Tariff and the Farmers." According to high statistical authority the commerce and principal industries of this country, Great Britain, France, and Germany in 1880 compared as follows:

Countries—	Commerce.	Manufactures.
United States	$1,505,000,000	$4,440,000,000
Great Britain	3,460,000,000	3,790,000,000
France	1,660,000,000	2,425,000,000
Germany	1,920,000,000	2,135,000,000

The commerce above referred to is mainly foreign commerce. In the case of Great Britain, what corresponds to our inter-State commerce (the trade between the different portions of the one extended government) is included under the head of "Commerce," swelling the aggregate largely, whereas but a small portion of the interstate commerce of the United States is included in the above estimate of our "Commerce." Our fifty million people buy and sell among themselves to supply each other's wants, and consume a much larger proportion of their domestic products per capita for their own comfort than do the English, French, or Germans. The effects of the tariff in building up American manufactures are shown in the above table, and in the table below are indicated some of the effects on mining, agriculture, and the carrying trade:

Countries—	Mining.	Agriculture.	Carrying Trade.
United States	$360,000,000	$3,000,000,000	$830,000,000
Great Britain	325,000,000	1,200,000,000	805,000,000
France	60,000,000	2,000,000,000	810,000,000
Germany	105,090,000	1,700,000,000	845,000,000

Comparatively few of our manufactures are exported, because our agriculture, mining, manufacturing, commercial, and professional classes consume them at home. So, too, the products of our mines are mostly kept at home, and four-fifths of our agricultural products. If our foreign carrying

trade is not so large as Great Britain's, our coasting and other domestic carrying trade exceeds hers. By division of labor we are creating a world of our own, setting up our own standards of wages, and modes of living, and are, as a consequence, living better, enjoying more of the comforts of life, man for man, than any other people under the sun.

THE JEWISH SCRIPTURES.

ALGONA, Iowa.

I come to you for a little light. In Abbott's "Life of Cleopatra" the author states that in early times the Bible was not kept by the Jews as any other than a vulgar history. I should like to know whether there is any authority for the assertion.

LAURA A. BARSLOW.

Answer.—For hundreds of years before the birth of Christ the books of Moses and other works sanctioned by the prophets (whose duty it was to guard the people against spurious writings or the loss of what was genuine) were regarded by the Jews as so sacred that "no one dared to add to or omit or alter anything;" so Josephus tells us. An authentic copy was kept in the Temple, while others copied from it were circulated for use in the synagogues of different places. A Jewish tradition ascribes to Ezra, after the return of the Jews from the captivity, and the college of learned men called the "Great Synagogue," the collection and selection of writings which form the Jewish and the present Protestant Old Testament canon. There is no good authority for the statement in your question.

SHOOTING NIAGARA.

KANSAS CITY, Mo.

Did any steamboat ever go through the great whirlpool in Niagara River with anybody on board and without being wrecked?

CONTROVERSY.

Answer.—The little excursion steamer Maid of the Mist, which used to ply on the Niagara River, between the falls and the whirlpool, ran through the seething rapids and the great whirlpool of that river in 1861, with the captain and two companions on board, one of whom was hurt on the passage. It was a foolhardy feat, and came near ending in the wreck of the vessel and the death of all on board.

THE SUN'S STAY IN THE NORTH.

GILMAN, Ill.

To settle a dispute, state whether the sun stays north of the equator longer than it does south of it; and if so, why.

YOUNG READER.

Answer.—The earth's orbit is not a perfect circle, but an ellipse with the sun in one of the foci, at a point on the long diameter of the orbit something more than a million miles from the center in the direction of perigee, or the place where the earth approaches nearest to the sun. In 1882 the sun was in perigee Dec. 31, and in apogee—the point furthest from the earth—on July 3. For several thousand years to come the perigee point will be south of the equator, as it has been for several thousand years past. As a consequence of this and because the earth moves more rapidly the nearer it gets to the sun, it takes it less time to travel through that part of its orbit south of the equator than through the portion north of it. In the year 1800 the sun was north of the equator seven days 16 hours and 51 minutes longer than it was south of it. The sun crossed the equator, coming north, March 21, 1882, at 12:02 o'clock at night, and crossed it on the return Sept. 22, 1882, at 10:29 o'clock p. m., an interval of 185 days 10 hours and 27 minutes. It reached the equator next on its return northward, March 20, 1883, at 5:39 o'clock p. m., an interval of 177 days 19 hours and 10 minutes. So that the northern hemisphere had a longer spring and summer than the southern hemisphere last year by seven days 15 hours and 27 seconds. The Brazilians and Terra del Fuegans may console themselves with the reflection that in about 6,000 years they will get even with us, and that in a little more than 12,000 years from now the sun will linger in the southern hemisphere a full week longer than in the northern.

AREA OF PALESTINE.

OSCEOLA, Iowa.

What is the extent of Palestine? Where can I get a first-class map and geographical description of Palestine?

C. M. F.

Answer.—The area is variously estimated as from 11,000 to 12,000 square miles. The former is Kitto's estimate, and according to that Palestine has not quite one-fifth the extent of Illinois (56,650) or Iowa (56,025). Maps of Palestine, ranging in cost from $4 to $30, with or without descriptive pamphlets, or geographies, may be ordered of any of the church publication societies in this city by yourself or through the nearest bookseller.

DATES OF CONSTITUTIONAL AMENDMENTS.

NEWTON, Kas.

Please give the dates of the amendments to the Constitution of the United States.

C. A. HERRICK.

Answer.—The first ten were added before the adoption of the Constitution, in 1791; the eleventh in 1798, the twelfth in 1804, the thirteenth in 1865, the fourteenth in 1868, and the fifteenth in 1870.

SENATOR SHARON.

MANLY JUNCTION, Iowa.

Please give a brief sketch of Senator Sharon.

A SUBSCRIBER.

Answer.—William Sharon was born in Smithfield, Ohio, Jan. 9, 1821. After preparing himself for admission to the legal profession he decided to enter the banking business, and upon his removal to Nevada became

interested in mining operations. He is at present a trustee of the Bank of California, and has great influence in the business of the Pacific slope. He was United States Senator from Nevada for the term 1875-81.

THREE BLACK FRIDAYS.

ODESSA, Neb.

What was "Black Friday," and what part did ex-President Grant take in it?

ED. S. JELLEY.

Answer.—September 24, 1869, Jay Gould and James Fisk, Jr., attempted to create a corner in the gold market by buying all the gold in the banks of New York City, amounting to $15,000,000. For several days the value of gold rose steadily, and the speculators aimed to carry it from 144 to 200. Friday the whole city was in a ferment, the banks were rapidly selling, gold was at 162½ and still rising. Men became insane and everywhere the wildest excitement raged, for it seemed probable that the business houses must be closed, from ignorance of the prices to be charged for their goods. But in the midst of the panic it was reported that Secretary Boutwell, of the United States Treasury, had thrown $4,000,000 on the market, and at once gold fell, the excitement ceased, leaving Gould and Fisk the winners of $11,000,000. There is no good evidence that President Grant had any connection with the sales. The fact that his brother-in-law was interested in Wall street operations at that time led to the charge against Grant by his enemies. The day noticed above is what is generally referred to as Black Friday in this country, but the term was first used in England, being applied in the first instance to the Friday on which the news reached London that the young Pretender, Charles Edward, had arrived at Derby, creating a terrible panic: and finally to May 11, 1866, when the failure of Overend, Guerney & Co., London, the day before, was followed by a widespread financial ruin.

FORFEITURE OF HOMESTEAD.

CAMARGO, Ill.

Is it absolutely necessary for a homesteader to commence his bona fide residence on his claim within six months?

G. H. Snedaker.

Answer.—The homestead law contemplates immediate settlement by the claimant upon the land; and section 2,297 of the Revised Statutes declares that if at any time after he has filed his entry affidavit it is shown, to the satisfaction of the receiver of the land office, that the claimant has actually changed his residence, "or abandoned the land for more than six months," at any time, the land shall revert to the government. "Copps' American Settlers' Guide," page 53, says: "At the expiration of six months from date of entry the homestead party who has not been able to establish a bona fide residence upon the homestead, owing to climatic reasons, must file his affidavit, duly corroborated by two credible witnesses, giving in detail the storms, etc., that rendered it impossible for him to commence residence within six months." We would add that it is safest to comply with the law, making it unnecessary to appeal to the decree of the General Land Commissioner, a very uncertain resort in cases of this nature.

LIQUOR DRANK IN ILLINOIS.

Carlinville, Ill.

In an argument on the temperance question a few days ago, a public speaker quoted The Inter Ocean as authority for the statement that there are $60,000,000 worth of liquor drank in Illinois during the course of a year. 1. Did The Inter Ocean say so? If it did, give us the figures in the Curiosity Shop to prove it. 2. He also said that this amount was one-third greater than the total value of the wheat crop of this State. Prove that too.

T. E. D.

Answer.—The principal facts on which The Inter Ocean rests the estimate above quoted are re-stated below once for all. If they can be successfully refuted, let us have that refutation. The following estimate is based on observations made as to the patronage of six Chicago saloons, so long ago as 1877, by the founders of the Citizens' League. The figures in

the first column give the number of persons, male and female, seen to enter these places between 7 o'clock p. m. and midnight; the second column is our own computation of the money paid in, assuming that nothing but beer was called for, at 5 cents a glass, two-thirds of the customers drinking but one glass, and the rest of them averaging only two glasses each; and the third column indicates the probable actual receipts, adding for the ordinary consumption of drinks more costly than beer:

Number entering.	Receipts if beer.	Gross receipts.
2,863	$190	$250
2,806	187	250
1,979	132	176
1,820	121	160
1,741	116	155
1,685	112	150

Observe that these are the receipts in saloons where lager beer was the chief drink; that the above figures cover only the five hours after 7 p. m., and that liquors in kegs, bottles, pitchers, and jugs ordered for home use are not taken into account. There are a few establishments dealing chiefly in whisky, brandy, wine, etc., whose receipts are at times nearly double the highest amount above given as the daily average.

To add assurance to the above calculation, one of the most thorough investigators and accurate reporters on THE INTER OCEAN local staff was detailed to ascertain, as nearly as may be, the actual receipts of Chicago saloons. He made the following report:

No. of Saloons	Average receipts per day.	REMARKS.
10	$150 or $200	Chapin & Gore's, Monroe st.; Hannah & Hogg, Madison st.; Batchelder's, Mahler & Gale.
50	$75 or	"Dutch" Henry, House of David, Hansen's, Dunhams, and

	$100	Chapin & Gore's branches, and dens on "the Levee."
100	$50	The ordinary down-town saloons and very good saloons in outlying districts.
2,000 or over	$30 and $25	Decent saloons in extreme north, south, and west portions of city, Rolling Mill and Stock Yards districts; mostly beer trade.
1,000 to 1,200	$15 to $20	The same as the above, with smaller trade, or houses in hard neighborhoods, with no legitimate trade, but which wait for victims to be "steered" into them.
300 to 500	$10	Little German beer saloons in sparsely settled districts, containing simply an ice-box and a keg of beer. Do a "can" trade mostly.

On the foregoing data a moderate estimate of the gross annual receipts of the 3,750 licensed saloons of Chicago figures as below:

No. of saloons.	Average daily receipts.	Receipts for year.
10	$175	$838,750
50	85	1,551,250
100	50	1,825,000
1,000	30	10,950,000
1,000	25	9,125,000
1,090	15	5,967,750
500	10	1,825,000
3,750		$32,082,750

This schedule does not cover unlicensed saloons, or other places where liquor is sold; the average daily receipts are taken at less rather than more than the probable truth, and yet it charges Chicago, which contains only about one-sixth of the population of the State, with an outlay of over $32,000,000 per annum for spirits, wines, and fermented drinks. It is not so easy to ascertain the number of saloons in the rest of the State and their average daily sales, but data are not wholly wanting. Take the following figures, compiled from a list of high-license towns, where in several instances the number of saloons has been reduced by more than half.

	Population.	No. of saloons.	License.
Anna	1,500	9	$500
Aurora	13,500	25	500
Apple River	650	2	300
Bloomington	23,000	32	600
Cabery	325	3	400
Carmi	2,500	12	300
Charleston	3,250	6	800
Chandlerville	700	3	500
Chenoa	1,100	5	300
Dongola	700	4	300
Elmwood	1,700	3	800
Galesburg	12,000	18	600
Gillespie	800	8	450
Hillsboro	2,000	3	800
Joliet	14,500	60	500
Kenny	600	2	500
Lamoille	500	1	300
Minier	650	3	300
Mason City	2,000	4	750
Mattoon	7,000	8	800
Moline	9,000	30	300
Mount Morris	900	1	500
Noble	400	1	300

Odell	1,000	2	750
Ohio	400	3	475
Oswego	700	2	300
Paris	5,500	8	800
Rockford	15,000	20	500
Rochelle	2,000	4	433
Savanna	1,500	10	500
Strawn	400	3	300
Tiskilwa	800	2	400
Washburn	500	3	300

In Peoria, Quincy, Rock Island, Galena, Alton, Cairo, Belleville, Springfield, LaSalle, Ottawa, Morris, Kankakee, and low-license towns generally, the number of saloons as compared with population is still greater, averaging but little better than Chicago with its license of only $103, and one saloon to every 160 inhabitants—men, women, and children. Fifty-eight high-license towns of the State, with a population of 189,000, contain 401 saloons, or one to every 470 inhabitants. Make all the allowance that can be reasonably asked for the moderate drinking of the farming classes, and discount, if possible, our estimate for Chicago, and the total cost of liquor drank in Illinois exceeds $60 000 000 per annum. 2. The Illinois crop report for 1882 makes the winter wheat of that year worth $45,472,045 and the spring wheat $1,242,331.

THE DIAMOND.

SHENANDOAH, Iowa.

When, how and by whom were diamonds first discovered? What is the etymology of the word diamond? How did their value when first discovered compare with the same now? What is the value of a one-carat diamond of the finest quality?

R. P. DRAKE.

Answer.—The discoverer of diamonds is unknown. From references in Exodus it is apparent that the diamond was a precious stone in Egypt in those early times; and even before that it was known in India, where

probably it was first obtained. The name is derived from the Greek word *adamas*, meaning "unsubduable," referring to its hardness, and later was written *diamas*, in Latin. From Pliny, a writer of the first century, we learn that the diamond was regarded as the most valuable of all things, and but few kings even could afford to buy them. But as no means of artificial polishing had been discovered the stone depreciated in value, so that the ruby and emerald became more precious. The discovery by Ludwig van Berquen, in 1476, of a mode of cutting and polishing it, at once returned this gem to the first place among precious stones. The present value of a fine brilliant, weighing one carat, varies from $50 to $100. The rose and table diamonds command much less. Larger diamonds appreciate in value much more rapidly than the ratio of their weight. The Orloff diamond, 193 carats, is valued at $500,000; the Pitt diamond, 136 carats, at $600,000; the Dudley diamond, 254½ carats, at $750,000; while the Kohinoor, for various reasons, although now it weighs but 102½ carats, is estimated to be worth $2,000,000.

AUTHORS OF CERTAIN POEMS.

RANDOLPH, N. Y.

The title of the poem containing the couplet—

> "And is this the man, thou vaunting knave,
> Thou hast dared to compare with the weeping slave?"

is "The Peasant." It was written by William Howitt. The author of the poem containing the lines, "I sat alone with my conscience," etc., is Charles W. Stubbs. It appeared in the *Spectator* under the title, "The Conscience and Future Judgment."

LEO BOARDMAN.

GENERAL TOM THUMB.

GRISWOLD, Iowa.

How old was General Tom Thumb when he died? State his real name in full, and that of his wife; also a few of the principal facts as to his size, history, etc., and oblige several readers.

A SUBSCRIBER.

Answer.—The true name of this celebrated dwarf was Charles Heywood Stratton. He was born in Bridgeport, Conn., Jan. 4, 1838, and died at his residence, Middleboro, Mass., July 15, 1883, of apoplexy. The attention of P. T. Barnum, the showman, was first drawn to Stratton in November, 1842, when the midget was about 4 years old. He was then less than 2 feet high, weighed less than 16 pounds, was beautifully formed, a blonde, with ruddy cheeks and mirthful eyes. Barnum introduced him to the public Dec. 8, 1842, by the name of General Tom Thumb; now known the world over. He paid him $3 a week and expenses for himself and his mother for the first four weeks, after which he engaged him for a year at $7 a week, but, as the boy proved a great attraction, he soon raised the wages to $25 a week. In January, 1846, under a contract of $50 a week, Mr. Barnum took him to Europe, where he made a profitable tour through England, France, and Germany. He was presented to Queen Victoria, Louis Phillipe, King William of Prussia (now the German Emperor), and other rulers, who treated him with marked kindness. The next year he returned to Europe for three months. On his return home he proved a greater attraction than ever, and Mr. Barnum says that in twelve days in Philadelphia he received $5,504.91; and in one day at Providence he took in $976.98. In 1857 he took Tom Thumb and Cordelia Howard, famous as little Eva in "Uncle Tom's Cabin," to Europe, where these children appeared in humorous characters, creating a furore and gathering a golden harvest. In 1862 Mr. Barnum introduced the two sister midgets, Lavinia and Minnie Warren, to the public, the former of whom young Stratton married before the end of that year. True to his chief instinct Barnum desired to turn the courting and the marriage ceremony to pecuniary account, offering $15,000 to postpone the wedding for a month, and then have it take place in the Academy of Music as an exhibition at so much a seat. To the credit of the bride and groom, they repelled this offer with just indignation, and were married in Grace Church, New York. The public reception at the Metropolitan Hotel, immediately following, was a notable affair. After this, for week after week, the three tiny folks drew crowds of admirers at Barnum's old museum on

the corner where the New York *Herald* office now stands, the receipts sometimes being over $3,000 a day. Mr. and Mrs. Stratton had a pleasant home at Middleboro, where they spent a large part of their time when not on the stage. They had one child, who died at the age of 2 years and 6 months. Both of them have been noted for sprightly intelligence, and have hosts of friends in all circles of society.

NAPOLEON BONAPARTE.

URBANA, Ill.

Will you please to give a short biography of Napoleon Bonaparte?

NETTIE AYERS.

Answer.—He was born at Ajaccio, Corsica, Aug. 15, 1769. His mother, a strong and cultured, but severe woman, ruled her household with a rod of iron, and to her the son owed his indomitable will. At ten years of age he was sent to a military school at Brienne, France, and six years later entered the army. In 1792, having taken an active part in the defection in Ajaccio, he was expelled, with the rest of his family, from the city. After several years of brilliant military service Napoleon was made commander of the campaign in Italy, which closed with the treaty of Campo Formio. On the eve of his departure he was married to the beautiful and accomplished Mme. Josephine Beauharnais. The year after the close of the Italian campaign (1797) Napoleon set out for Egypt, designing to investigate its wealth, art treasures and other antiquities, but the expedition proved disastrous and he soon returned to meet a critical state of affairs in France, leaving the army under the command of General Kleber. On Aug. 2, 1802, the French people made Bonaparte First Consul for life, and in the same year received at his hands the famous Code Napoleon, the product of the best legal talent of the nation, and undoubtedly one of the noblest monuments of his administration. It still forms the great body of French law. Two years later, he was proclaimed Emperor. After a remarkable career in war and peace, he sacrificed his heart and highest manhood to his ambition by divorcing his faithful Josephine to form a royal alliance with Maria Louisa, daughter of the Emperor of Austria. The decline of his power

soon followed, like a pursuing Nemesis; beginning with the fearful disasters succeeding the burning of Moscow and the ensuing retreat in the midst of a Russian winter, and ending with the disastrous battle of Leipsic, the fall of Paris, his first abdication, and his exile (1814) to the little island of Elba. He escaped to France ten months later; raised another army, and hastened to meet the allies—English, Germans, and Netherlanders—in Belgium, on the fatal field of Waterloo. A few months later and he was a prisoner for life on the desolate island of St. Helena, in custody of Great Britain, where he died of cancer of the stomach May 5, 1821. By almost universal concession he is regarded as the greatest military commander that ever lived. Had his diplomacy been equal to his military genius it is probable that he would have remained to his death, as he was for a period of more than six years, the virtual master of nearly all the civilized States of Continental Europe. In 1840 his mortal remains were carried to France and buried in Paris, the scene of his greatest triumphs as of his final downfall.

WEIGHT OF LUMBER.

DECATUR, Ill.

Please publish a table of the weight per thousand feet, "Chicago yard measure," of planed and unplaned boards, flooring, siding, etc., and do your readers a practical service.

OLD SUBSCRIBER.

Answer.—The following table is given in the lumber inspection rules printed by the Northwestern Lumberman Publishing Company of this city. It presents the average of the actual weights in the shipment of 20,000,000 feet of lumber during a single season:

Description	Weight in pounds
Boards, 1, 1¼, and 1½ inch thick, surfaced on one side per thousand ft.	2,102
Boards, 1, 1¼, and 1½ inch thick, surfaced on two sides	2,068
Boards, 2 inches thick, surfaced on one side	2,000

Flooring, white pine, dressed and matched	1,890
Flooring, 4 inches wide, dressed and matched	1,793
Flooring, hard pine, dressed and matched	2,366
Ship laps, 8 inch	1,711
Ship laps, 10 inch	1,725
Ship laps, 12 inch	1,855
Ceiling, white pine, ⅜ inch	786
Ceiling, hard pine, ⅜ inch	950
Siding	865
Piece stuff, rough	2,560
Piece stuff, surfaced on one side	2,210
Thin, clear	1,380
Ceiling, ⅝	1,120
Rough boards	2,524
Fence, hard pine	2,910
Fencing, 6 inch	2,433
Shingles, pine, per 1,000	248
Shingles, cedar, per 1,000	203
Lath, dry	502

ST. ANASTASIUS—APOSTLE OF HUNGARY.

Who was called the "Apostle of Hungary," where was he born, and when did he live?

W. I. PRATT.

Answer.—St. Anastasius, surnamed Astric, was born in France, A. D. 954, and died in 1044. He gained great influence over Stephen I., King of Hungary, 997-1038, who intrusted the zealous missionary with almost unlimited powers. These he used with such rare wisdom and spirit that the Hungarians were rapidly converted from paganism. The freedom of all Christian slaves was proclaimed, the political organization of the kingdom was reconstructed, schools were established, and, in fine, Hungary was transformed from barbarism to a state of inchoate Christian civilization. He is honored in history and tradition as the "Apostle of Hungary."

EXECUTIVE AND DEPARTMENT SALARIES.

AUGUSTA, Kan.

Please give the organization of the President's household, give the salaries of its several officers, and state who pays the same. Also give the organization of each of the departments under the several members of the President's Cabinet.

C. H. M.

Answer.—The President's salary is $50,000 a year. The organization of the executive office gives him a private secretary, with salary of $3,250; assistant secretary, $2,250; two executive clerks, each $2,000; stenographer, $1,800; five other clerks, severally $1,200, $1,400, and $1,800; steward, $1,800; usher, $1,400; five messengers, each $1,200; four doorkeepers, each $1,200; watchman, $900; furnace-keeper, $864.

The principal officers of the Department of State are: Secretary of State, salary, $8,000; Assistant Secretary, $4,500; Second Assistant, $3,500; Third Assistant, $3,500; Chief Clerk, $2,750; Examiner of Claims, $3,500; Chief of Diplomatic Bureau, $2,100; Chief of Consular Bureau, $2,100; Chief of Indexes and Archives, $2,100; Chief of Bureau of Accounts, $2,100; Librarian, $2,100; Translator, $2,100. There are thirty-nine clerks with salaries ranging from $1,800 down to $900; a proof-reader, $1,300; a lithographer, $1,200; chief engineer, $1,200; assistant engineer, $1,000; messengers, watchmen, laborers, and firemen, in all twenty-four, ranging from $1,000 down to $660.

The Treasury Department is one of the most, perhaps the most important and laborious department of the government. The Secretary's salary is $8,000, the Assistant Secretary receives $4,500; Second Assistant Secretary, $4,500; Chief Clerk, $2,700; First Comptroller, $5,000; Second Comptroller, $5,000; Commissioner of Customs, $4,000; First, Second, Third, Fourth, Fifth, and Sixth Auditors, each, $3,600; Treasurer of the United States, $6,000; Assistant Treasurer, $3,600; Register of the Treasury, $4,000; Comptroller of the Currency, $5,000; Commissioner of Internal Revenue, $6,000; Solicitor of Internal Revenue, $4,500; Solicitor of the Treasury, $4,500; Director of the Mint, $4,500; Chief of Bureau of

Engraving and Printing, $4,500; Chief of Bureau of Statistics, $2,400; Supervising Architect, $4,500; Superintendent of United States Coast Survey, $6,000; Chairman of Lighthouse Board, $4,000; Superintendent of Life-saving Service, $4,000; Inspector General of Steamboats, $3,500; Chief of Appointment Division, $2,500; Chief of Warrant Division, $2,750; Chief of Public Moneys Division, $2,500; Chief of Customs Division, $2,750. The subordinate officers and employes under the above chief officers of the Treasury number many thousands, varying in number with the emergencies of the service. The total official list of this department for all parts of the country, including collectors of customs and internal revenue and their employes, covers 195 octavo pages, with from sixty to ninety-six names on a page.

The Department of the Interior is organized as follows: Secretary of the Interior, salary, $8,000; Assistant Secretary, $3,500; Chief Clerk, $2,750; Assistant Attorney General, $5,000; Commissioner of General Land Office, $4,000; Commissioner of Pensions, $5,000; Commissioner of Patents, $4,500; Commissioner of Indian Affairs, $4,000; Commissioner of Education, $3,000; Director of Geological Survey, $6,000; Superintendent of Census, $5,000. Other officers and employes in all parts of the country, but mainly at Washington, vary in number from time to time, more perhaps than those of any other department, ranging from about 7,500 to about 9,000, with salaries from $3,000 down to $600.

The Secretary of War receives $8,000 a year; Chief Clerk, $2,500; Adjutant General, $5,500; Inspector General, $5,500; Quartermaster General, $5,500; Commissary General, $5,500; Surgeon General, $5,500; Chief Medical Purveyor, $4,200; Judge Advocate General, $5,500; Chief of Engineers, $5,500; Chief Signal Officer, $5,500; Chief of Ordnance, $5,500. The complete official list of the department at present embraces about 4,000 names, with salaries from $3,000 to $660.

The Secretary of the Navy receives $8,000; Chief Clerk, $2,500; Judge Advocate General, $4,500; Chiefs of the Bureaus of yards and docks, navigation, ordnance, provisions and clothing, medicine and surgery, equipment and recruiting, construction and repair, steam-engineering, each $5,000; Commandant of navy yard, $4,500; Pay Inspector, $3,000; Commandant of Marine Corps, $4,500; Superintendent of Naval Observatory, $5,000; Superintendent of Nautical Almanac, $3,500; Chief

Signal Officer, $3,500; Hydrographer, $3,500. The total official list of the Navy numbers now about 2,800, with salaries from $3,000 to $660.

The Postmaster General receives $8,000; the First, Second and Third Assistants, each $3,500; Superintendent of Foreign Mails, $3,000; Assistant Attorney General for Postoffice Department, $4,000; Superintendent of Money-order System, $3,000. The total official list for employes at Washington numbers about 5,000, with salaries ranging from those already given down to $660 a year.

The Department of Justice is organized with Attorney General, salary, $8,000; Solicitor General, $7,000; First Assistant Attorney General, $5,000; Second Assistant Attorney General, $5,000. There are about fifty clerks, copyists, messengers, laborers, etc., at salaries from $2,200 to $660.

WHEN THE SEASONS BEGIN.

WENONA, Ill.

To end an argument, please inform us, through Our Curiosity Shop, when summer begins.

C. M. TURNER.

Answer.—The civil or tropical year, the one commonly used in the measure of time, is the period which elapses from the sun's appearance on one of the tropical circles to its return to the same. It varies very slightly, and has a mean length of 365 days, 5 hours, 48 minutes, and 49.7 seconds. Astronomically considered, the four seasons begin at the equinoctial or the solstitial points. The summer solstice is the meridian, passing through the point where the sun touches the tropic of cancer; the winter solstice is the meridian passing through the point where it touches the tropic of capricorn; and the equinoctial points are the points at which the sun's path or equinoctial crosses the celestial equator. All these points shift, according to very exact astronomical laws, from year to year; and so the precise times when the seasons begin are matters of the nicest mathematical calculations. For example, last year the seasons began as follows:

Winter began Dec. 21, 1881, at 10:52 a. m. and lasted 90 days, 1 hour, and 10 minutes.

Spring began March 21, 1882, at 12:02 p. m. and lasted 91d, 20h, and 4m.

Summer began June 21, 1882, at 8:06 a. m. and lasted 93d, 14h, and 23m.

Winter began Dec. 21, 1882, at 4:45 p. m. and lasted 89d, 18h, and 16m.

The beginning of the seasons this year are given as follows:

Winter began Dec. 21, 1882, at 4:45 p. m. and lasted 88 days, and 54 minutes.

Spring began March 20, 1883, at 5:39 p. m. and lasted 92d, 20h, and 14m.

Summer began June 21, 1883, at 1:53 p. m. and lasts 93d, 14h, and 35m.

Winter will begin Dec. 21, 1883, at 10:44 a. m. and last 89d, 16h, and 16m.

HENRY CLAY.

HOOSIER, Pa.

Please give me an account of Henry Clay and his descendants.

A SUBSCRIBER.

Answer.—Henry Clay was born near Richmond, Va., April 12, 1777. His father died in 1782, and ten years later his mother married again and moved to Kentucky, leaving Henry as a clerk in Richmond. In 1797 Henry followed her, and opened a law office in Lexington. He took an active part in the framing of a new constitution for Kentucky, upon her separation from Virginia when he strongly urged some provision for the abolition of slavery, but in vain. From this time he became prominent in politics. In 1803 a State Senator, a United States Senator in 1806, one of the negotiators of peace in the war of 1812, and twice a Speaker of the House, he was no stranger to statesmanship when in 1824 he appeared as a candidate for the presidency. He was defeated, however, as was also the case in 1832 and 1844 when he was the candidate of the Whig party. As an orator he stands among the very

first that this country has produced. As a statesman he was far-seeing, a wise political economist, a devoted lover of the Union, and absolutely incorruptible. “I would rather be right than be the President,” is one of his utterances, made under circumstances that tested his sincerity. He did what he believed was right, offended the slave oligarchy thereby, as he foresaw he should do, and barely failed of election to the presidency in the ensuing campaign as the consequence. Knowing the desperate measures to which the champions of slavery would resort to preserve and extend that institution, he averted threatened secession in 1821 by bringing forward the “Missouri Compromise;” again in 1850 by another compromise known as the “Omnibus bill.” The effect of these pacific measures was to defer the inevitable final appeal to arms until the strength of the free States had outgrown the slave power, and the Union was able to grapple with secession and throttle it. As one of the commissioners who negotiated the treaty of Ghent, at the close of the second war with England, he caused the erasure of the clause granting free navigation of the Mississippi to British vessels. Protection to American industry through a wise adjustment of the tariff, found in him one of the ablest of its early champions. Mr. Clay married Lucretia Hart, in 1799, who bore him six daughters and five sons. The last of the daughters died in 1835. Of the sons, the most promising, Henry, born in 1811, fell at the battle of Buena Vesta, Feb. 23, 1847. James B., born in 1817, was a representative in Congress from his father’s old district, 1857-9. He was a member of the Peace Commission of 1861; died at Montreal, Jan. 26, 1864. Thomas Hart, born in 1803, took office under President Lincoln as minister to Nicaragua, and, later, to Honduras. He died at Lexington, Ky., March 18, 1871.

FOUNDING OF YALE AND DARTMOUTH.

MELVIN, Ill.

Please state when and by whom Yale, Harvard, and Dartmouth colleges were founded.

A. BUCKHOLZ.

Answer.—Yale College was founded in 1700, by the Connecticut Colony, under the trusteeship of the ten principal ministers of the colony. Harvard

University was founded at Cambridge in 1636, and named for the Rev. John Harvard, who gave $3,500 toward its endowment fund. Dartmouth College was chartered in 1769, and named for Lord Dartmouth, because of his interest and benefactions. These institutions were chartered by corporations, and not by single individuals.

SWARMING OF BEES.

KEWANEE, Ill.

In swarming, do the old or the young bees leave the hive?

"TOPSY."

Answer.—The first swarm of a season leaves the hive under the guidance of the old queen, before the new brood is hatched. This swarm consists of most of the old workers and drones. As soon as the new brood is five or six days old, young queens lead forth other swarms, composed for the most part of young bees, until only one queen remains in the old hive with a swarm.

MARTIN LUTHER.

URBANA, Ill.

Will you please give me a short biography of Martin Luther?

NETTIE AYRES.

Answer.—Martin Luther was born of poor parents, at Eisleben, in 1483. After studying at Erfurt and being confirmed priest, Luther accepted a professorship at the University of Wittemberg in 1508. In 1510 he was sent on a mission to Rome, where he had an insight into the corruptions of the papacy, and upon his return he immediately entered upon his work of reform, especially attacking the sale of indulgences. One of his first acts was to nail on the door of Wittemberg Church ninety-five theses, in which he denied the power of the Pope to forgive sins. Great excitement followed, and Luther was summoned by Pope Leo X. to appear at Rome. The university and electors interfered, and a legate from Rome came to Germany to hear Luther's defense. Soon Luther's books and papers gained

a wide circulation, and in 1520 came a papal bull of excommunication, which Luther burned in the gate of Wittemberg in the presence of a large company. The next year Charles V. convened the Diet of Worms, which ordered the destruction of Luther's books and the arrest of the heretic. He was now imprisoned by friends in the Castle of Wartburg for his protection, and soon after his release married the gifted Katharine Von Bora, a nun whom he had converted to Protestantism. His later life was spent in writing and controversy, though, on the whole, very quiet. He died in 1546.

FALL OF WESTERN RIVERS.

1. What is the elevation of Rock Island, St. Louis, and Cairo above the Gulf of Mexico? 2. What is the fall per mile required to give a river a current of two miles an hour? 3. State average fall of the Mississippi River and its tributaries.

J. H. RHODES.

Answer.—1. Rock Island is about 536 feet, St. Louis 408 feet, and Cairo about 322 feet above tide-water. 2. The number of inches fall per mile required to give a current of two miles depends very greatly upon the volume of the stream, the character of the bed, and the directness of the channel. The same stream is sluggish at low water and a rushing torrent at high flood. The current of the Lower Mississippi, with a fall of nearly three inches per mile, has an annual average of three miles an hour in midstream. 3. The slope of rivers falling into the Mississippi from the west is about six inches per mile, and that of those from the east is about three inches per mile, except in the case of the Ohio River, whose mean descent from Pittsburg to Cairo, including the falls and rapids at Louisville, is about 5⅙ inches. The mean descent of the Mississippi from the mouth of the Ohio to the gulf is a little over 2⅘ inches a mile. Between Lake Itasca and the mouth of the Ohio the descent of the Mississippi is much more rapid. From its source to the Falls of Pecogama, 270 miles, the total descent is 324 feet; thence to Pine River, 200 miles, the fall is 165 feet; thence to Crow Wing, 47 miles, it is 49 feet. Below this are the Sauk Rapids, then the Rapids and Falls of St. Anthony, 18 feet at a leap and 66 feet in a single mile; then the Rock Island Rapids, 22 feet; and the Des Moines Rapids, 24 feet. The total descent between Lake Itasca and the mouth of the Ohio is 1,285 feet.

PRINCIPAL BATTLES OF THE REBELLION.

York, Neb.

Please give the dates of the principal battles of the rebellion, who commanded in each, and the number killed on both sides.

J. I. Mosbarger.

Answer.—Bull Run (first), July 21, 1861: North, General McDowell; killed, 481: South, General Beauregard; killed, unknown. Shiloh, April 7, 1862: North, General Grant; killed, 1,735; South General A. S. Johnston; killed, 1,728. Seven Pines and Fair Oaks, May 31 and June 1, 1862: North, General McClellan; killed, 890; South, General J. E. Johnston; killed, 2,800. Antietam, Sept. 16 and 17, 1862; North, General McClellan; killed, 2,010; South, General Lee; killed, 3,500. Chancellorsville, May 2 and 3, 1863: North, General Hooker; killed, 1,512: South, General Jackson; killed, 1,581. Gettysburg, July 1, 2, and 3, 1863; North, General Meade; killed, 2,834; South, General Lee; killed, 3,500. Vicksburg, July 3 and 4, 1863: North, General Grant; killed, 545: South, General Pemberton; killed, unknown. Chickamauga, Sept. 19-23, 1863: North, General Thomas; killed, 1,644; South, General Bragg; killed, 2,389. Wilderness, May 5, 6, and 7, 1864: North, General Grant; killed, 5,597; South, General Lee; killed, 2,000. Spottsylvania, May 8-21, 1864: North, General Grant; killed, 4,177; South, General Lee; killed, 1,000. The above figures are based on medical official returns, and do not agree with returns of Adjutant General. No two reports agree. Adjutant General makes killed at Wilderness 2,261, and at Spottsylvania 2,270; while General Meade's report, based on reports immediately after the battle, states killed at Wilderness at 3,288; at Spottsylvania 2,146.

SILVER COINS AT A PREMIUM.

Hebron, Ind.

Can you give a list of the United States silver coins that are at a premium?

Frank Richards.

Answer.—There is a considerable demand for United States silver coins of rare issues to complete collections for coin cabinets. The following are quotations for a few of the rarer coins, taken from two coin price lists, one published in Chicago and the other in Reading, Pa.:

UNITED STATES DOLLARS.

	Reading.	Chicago.
1794, flowing hair	$30.30	$12.50
1795, flowing hair	1.50	1.25
1795, fillet head	1.65	1.25
1796, fillet head	1.65	1.25
1797, fillet head, 6 stars facing	1.75	1.75
1797, fillet head, 7 stars facing	2.00	1.25
1798, fillet head, 13 stars, small eagle	4.75	1.25
1798, fillet head, 15 stars, small eagle	6.00	2.00
1798, 13 stars, large eagle	1.35	1.15
1799, 5 stars facing	2.25	1.40
1799, 6 stars facing	1.25	1.15
1800, spread eagle	1.45	1.25
1801, spread eagle	1.75	1.50
1802, spread eagle	1.45	1.35
1802 over 1801, spread eagle	1.50	1.35
1803, spread eagle	1.50	1.25
1804, excessively rare, “boss dollar”	500.00	200.00
1836, C. Gobrecht’s name in field		6.00
1836, flying eagle		3.00
1838, flying eagle	12.00	15.00
1839, flying eagle	18.00	15.00
1851, liberty seated	18.00	15.00
1852, liberty seated	18.00	15.00
1854, liberty seated	5.50	2.25
1855, liberty seated	3.25	2.00
1856, liberty seated	2.25	1.50
1857, liberty seated	2.75	1.50
1858, liberty seated	20.00	15.00

U. S. HALF DOLLARS.

1794, flowing hair, fair	3.50	2.00
1794, flowing hair, good	5.00	3.25
1796, fillet head, 15 stars	20.00	15.00
1796, fillet head, 16 stars	20.00	16.00
1797, fillet head, 15 stars	20.00	12.50
1801, fillet head	3.50	2.00
1802, fillet head	3.50	2.75
1815, head to left, good	3.50	2.60
1815, head to left, fine	5.00	3.50
1836, liberty cap, milled edge	2.00	2.00
1836, liberty cap, milled fine	2.50	2.50
1838, liberty cap, having “O” mark underhead	7.00	3.00
1852, liberty seated	2.50	1.50
1852, liberty seated, fine	3.50	2.00

QUARTER DOLLARS.

1796, fillet head, fair	2.00	1.75
1796, fillet head, good	3.50	2.00
1804, fillet head, fair	1.50	1.25
1804, fillet head, good	2.00	1.50
1823, head to left, fair	15.00	13.50
1823, head to left, good	25.00	20.00
1827, head to left, fair	15.00	17.50
1827, head to left, good	25.00	20.00
1853, liberty seated, without arrows	5.00	2.50

TWENTY-CENT PIECES.

1877		1.25
1878		1.50

DIMES.

1796, fillet head, fair	.75	1.00
1796, fillet head, good	1.50	1.25
1797, 13 stars, fair	1.00	1.25
1897, 13 stars, good	1.75	1.75
1797, 16 stars, fair	1.00	1.25

1797, 16 stars, good	1.75	1.75
1798, fillet head, fair	.75	1.00
1798, fillet head, good	1.00	1.50
1800, fillet head, fair	.50	1.00
1800, fillet head, good	.75	1.50
1801, fillet head, fair	.75	1.00
1801, fillet head, good	1.00	1.50
1802, fillet head, fair	1.50	1.25
1802, fillet head, good	2.50	2.00
1803, fillet head, fair	1.25	.75
1803, fillet head, good	1.75	1.25
1804, fillet head, fair	4.00	1.75
1804, fillet head, good	5.50	2.00
1800, head to left	1.25	.60
1811, head to left	.70	.60
1822, head to left, fair	1.50	1.50
1822, head to left, fine	2.00	2.00
1846, liberty seated	1.00	.50
HALF DIMES.		
1794, flowing hair, fair	2.00	1.25
1794, flowing hair, good	3.00	2.00
1795, flowing hair, good	.70	.50
1796, 15 stars, fillet head, fair	1.50	1.00
1796, 15 stars, fillet head, good	2.00	1.50
1797, 15 stars, fillet head, fair	2.50	.75
1797, 15 stars, fillet head, good	2.50	1.25
1797, 16 stars, fillet head, fair	1.50	.75
1797, 16 stars, fillet head, good	2.50	1.25
1800, fillet head, fair	.40	.25
1800, fillet head, good	.60	.50
1801, fillet head, fair	1.25	.75
1801, fillet head, good	2.00	1.25
1802, fillet head, fair	25.00	10.00
1802, fillet head, fine	40.00	30.00

1803, fillet head, fair	1.25	.75
1803, fillet head, good	2.25	1.25
1805, fillet head, fair	1.50	1.00
1805, fillet head, good	2.50	1.50
1846, liberty seated, without stars, fair	1.50	.50
1846, liberty seated, good	2.00	.75
1846, liberty seated, fine	2.00	1.00
SILVER THREE-CENT PIECES.		
1863	.60	.25
1864 to 1869, inclusive		.25
1870, large star in center		.20
1871, large star in center		.20
1872, large star in center		.20
1873, large star in center	.90	.60

Such quotations are subject to frequent fluctuations, but New York auction sales of old United States coins, reported from time to time, indicate that coin purchasers can make a fair profit on the above prices.

THE SALVATION ARMY.

BELLE RIVER, Wis.

Will the Curiosity Shop please to give some information regarding the "Salvation Army," its origin, object, and modes of work?

W.

Answer.—Eighteen years ago, when General Booth began his work in London as a Methodist minister to the artisan classes, he was confronted by the great question, how to bring the gospel to the hearts of the ignorant and degraded so as to make it a vital power. After many trials and failures he began the organization of what is now known as the Salvation Army numbering at present 320 corps, with 760 officers who give their entire time to the work, having over all a "general." Their creed is the literal gospel, and it is preached by them in no less than 6,200 meetings a week. Their territory is divided into thirteen districts, each under the care of a "major,"

who inspects and controls all the corps in his district. To each corps is assigned a "captain," assisted by one or two "lieutenants," who devote all their time to conducting meetings, visiting those enlisted, and organizing work among the unconverted. The system of promotion is slow and guarded. When a person professes a change of heart he must at once rise and confess it before his former associates. He is then placed under the supervision of the sergeant of the district in which he resides, whose duty it is to report him to the captain if he fails in the proper performance of any religious duty. He must always wear the letter S in some conspicuous place, and is soon given the charge of a part or the whole of a street. If faithful in these duties, godly in character, and of good general ability, he may be recommended by his captain for promotion. The major refers him to the general, and if he answers satisfactorily a long list of questions asked him by the latter he is sent to the "training barracks" at Clapton, whence, after from six weeks to three months, he is dispatched to some distant field as lieutenant. Each officer is expected to lead from nineteen to twenty-five meetings a week, and spend eighteen hours in visiting families. The army has become so large that the management of affairs devolves upon the majors. Its property is held by an attorney in the name of the general. All who are able must contribute toward the general expenses, and most of the corps are now self-supporting. The salaries are met by general subscription.

COMMANDER-IN-CHIEF OF BRITISH ARMIES.

CHICAGO, Ill.

Who is the present Duke of Cambridge, Commander-in-chief of the British armies? Please give an outline of his career.

INQUIRER.

Answer.—He is first cousin to Queen Victoria; being the son of Adolphus Frederick, Duke of Cambridge, tenth child of George III., of whom Edward Augustus, Duke of Kent, the Queen's father, was fifth child. He succeeded to the title of his father, July 8, 1850. In 1837 he was promoted to a colonelcy in the British army. In 1854 he was Lieutenant General commanding the first division sent to aid Turkey against Russia in what is known as the Crimean war. He led the troops at Alma and Inkerman. There

was a good deal of dissatisfaction expressed at the slow progress of the war, and under the plea of ill-health he returned to England, where, in 1856, he succeeded Viscount Hardinge as Commander-in-chief. In 1862 he was raised to the rank of Field Marshal. He has never married, but—like his Uncle William IV., who lived for many years with Mrs. Jordan, the actress, rearing a numerous illegitimate family by her, and his Uncle Augustus Frederick, Duke of Sussex, who, in violation of the royal marriage act, married a subject, the Lady Augusta Murray, who bore him two illegitimate children—he has persistently lived for many years with Miss Fairbrother, once known as a beautiful actress, by whom he has several illegitimate children, well provided for out of his large income.

THE ANTIQUITY OF MAN.

Brushy Prairie, Md.

Please give a synopsis of the observations and opinions of the best geologists of the present time as to the antiquity of man upon the earth.

R. Ashley.

Answer.—To summarize the earliest recorded geological evidences of man's life as briefly as possible it may be said: 1. In the words of Professor Archibald Geikie, of Edinburgh University, "The geological deposits which contain the history of the human period are cavern loam, river alluvia, lake bottoms, peat mosses, and other superficial accumulations." Human remains are not found imbedded in stratified rock, as in the cases of the fossilized plants and animals of the lower orders. The entire period in which any supposed evidences of the existence of man have been discovered is the Miocene or middle epoch of the Tertiary period. They consist of a few flint flakes, fancied to have been used, possibly, as human implements, but so roughly shaped that it is admitted they may be simply natural; and some bones of animals, scratched as if scraped by men, but more probably by the teeth of wild animals. No geologist of high repute acknowledges any of these crude objects and marks as proof of the existence of man in the Miocene period. It has been claimed that traces of man were found in California, in Calaveras County, and on Table Mountain, in the next later

formation, the Pliocene. But M. Favre, reviewing the whole subject up to 1870, and Mr. Evans, President of the Geological Society of London, still later, in 1875, declare that the existence of man in any epoch of the Tertiary period is unproved. 2. The next period is the Quaternary, which immediately precedes the geological epoch in which we are living, known as the "recent epoch." The Quaternary period is subdivided into three epochs, of which the earliest was the "glacial," the second the "champlain," and the third the "terrace." During the first of these the northern regions of Europe, Asia, and America appear to have been capped with ice down to about the latitude of 40 degrees north. During the second the glaciers melted, the ice cap receded toward the pole, and the greater part of the now cultivable regions of the northern hemisphere were flooded with seas and lakes, underneath which heavy sedimentary deposits were found. During the third epoch land continued to rise; the lakes were drained off; mighty rivers took the place of many of the lakes, cutting deep channels through the old flood plain-deposits left by glaciers and lakes, and leaving terraces or bluffs, such as are seen along the Mississippi, Missouri, and other great rivers. In this formation, in the terraces of the river Somme, near Abbeville, M. Boucher de Perthes discovered, about 1858, chipped flints, associated with the bones of the mammoth, rhinoceros, hyena, horse, etc., which are generally regarded as human implements. Similar discoveries were made at Hoxne, England, in strata underlying the higher level river-gravels, but overlying the glacier deposit, which seems to fix this discovery in the champlain epoch. A well-shaped human skull was found in a cave at Engis, near Liege, Belgium, associated with bones of extinct and living species, beneath a crust of stalagmite, which are believed to belong to the middle or latter part of the Quaternary period. Near Nice, in a cave at Mentone, a few years ago, was found the skeleton of a man, associated with the bones of the cave-bear and the cave-lion—long extinct in that region—and the bones of living species, such as the reindeer and stag, with twenty-two perforated teeth of the stag lying around his head as if they had been worn as a necklace. In what is called the Aurignac cave in France were found seventeen human skeletons of both sexes and all sizes, along with entire bones of extinct animals, and human implements and ornaments. The cave was closed up with a slab, and outside of it was a deposit of ashes and cinders, with burnt and split and knawed bones of extinct animals, covered with talus, or a sloping heap of broken rock and earth. Coming down from

these discoveries to those of apparently later times, the habitations of more civilized men have been discovered in what are called the "lake dwellings" of Switzerland, of New Guinea, South America, and in some parts of Africa. Such are the chief indications of the antiquity of man, reckoned by geological periods and epochs; but how to reduce these latter to years is still an unsolved problem; so much so that some geologists claim that the beginning of the terrace epoch, which, as above shown, contains the earliest well-defined human remains, does not extend back more than 7,000 to 10,000 years, while others date it back from 50,000 to 60,000 years. Professor Le Conte sums up his review of this question by saying: "In conclusion, we may say that we have as yet no certain knowledge of man's time on the earth. It may be 100,000 years, or it may be only 10,000, but more probably the former than the latter." The fact that the deposits in which human remains and implements have been discovered are all confessedly "superficial" gives opportunity for unending disputations as to the origin of such remains, the date of their deposit, and the time requisite to produce subsequent physical changes.

PALACE OF THE CÆSARS.

MULBERRY, Ind.

Please give a description of the Palace of the Cæsars and the "Golden House" of Nero. How far were they apart, and how much did they cost?

J. J. R.

Answer.—The Palace of the Cæsars, if we judge from the Latin authors, was of all palaces of its time the most magnificent. The palace of Augustus, built upon the site of the houses of Cicero and Catiline, was its beginning, and each succeeding Emperor altered and improved it. Tiberius and Caligula enlarged it, Nero added his Golden House, and Titus used the portion on the Esquiline Hill for his famous baths. It is now a mass of shapeless ruins, extending over three hills of Rome, and covering an area 1,500 feet in length and 1,300 feet in width, giving no hint of what it once was in architecture or embellishment. All is left to the imagination of the poet except the beauty of the Golden House, which soon outrivaled the

splendor of the older palace of which it was a part. It is said to have been the houses of Augustus and Maecenas connected by arches and columns, and it extended over the Palatine, Esquiline, and Cælian Hills of Rome. The interior was covered with gold and precious stones, and adorned with the finest paintings and statuary that the world afforded. The circular banquet hall, perpetually revolving in imitation of the apparent motion of the sun about the earth, had vaulted iron ceilings, which, opening, scattered flowers upon the guests, and golden pipes through which ran sweet perfumes. In the vestibule stood Nero's statue, 120 feet in height. The palace was surrounded by a triple portico a mile in length, and supported by a thousand columns, and within this lay an immense lake, whose banks were bordered by great buildings, each representing a little city, about which lay green pastures and groves, where sported "all animals, both tame and wild." It is impossible to learn how much these palaces cost. They were not far apart, but reference to Tacitus Annals shows that they were distinct structures.

HOMEOPATHY IN THE UNITED STATES.

CAMBRIDGE, Ill.

Please inform me, if you can, who was the first teacher of homeopathy in this country, and the extent to which the practice of it has spread.

W. N. BOYER, M. D.

Answer.—It is generally conceded that Hans B. Gram, a native of Boston, who studied in Denmark, introduced homeopathy into the United States in the year 1825. There are now twelve colleges of this school of medicine in this country, graduating from 300 to 400 students a year—380 in 1880—45 homeopathic dispensaries; over 30 hospitals; 15 periodicals devoted to this practice; and about 7,500 physicians and surgeons.

NEBRASKA AND LINCOLN'S MONUMENT.

FREMONT, Neb.

To settle a dispute, state whether Nebraska voted $500 toward the National Lincoln Monument at Springfield, Ill., and then

took it back, or refused to pay it over to the Monument Association.

A. C. F.

Answer.—By an act approved Feb. 15, 1869, the Legislature of Nebraska appropriated $500 "to aid in the construction of the National Lincoln Monument at or near Springfield, Ill." In September, 1882, when visiting the monument, the Hon. Isham Reavis, of Falls City, Neb., who voted for this appropriation, learned incidentally from Mr. J. C. Power, the custodian, that the Association had never received the money. On his return to Nebraska he went to Lincoln, and by examination of the Auditor's books found that the $500 had never been remitted, and that in due time it had by operation of law been covered back into the treasury with other unexpended balances. With the hearty co-operation of the Hon. C. H. Gere, of the *Nebraska State Journal*, who as a member of the Senate had participated in the act of appropriation, Judge Reavis induced leading members of the last Legislature to revive the appropriation. The Legislature of New York had set an example some time before by the reappropriation of the $10,000 which it had voted to the monument, but which had been permitted to lapse before it had been called for. Having been informed that the monument was then about complete, that the association was not in debt, and that the receipts from visitors for admission to the monument pay all current expenses, but that if the Nebraska appropriation was paid over it would be used in embellishing the nine acres of ground surrounding the monument, the Legislature, on or about Feb. 23, 1883, reappropriated the original amount of $500. After all, therefore, Nebraska has a share in this splendid memorial to the immortal Lincoln.

LOW TARIFF AND FIAT MONEY.

EMPORIA, Kan.

Your reply to J. R. Thompson has awakened in my mind a desire to know more about the Japanese currency and financial conditions. What led to the issue of the Japanese "fiat money," as you call it? Was this paper money "convertible?" What was it based on? When was it redeemable, and how? What was the

financial standing of the government at the time, and what is it now?

E. D. HUMPHREY.

Answer.—The treaties made with Japan by foreign nations when that country was wholly unsophisticated in treaty-making and inexperienced in the laws of international commerce, provided for the admission of foreign products on what is practically a free-trade basis. As a consequence, the balance of trade has for years past been against Japan, her exports being considerably less in value than her imports. For example, in 1880 the exports from Japan to Great Britain (which country gets two-thirds of the whole Japanese foreign trade) amounted to only £531,621, while the British "home produce" alone imported into Japan amounted to £3,290,906. Again and again Japan, seeing the ruinous effects on home industry resulting from the too moderate tariff fixed by the foreign treaties, has sought to get a modification of those treaties permitting her to increase the tariff, but thus far with little effect. Of course the difference between the value of the imports and exports has to be paid in the precious metals. The country was already suffering from this drain of bullion, when a civil war broke out in 1868, and the government was forced to issue paper currency to meet its ordinary and extraordinary expenses. This first issue bore a promise of redemption at the end of thirteen years; but, though the rebellion had been put down and a peaceful and, in many respects, a strong, progressive government had been established, this government was not in a condition to keep its promises, and the old currency issue was replaced with a new one, without any stipulation as to when it should be redeemed. The people looked upon it with distrust, and, although it was a legal tender, it was not long before it dropped to 50 cents on the dollar as compared with specie. The government took warning, entered upon a contraction of expenditures, strove to inspire confidence in the currency, and by contracting the volume somewhat, it has raised the value of its paper money to about 75 cents on the dollar.

When Japan opened its ports to foreign commerce it was substantially without debt. It is not even now heavily burdened, and could it once check the influx of foreign goods and so develop its home productions as to bring exports and imports to something like an equilibrium, its financial condition would be superior to that of most other countries. Its foreign debt in

January, 1875, amounted to no more than £3,400,000, which had been reduced by the action of the sinking fund to £2,134,700 at the end of 1881; and its home debt in July, 1880, stood at £69,406,919—a total of about $357,700,000; of which $108,000,000 was the "fiat money," or irredeemable paper currency above described.

MEANING OF A AND AP IN SURNAMES.

GREENVILLE, Ill.

What do the abbreviations *a* and *ap* before a surname denote?

SEA.

Answer.—These particles, "a" and "ap," are abbreviations of Latin prepositions meaning "of" and "at" or "from." Generally, when connected with names, they refer to the town or place where one was born, or the family estate. In the case, for example, of Thomas *a* Kempis, author of that famous work entitled "Imitation of Christ," which has been translated into more languages than any other book, save the Bible, the "a" denotes "from." His family name was Thomas Hammerken. He was born in 1379 or 1380 in the town of Kempen, near Cologne. He was educated first at Deventer, then at Zwolle, and in the Convent of St. Agnes. After the custom of the times at these schools, he was known as "Thomas from Kempen," and, finally, as happened in many other such cases, the school name pushed aside the family name.

TROPICAL PLANTS IN LABRADOR.

TINGLEY, Iowa.

Have any tropical plants been discovered in the rocks of Labrador? If so, where and by whom?

JAMES S. WILLIAMS.

Answer..—Tropical vegetation once existed far north of Labrador, as is shown by fossil remains discovered in Greenland, Iceland and Spitzbergen; but we do not know whether similar discoveries have been made in

Labrador. We must refer you to Hind's "Explorations of the Labrador Peninsula," and Bell's "Report of the Geological Survey of Canada," 1879.

CURING BASKET WILLOW.

WINNECONNE, Wis.

In your edition of July 26 is an inquiry on the basket willow from T. H. Davis, of Loveland, Col. I think the answer right all but the directions for curing. In England I have seen them set the willows, after they are cut, in bundles, standing in a pond or stream of water, butts down, with stakes and poles to keep them in position. In the spring, when the sap rises, peel them by drawing through a crotched stake set firm in the ground and faced in the crotch with iron. If the willow is allowed to dry before peeling it will be hard to get the bark off and the wood will be discolored.

F. LIGHTFOOT.

JEAN PAUL RICHTER.

OCONOMOWOC, Wis.

Will you oblige me with a short sketch of Jean Paul Richter. How is Richter pronounced?

A READER.

Answer.—Jean Paul Friedrick Richter was one of the most original characters in the literary world. He was a man of much general information, but of erratic genius. It has been said that he wrote in "gems," so filled are his works with beautiful ideas. But his style is too careless and his thoughts too rambling to place him among classical writers. He was born at Wunsiedel, in Bavaria, March 21, 1763. Though, when quite young, his father's death left the family in poverty, Jean Paul resolved to go to Leipsic, and by the greatest self-sacrifice he accomplished his resolve. At the end of four years, however, he was obliged to leave the town secretly to escape being arrested for debt. He now abandoned the idea of entering the church and taught for a few years, writing meanwhile. When, in 1794, he began his visits to German literary centers, he found himself the idol of the ladies,

who treasured even the shorn locks of his poodle, and sometimes ventured to propose to the eccentric author himself. But he rejected them all, and in 1801 chose for himself the brilliant Caroline Mayer, of Berlin. Ever afterward the King of Bavaria gave him an annual pension of 1,000 florins and he received the degree of doctor from the University of Heidelberg. In his later years his mental strength failed and in 1824 he became totally blind. He died at Bayreuth Nov. 14, 1825, surrounded by loving friends. His character, though eccentric, was beautiful in its gentleness and philanthropy. The poor were his chief mourners. Carlyle has translated some of his writings and found in him a theme for two of his best essays. The ch in Richter's name has the same sound as in the German word for book. It can be learned properly only by oral instruction.

INVENTOR OF COTTON GIN-WHITNEY.

WINDSOR, Ill.

Please give some items connected with the life of Eli Whitney.

SUBSCRIBER.

Answer.—Eli Whitney, a graduate of Yale College in 1792, was induced to invent a machine for cleaning cotton by the widow of Nathaniel Greene, with whom he boarded while studying law. He patented the cotton-gin, but the idea was stolen by other parties, and it was only after years of litigation that he obtained the $50,000 which had been voted him for the invention by the Legislature of Georgia. In 1793 he established a manufactory for the machine near Washington, Ga., but five years later he turned his attention to the improvement of firearms, reaping a fortune therefrom.

ISINGLASS.

GLENALLIN, D. T.

Please tell me how isinglass is made, and whether the raw material is valuable.

A. H. CHASE.

Answer.—The raw material of isinglass is the air bladders or sounds of fish, and is invaluable except for this one purpose. In Russia, where the finest isinglass is made, the sounds of the sturgeon are cut open and steeped in water until the outer membrane separates from the inner; then the latter is washed and dried in the sun. The sounds of the common cod, the hake, and other gadidae are also used for isinglass.

MOCHA ISLAND.

CHICAGO, Ill.

Is there an island by the name of Mocha? If so, please describe it. Also tell where Mocha coffee grows.

HENRY COLLINS.

Answer..—There is an Island named Mocha off the coast of Auracania, belonging to Chili. It is about eight miles long, very broken, and at the north end mountainous, rising to 1,230 feet above the sea. Whalers occasionally resort to it for wood and water, both of which are scarce, while the landing is bad. There is a portion of Southwest Abyssinia called Mocha. But the place by this name that is of most importance is a fortified port on the Arabian side of the Red Sea. It gives its name to the finest variety of coffee known to commerce, most of which is produced in the interior of Arabia, in the province of Yemen.

A SPORTING TERM—HIGH-BINDER.

ALEDO, Ill.

What is the meaning of "high-binder," an old sporting term, I think?

JOSEPH WHITTAUS.

Answer.—The high-binder is an athlete, such as a circus tumbler and jumper. The term is sometimes applied to horses that jump hurdles and ditches, or steeple-chasers.

UNITED BRETHREN.

KINGMAN, Kan.

What is the date of the founding of the sect known as the United Brethren in Christ; what are the present statistics of the church, and how does it differ from the Methodist Episcopal Church?

A SUBSCRIBER.

Answer.—This sect was founded among the Germans in Pennsylvania by Philip William Otterbein and Martin Boehm in 1760. In 1875 they numbered 4,010 churches, 1,967 ministers, 136,076 members, and their church property was valued at more than $2,500,000. The church has ten educational institutions in Western States, and a large printing establishment at Dayton, Ohio. The members are sometimes called German Methodists, as their faith is Arminian; but their church polity is a mixture of Methodism, Congregationalism, and Presbyterianism. Like the Methodists, they have quarterly, annual, and general conferences, but their bishops are elected for only four years. They are very severe in the requirements of candidates for membership, admitting none who are members of secret societies or sanction slavery and the use of alcoholic liquors.

EMBER DAYS.

CHAMPAIGN, Ill.

What is understood by the ember days?

N. ZEIGLER.

Answer.—The ember days are days set apart in the calendar of the Romish and Episcopal Churches for the purpose of fasting and prayer, imploring a divine blessing upon the fruits of the earth, and upon the ordinations performed at that time. Wednesday, Friday, and Saturday, in the week following the first Sunday in Lent, Whitsunday, the 14th of September, and the 13th of December, are called ember days, and the weeks in which they occur are called ember weeks.

VICTOR HUGO'S WORKS.

VIENNA, Iowa.

Please give a sketch of the life of Victor Hugo, the poet and novelist. Name some of his most noted writings, and where they may be found?

H. S. ELLWANGER.

Answer.—A brief biographical sketch of Victor Hugo may be found in Our Curiosity shop for 1880. His earlier novels are "Han d'Islande," "Bug-Jargal," and "Notre Dame de Paris;" his dramas, "Cromwell," "Marion Delorme," "Le Roi s'amuse," "Lucrèce Borgia," "Ruy Blas," and "Hernani;" his poems, "Les Feuilles d'Automne," "Les Chants du Crépuscule," and while an exile upon the island of Guernsey he added "Les Misérables," "Les Travailleurs de la Mer," "L'Homme qui Rit," and "Quatrevingt-Treize." Since then he has published his "Speeches," the "Légende des Siècles," "L'Histoire d'un Crime," and a poem, "Le Pape." He is one of the most original and perhaps the most popular writer of fiction and lyric verse France has ever produced.

PRESIDENTS OF THE SENATE.

WAUSAU, Wis.

Please give the names of the Presidents of the United States Senate up to date. How long do the Presidents pro tempore retain that position? Give the names of Speakers of the House of Representatives, beginning with the Forty-second Congress.

N. A. S.

Answer.—The Vice President of the United States is President of the Senate when sitting in that body, but in his absence a President pro tempore is proposed and chosen by ballot. "His office is understood to be determined on the Vice President appearing and taking the chair, or at the meeting of the Senate after the first recess." (See Jefferson's Manual.) The persons who have presided over the Senate are: John Adams, Thomas Jefferson, Aaron Burr, George Clinton, William H. Crawford, Elbridge Gerry, John Gaillard, Daniel D. Tompkins, John C. Calhoun, Hugh L.

White, Martin Van Buren, Richard M. Johnson, John Tyler, Samuel L. Southard, Willie P. Mangum, George M. Dallas, Millard Fillmore, William R. King, David R. Atkinson, Jesse D. Bright, John C. Breckinridge, Hannibal Hamlin, Andrew Johnson, Lafayette S. Foster, Benjamin F. Wade, Schuyler Colfax, Henry Wilson, Thomas W. Ferry, William A. Wheeler, Chester A. Arthur, David Davis, and the present incumbent, George F. Edmunds. It is not worth while to mention those who have filled the chair only for a few hours at a time. The Speakers since the Forty-second Congress have been James G. Blaine, Michael C. Kerr, Samuel J. Randall, and J. Warren Keifer.

DAVID H. STROTHER—"PORTE CRAYON."

CHICAGO, Ill.

Kindly give the right name of the author of "Virginian Illustrated," "Life in the Old Dominion," "Virginian Canaan," etc., which appeared in *Harper's Monthly*, vols. 6 to 12, under the nom de plume of "Porte Crayon." What became of him? Is he still living?

JAMES BUTCHER.

Answer.—The real name of this author is David Hunter Strother. He was born in Virginia, in 1816, studied art in New York; first became known to the public as "Porte Crayon" in 1853; entered the Union army as Captain in 1864, resigned, and in 1867 was brevetted Brigadier General; after the war, published in *Harper's Monthly* a series of "Personal Reminiscences of the War;" and in 1879 went to Mexico as Consul General, an office he still holds.

THE GUINEA PIG.

WATERVILLE, Kan.

Will you please tell me, through your department, the nature and origin of the Guinea pigs? Where do they come from, and how often in a year do they breed?

"MAGNOLIA."

Answer.—Properly speaking, the "Guinea pig" (cava caboya) is not a pig, but a rodent closely related to the restless cavy of Uraguay and Brazil, belonging to the same natural order as the rat and beaver. Like the cavidae, it burrows in the ground, and feeds upon fruits and herbs. Its chief value consists in its beauty, which may be described thus: A white fur, patched with red and black, covering a little animal a foot long and weighing from a pound to a pound and a half—a creature inoffensive and helpless in the extreme, exceedingly restless, and not remarkably intelligent. It is supposed that this cavy was carried from South America to Europe in the fifteenth or sixteenth century, and there domesticated; and that its name is a corruption of Guiana pig. It is very prolific, beginning to breed at the age of two months, and rearing a brood of four to twelve three times a year.

DARIUS AND THE SCYTHIANS.

GENEVA, Ill.

In "Gibbon's Rome," Vol. III., chap. 26, page 13, we find the following foot-note: "When Darius advanced into the Moldavian desert, between the Danube and the Niester, the King of the Scythians sent him a mouse, a frog, a bird, and five arrows; a tremendous allegory!" What did this allegory signify?

C. P. DUTTON.

Answer.—It has been variously interpreted. The following is the meaning given it by some writers: "You make war (the arrows) on a people you cannot conquer until you can subsist on roots and wild grain like the mouse, inhabit either land or water, like the frog, and flee with the swiftness of a bird." Another rendering is: "We subsist in the wild fields like the mouse; live either on land or water, like the frog; flee like the bird, and slay our pursuers as we flee, for our right hands are full of arrows for our enemies." Darius Hystaspes had demanded an offering of earth and water from them as a token of submission, and this was the answer of these invincible barbarians; and they made good their allegory. As Darius pursued them with an army of 700,000 men they led him farther and farther, through forests, swamps, and deserts, until his troops died of fatigue, malaria, and famine,

and he was compelled to return, utterly defeated in his object, leaving all but a mere remnant of his immense army dead in the wilderness.

THE MISSISSIPPI AND MISSOURI RIVERS.

YELLOWSTONE, Wis.

The "New American Dictionary" says that the Missouri is the longest river in the world, 4,194 miles, and that the Mississippi is 3,200. "Wilson's Geography" says the Mississippi is 4,396, and the Missouri is 3,960 miles long. Please tell us which is right, and the reasons for these variations.

JAMES LYONS.

Answer.—The fact is that the precise lengths of the chief rivers of the globe are not known. They shift their channels and wind to such a degree as renders it a difficult problem to determine the exact length of any one of them, and exactness in such cases is not as yet a matter of sufficient practical importance to justify the expense of making accurate measurements. If it were, it would be found that every great river varies in length from time to time by cutting new channels for itself. As a consequence all statements are only estimates, and scarcely two original writers precisely agree. The latest edition of "Lippincott's Gazetteer of the World" does not presume to speak positively, but says: "The Mississippi is about 3,000 miles long (or, as some say, 3,160)." Speaking of the Missouri, it says: "The total length of the stream, from its source to the Gulf of Mexico, is computed to be 4,300 miles." "Chambers' Universal Knowledge" says the Mississippi River is 2,986 miles long from its source to its mouth, and that from the latter to the source of the Missouri is 4,506 miles. Probably Lippincott's statements are nearest to the truth, but none of them claim to be absolute measurement.

WHY EASTER IS A MOVABLE FEAST.

CHICAGO, Ill.

Why does Christmas always fall on the same day of the month, while the days celebrated in commemoration of Christ's

death and ascension change? I have submitted this question to several ministers and other learned persons without receiving a satisfactory answer.

BUSCANDO.

Answer.—Christ was crucified on Friday, the 14th day of the Jewish month Nisan, and rose from the dead on the following Sunday. The 14th of Nisan was the Jewish "passover," the day observed by them in commemoration of the sprinkling of their door-posts with the blood of the paschal lamb on the night when the "Destroying Angel" passed over the dwellings of the Israelites but smote the first-born of the Egyptians. As the year of the Jews is a lunar year, and the 14th of Nisan is always a full-moon day, the Christian Church, regarding the observance of the crucifixion of Christ as a substitute for the passover of the Jewish Church, determine Good Friday and Easter Sunday by the rules for reckoning the Jewish ecclesiastical year. Christmas, intended to commemorate the birth of Christ, had no connection with the ritual of the old church, and, like some two or three hundred other immovable feast days of the Church of Rome, many of them birthdays of saints, it was finally settled that it should be observed on a given day of the common calendar.

OMAHA INDIAN RESERVATION.

BOONE, Iowa.

Isn't it about time that the Omaha Indian Reservation was opened for settlement, under the act of Congress approved Aug. 7, 1882?

GRANGER.

Answer.—The same question, substantially, comes to THE INTER OCEAN at least once a week from one part of the country or another. In reply to an inquiry, the Acting Commissioner of the General Land Office recently wrote as follows:

> WASHINGTON, Aug. 4.—Editor of Inter Ocean: In reply to your inquiry of the 17th ult., I have to state that this office is unable to say what time will elapse before the Omaha Indian Reservation, in Nebraska, will be open to settlement. The requirements of the act of Aug. 7, 1882, as to appraisement, have not yet been fully complied with, and these lands are still under the jurisdiction of the Office of Indian Affairs. Yours respectfully,
>
> LUTHER HARRISON,
> Acting Commissioner.

The substance of the act above referred to is given in Our Curiosity Shop for 1882, pages 113 and 128.

FIRST AMERICAN FREE SCHOOLS.

DOUGLASS, Kan.

Where and in what year were free schools first established in this country? Who was the first advocate of them? When did they become general?

HENRY BUTLER.

Answer.—A law was passed in Massachusetts in 1649 requiring every township to maintain a free school, and every town of 100 families to maintain a grammar school to "fit youths for the university;" and it is

recorded in 1665 that a free school was then supported by each town in New England. The Connecticut, Plymouth, and New Haven Colonies soon followed this good example of Massachusetts, either in whole or in part. The first public school in Pennsylvania was established in Philadelphia by the Quakers, in 1689, free to those who could not pay. In 1694 Maryland enacted that every county should have a public school, and every parish a free library of at least fifty volumes. A free grammar school was established in New York by an act passed in 1702, but a system of free common schools was not inaugurated in this State until after 1795, in which year, on the recommendation of Governor Clinton, the Legislature appropriated $50,000 to encourage the establishment of common schools—not wholly free. It was years after this before the system of schools free to all (except colored children) went into general operation in New York, Pennsylvania, Ohio, Illinois, Indiana, and Michigan. The Southern States waited until after the war before adopting the free-school system even for white children. Their common schools were free only for the children of confessed paupers. Who was "the first advocate" of free schools it is now impossible to determine positively. Several of them came over in the Mayflower, as there were a few free schools in Massachusetts before the above enactment of 1649, making it obligatory on every town to have them, the chief argument then being that "every child must know how to read the Bible."

CORDOVA, MEXICO.

UNION CITY, Iowa.

My regiment was stationed at Cordova, Mexico, at the close of the Mexican war. How old is that city, by whom was it founded, and what is its present population?

M. W. V.

Answer.—Cordova, situated about fifty-seven miles inland from Vera Cruz, Mexico, is now a city of 6,500 to 7,000 inhabitants. The district around it is very fertile, and the tobacco, sugar, coffee, and cotton produced here foster an increasing trade. Its streets are regularly laid out and well paved; most of the houses are built of stone, and the fine cathedral is much admired for its interior architecture and decorations. The city was founded

by the early Spanish adventurers and missionaries on the site of an old Aztec town, and named in honor of the forerunner of Cortez, Francisco Fernandez de Cordova, the discoverer of Yucatan and the southeastern extremity of Mexico, in the year 1517. The date of the first Spanish settlement is uncertain.

MARSHAL KEITH.

FAIRMONT., Neb.

Who was Marshal Keith, "the noble exile," killed at the battle of Hochkirchen?

W. P. JACKS.

Answer.—He was Francis Edward James Keith, a Scotch nobleman, born at Inverngie Castle, Aberdeenshire, in 1696. He and his elder brother, the Earl Marischal, espoused the cause of the "Elder Pretender," as he is called, James Francis Edward, son of the deposed James II. of England, in the insurrection of 1715. That affair ended in speedy disaster, and being attainted of treason, he fled to France. Here after some two years, spent for the most part in study at the University of Paris, he took part in the disastrous expedition of the Pretender to the highlands of Scotland in 1719. Escaping again to France, he lived in obscurity and want, first at Paris and then at Madrid, until he received a colonel's commission in the army of the King of Spain. Here his Protestantism stood in the way of his promotion, and he soon took a recommendation from the King to Peter II. of Russia, in whose service he soon rose to the rank of general. In 1747 he entered the service of Frederick the Great of Prussia, who made him a field marshal, accounting him one of his ablest generals. Quick to discern the military exigencies and opportunities of the moment, and prompt to avail himself of them, "sagacious, skillful, imperturbable, without fear and without noise, a man quietly ever ready," as Carlyle describes him, he had the full confidence, and even won the affection, of Frederick, who was wont to place him in the most responsible positions. He was killed Oct. 14, 1758, in the battle of Hochkirch, in which Frederick the Great suffered one of the most terrible defeats of that bloody war at the hands of the combined Austrian and Prussian armies.

SUNDAY SCHOOLS IN ALL THE WORLD.

SALMON CITY, D. T.

Please give the origin of the Sunday school, where and by whom first started, and the number of such schools in this country, and, so far as known, in the whole world.

W. H. ANDREWS.

Answer.—The following statistics of Sunday schools were reported by Mr. E. P. Porter to the Robert Raikes Centennial Convention held in London, England, June 28, to July 3, 1880. They comprise only those of the "Evangelical denominations," and are incomplete even for this class of schools. Full returns, including the enrollment in schools of denominations not classed by Mr. Porter as Evangelical, probably would increase the above aggregate by from 20 to 25 per cent.

Countries.	Teachers.	Scholars.	Total.
Europe	550,001	5,332,813	5,882,814
Asia	1,772	38,000	39,772
Africa	300	15,000	15,300
N. America	931,740	6,974,454	7,906,194
S. America	3,000	150,000	153,000
Oceanica	17,800	170,000	187,800
Total	1,504,613	12,680,267	14,184,880

The numbers reported for the United States, at the above convention, were as follows: Schools, 82,261; teachers, 886,328; scholars, 66,233,124. Your other questions are all answered with great care on pages 58 and 96 of Our Curiosity Shop, in book form, for 1882; price per mail, 25 cents.

SCHOOLS OF BRITAIN AND IRELAND.

MILES, Iowa.

How do the public school privileges of Ireland compare with those of England?

H. G. Bryant.

Answer.—The total population of Ireland in 1881 was 5,159,839. The total number of national schools in 1880 was 7,590, with 1,083,020 pupils, aided by a parliamentary grant of £722,366, or about $3,611,830. The population of Great Britain proper—England, Wales and Scotland—was 29,703,859 in 1881, and the number of public schools inspected in 1880 was 20,670, with an attendance of 3,155,534 pupils. The parliamentary grant amounted to £2,468,077, or about $12,340,385, so that the parliamentary grant in aid of primary education in Ireland is about 70 cents per capita of the total population, while for England, Wales and Scotland it is only about 41 cents. The above figures cover only the national schools for elementary instruction, in addition to which there are hundreds of parochial, or denominational and private schools in both countries. In Ireland, in 1880, there were 158 workhouse schools under the superintendency of the National Board, with an enrollment of 16,945, and an average attendance of 8,880. There were fifty-two industrial schools in 1879, with 4,979 inmates. There were in 1880, ninety-four school farms, nineteen school gardens, and a large number of agricultural schools under local management. The total number of pupils who entered the examination in agriculture in 1880 was 33,648, of whom 15,652 passed. The statistics of industrial schools in England, Wales, and Scotland are not conveniently obtainable.

SUNLIGHT OVERFLOWS THE HEMISPHERE.

Happy Hollow, Ill.

> The sun being so much larger than the earth, does not a little more than one-half of the earth's surface receive its rays at the same time?

W. C. Colgrove.

Answer.—A little more than half of the earth's surface is illuminated by the sun at any given moment. There is a very slight extension of the area of illumination for the reason you mention, and beyond that an extension of from thirty-five to forty miles all around on account of horizontal refraction. If you put a silver coin into a bowl, then stand back until the edge barely hides the coin, and while you keep this same position another

person fills the bowl with water, you will see the bottom of it seem to lift until the coin comes into sight. This is because the rays of light reflected from the bottom of the bowl are bent out of a straight line in passing through the water and out into the thinner medium, the air. This is called refraction. The rays of light from the setting sun are bent downward in a similar manner as they enter the earth's atmosphere, and so the sun appears to be above the horizon a little more than two minutes after it has actually dropped below the true horizon. A difference of two minutes in time corresponds to a distance of thirty miles on the earth's surface.

THE BRITISH PARLIAMENT.

SANDUSKY, Iowa,

1. Does Parliament serve the same purposes in Great Britain as Congress does in the United States? 2. How is Parliament constituted?

A. C. STARIN.

Answer.—Like the Congress of the United States, the British Parliament legislates for the whole nation. But, in addition to this, it takes the place of the separate legislative bodies that used to exist in Scotland and Ireland, and makes local laws for England, Wales, Scotland, and Ireland, such as in this country can only be made by State Legislatures. As regards the Dominion of Canada, the Australian Provinces, and other colonial possessions, with legislatures of their own, the powers of Parliament are somewhat analogous to those of Congress over the States. 2. Parliament is composed of two houses, the Lords and the Commons. The House of Lords consists of peers who hold their seats either by virtue of hereditary right; by creation of the sovereign (who is unrestricted in his power of creating peers); by virtue of office, as the English bishops; by election for life, as the Irish peers; or by election for duration of Parliament, as the Scottish peers. This House, in the session of 1882, consisted of 516 members, of whom 5 were peers of the blood royal, 2 were archbishops, 22 were dukes, 19 marquises, 117 earls, 26 viscounts, 24 bishops, 257 barons, 16 Scottish peers, and 28 Irish representative peers. More than two-thirds of these hereditary peerages have been created within the present century—over one-third of them by

the present sovereign, which marks one of the strongest factors of the power of the Crown. In the same year the Commons consisted of 639 members, classified as “knights of the shire,” or representatives of counties; “citizens,” or representatives of cities; and “burgesses,” or representatives of boroughs—all of whom hold office by election. The qualifications of electors were given in an article published in Our Curiosity Shop a few months ago. The total number of these electors in 1882 was 3,134,801.

REMOVAL OF ARTHUR FROM CUSTOM HOUSE.

MILWAUKEE, Wis.

Why did President Hayes remove Chester A. Arthur from the New York Custom House? Was he charged with dishonesty?

S. J. SMITH.

Answer.—There was no official charge or imputation of dishonesty against Chester A. Arthur when in the New York Custom House. His administration of that office was a great improvement on any preceding one for many years back. He had effected great reforms and ousted officers who had fattened on corruption under his predecessors. President Hayes distinctly disclaimed any want of faith in Mr. Arthur’s integrity as a cause for replacing him, and the official reports of Secretary Sherman bore unequivocal testimony to the efficiency of the Collector’s administration of his difficult office, and clearly recognized his personal integrity. Mr. Arthur did not approve certain changes which Secretary Sherman wished to make, and he was known also to be in sympathy with Mr. Conkling and others not favorable to Secretary Sherman’s aspirations for the Presidency. It is generally believed that the above were the chief reasons for the Secretary’s desire to supersede Mr. Arthur, which finally prevailed.

ROGER BACON.

MELVIN, Ill.

Please tell us something of the life and works of Roger Bacon.

A. BUCKHOLZ.

Answer.—Roger Bacon was an English monk of penetrating intellect, who by his scientific investigations and writings greatly advanced the cause of science in a time when the study of nature had been supplanted by the theological disputations and philosophical speculations of the "schoolmen." He was born near Ilchester, England, in the year 1214, of a respectable family. He graduated at Oxford and Paris, and, entering the order of Franciscan monks, settled at Oxford, where he devoted himself to the study of physics. His discoveries were looked upon as wonderful by the ignorant, and were made the means by his clerical brethren of bringing him into disfavor with the Pope, who deprived him of his professorship. He was imprisoned for some years, until the elevation of Clement II. to the Papal throne. Despite the Franciscan interdiction, Clement requested Bacon to send him his writings, and, in answer, John of London became the bearer to the Pope of "Opus Majus" and two other works. For ten years Bacon was at liberty, but in 1278 he was again imprisoned, and the reading of his works forbidden. Through the intercession of many influential English noblemen, his release was granted shortly before his death, which occurred in 1292 or 1294. He wrote much, but several of his works have not been printed. Chief among his inventions was the magnifying glass, and his superior knowledge won for him the title, "Doctor Mirabilis." He sought to know nature through the study of mathematics and by investigation. He pointed out the errors in the calendar, growing out of the old style of reckoning, long before Pope Gregory instituted the present calendar. As a Latin writer, his style was elegant and forcible; as a scientific scholar, he was fully two centuries in advance of his age; as a man, his character was pure and noble.

THE SPHINX—GUNPOWDER.

1. Is the Sphinx made of one solid block of stone, or is it built of mortar and brick? 2. Who invented gunpowder?

A. L.

Answer.—1. The "great Sphinx" at Gizeh, Egypt, only 300 feet east of the second pyramid, was hewn out of the natural rock where it stands. It measures 172 feet 6 inches long by 52 feet high. 2. Nearly all authorities

agree in referring the invention of gunpowder to China or India, the weight of evidence being in favor of crediting it to the former.

COUNTIES LARGER THAN STATES.

COLUMBIA, D. T.

Is it true that Brown County, D. T., contains a larger area than Rhode Island? Please give the exact figures.

R. A.

Answer.—Brown County, D. T., contains forty-eight Congressional townships, or, disregarding fractional sections, 1,728 square miles; whereas the area of Rhode Island is but 1,250 square miles. There are several counties of Dakota that are larger than Delaware, which contains but 2,050 square miles; such, for example, as Grand Forks, Pembina, and Burleigh. Some of the unorganized counties are as large as Connecticut. It will not be long before, following the practice in the most thickly settled parts of the Territory, these undergrown but over-extended counties will be subdivided into smaller ones of sixteen to twenty townships, the ordinary size of an Iowa county, each about half the size of "Little Rhody."

LORD BYRON.

GARNAVILLO, Iowa.

Please give a sketch of Lord Byron.

WILLIAM A. KREGEL.

Answer.—George Gordon, Lord Byron, was born in London in the year 1788, and at the age of 11 succeeded to the title and estate of his grand uncle, William, Lord Byron, near Nottingham. In 1807, two years after entering Trinity College, he published his first volume of poems, entitled "Hours of Idleness." Stung by the sarcastic criticism on these poems by Lord Brougham in the Edinburgh *Review*, he soon after wrote "English Bards and Scotch Reviewers," a scathing satire, and at once sailed for Turkey and Greece. "Childe Harold" and a few shorter poems were written between the years 1812 and 1818. After a year of riotous living in Italy he

sailed for Greece in 1823, and took a conspicuous part in the struggle for Greek independence. In this he succeeded so far as to restore comparative order to the disorganized army, but his health soon began to fail, and exposure to a storm induced a fever which terminated his life, April 10, 1824. His body was interred in the Huckwall church-yard, being denied admission to Westminster Abbey. Byron undoubtedly possessed great genius and wrote many beautiful and ennobling poems, but his restless and passionate temper and the immorality of his life tainted most of what he wrote and debarred him from the list of really great English poets. In descriptive power, fervor, imagery, and melody his powers were marvelous, and many passages in his writings are unsurpassed in these respects by anything in the English language.

TIN AND TARIFF.

BELOIT, Wis.

> What is meant by "tin and terne plates," and what is the gist of the demand of the "American Tinned Plate Association" for an increase of the duty on these plates?

SUBSCRIBER.

Answer.—"Tin plates" are plates of sheet-iron or soft steel, coated with tin, used chiefly for making household and dairy utensils, and for cans of all sorts. "Terne plates" are iron or soft steel sheets, coated with mixed lead and tin, used for roofing and similar purposes. About 95 to 98 per cent of these products are iron or steel, the tin and lead coating constituting the remaining 2 to 5 per cent. Soft steel is used chiefly now, because the quality required can be made cheaper than in iron, is more homogeneous and solid, and less liable to blister in the tinning processes. The association above named claims that the British plates imported to this country are "of poor quality, meanly coated, and, if low priced, are wasteful in the end." That if home manufacture of such plates were encouraged by as heavy a tariff as is put upon other forms of finished iron—say 50 per cent, instead of only 15 to 30 per cent, as at present—American competition would act in this case as it has done in other classes of "protected industry," to improve the qualities and ultimately to reduce the actual cost of the goods. But it is not

only in these respects that it would benefit the country, says this association, but in bringing out the buried resources of our own mines and increasing the home market for American goods and American labor. The extra cost of American labor is, after all, accounted for mainly by the better manner of living of American laborers; their earnings are distributed among the American consumers of their wares, instead of being sent abroad to pay foreign laborers, while the native products utilized are so much clear gain. The tin, a small percentage of the sheets as above shown, would be imported to this country directly from Australia or the Dutch East Indies and "Straits Settlements," but aside from this the materials used would be American products. In 1882 there were 480,596,480 pounds of British tin and terne plates sold in the United States, valued at $18,000,000 at Liverpool, and costing about $2,000,000 more for transportation. For this tin the American consumers paid about $30,000,000. To produce this in the United States would cost about as follows:

Tin (to be Imported), lbs	25,000,000
Tallow, home product, lbs	10,000,000
Sulphuric acid, lbs	30,000,000
Lead, lbs	5,000,000
Iron ore, tons	850,000
Limestone, tons	300,000
Coal, tons	1,500,000
Pig iron, tons	300,000
Charcoal, bu	5,000,000
Labor	$12,000,000
Interest on $30,000,000, capital invested in machinery	1,800,000
Cost of repairs	1,000,000
Oils and lubricants	100,000
Insurance and taxes	1,000,000

The whole of this amount, excepting the cost of the 25,000,000 pounds of tin ore, or "block tin," would be produced and the money involved kept at home. Such is the substance of the arguments used by the American Tinned Plate Association to induce Congress to increase the tariff on "tin and terne plates."

DEATH RATE OF CITIES.

New Orleans, La.

Will you state the death rate in the principal cities of America and Europe?

E. C.

Answer.—The following represents the number of deaths per annum in the United States out of 1,000 inhabitants, according to the census of 1879: New York, 25.82; Boston, 19.80; Philadelphia, 17.20; Chicago, 17.20; St. Louis, 18.19; New Orleans, 21.60. The deaths per 1,000 in the following European cities were as follows: London, 22.83; Berlin, 27.81; Paris, 22.04.

A STANZA FROM MRS. BROWNING.

Pontoosuc, Ill.

The lines quoted in the inquiry of "A Reader" in The Weekly Inter Ocean of Aug. 30 are from the pen of that grand Christian poetess, Elizabeth Barrett Browning, and may be found in the fifth verse of the beautiful poem, "A Woman's Shortcomings." One of the lines is a little different from what your questioner has it. I will give you the whole verse:

"Unless you can muse in a crowd all day,
  On the absent face that fixed you;
Unless you can love as the angels may,
  With the breadth of heaven betwixt you;
Unless you can dream that his faith is fast,
  Through behooving and unbehooving;
Unless you can die when the dream is past—
  Oh, never call it loving!"

Your correspondent has the fourth line, "With the breath of heaven between you."

Millard E. Little.

CORN IN DAKOTA.

PIERRE, D. T.

I notice that in THE WEEKLY INTER OCEAN of Aug. 23, in answer to W. K., Chicago, you say that corn is generally conceded to be a hazardous crop in Southern Dakota. That theory is like the one of olden time, that Dakota is a vast wilderness where only the sagebrush and wild buffalo abound. Both theories have been exploded by actual demonstration, and it is no longer an experiment. Corn ripens in South Dakota in from 90 to 100 days from date of planting, which is 10 to 15 days shorter time than it takes in Northern Illinois or Iowa. It is the soil, the long days and short nights that do it; and there are numerous farmers here who can testify to the fact.

W. B. STEERE, M. D.

A GULLED ENGLISHMAN.

CAPRON, Ill.

In reply to the inquiry of one of your correspondents, referred to me, as to whether there is "any truth in the statement made in a book published by some returned English tourists, to the effect that an itinerant lecturer advertised to give an entertainment at Capron, Ill., and at the close of the lecture shoot himself dead; that the home was crowded at $1 a head; and that, true to the programme, at the conclusion of his speech, this peripatetic orator actually committed suicide," I would say that there was such a story written by a barber here, which was published in the county paper. It was false. The lecture never was given; at least the funeral never came off.

ALEXANDER VANCE, P. M.

SAINT SIMON, THE SOCIALIST.

DANVILLE, Ill.

Who was Saint Simon, and what were his principles?

JOHN SHORT.

Answer.—Claude Henri, Saint Simon, was a French nobleman, who was noted as a social philosopher and the founder of the sect named for him Saint Simonians. He entered the American army in 1778, at 18 years of age, and served therein with distinction and honor. While returning to his native land he was captured by British seamen and carried to Jamaica, where he remained until 1783. When at length he reached France he won many disciples to his socialistic views, and before his death, in 1823, he wrote several works upon philosophy and social reform. His greatest work was the 'Nouveau Christianisme' (New Christianity), in which he embodies his final and complete design for the amelioration of the poor and the preservation of society. He advocates a social hierarchy, controlling and regulating the choice of vocations, the fixing of salaries, the division of heritages, whose chief aim it shall be "to make the labors of each conduce to the good of all;" and to aid his projects he advised the union of France and England.

DIXON AND ELGIN BRIDGE DISASTERS.

BLENDON, Kan.

Please state the date and the occasion of the Dixon bridge disaster, with the number of killed and wounded.

SUBSCRIBER.

Answer.—This calamity occurred on Sunday afternoon, May 4, 1873, resulting in the death from drowning and injuries of over forty men, women, and children, and the serious injury of nearly forty others. Its immediate cause was the overcrowding of the bridge by spectators of an immersion service of the Baptist Church of that city. The real cause was the faulty construction of the bridge, which was an iron structure, known as a Truesdell truss. It was a wagon and root bridge of five spans, each about 120 feet long. Both shore spans fell into the water while the three middle ones, resting entirely upon stone piers, remained suspended by the wrought-iron members of the main cords from six to eight feet below their proper place, dropped down between the piers. The number of persons on the first span that went down was variously estimated to be from 150 to 200, representing a weight of not more than 30,000 pounds. A Truesdell bridge,

erected over Fox River at Elgin, fell in December, 1868. This was rebuilt by Mr. Truesdell. On Monday, July 5, 1869, a crowd of about 300 persons gathered on the bridge to witness a tub race, when the east span, 68 feet in length, fell, precipitating about one hundred men, women, and children into the water. Fortunately the stream was but about four feet deep at this time, and no persons were drowned and but two or three deaths followed from injuries received.

CONGRESSMAN GEORGE W. JULIAN.

NEODESHA, Kan.

Was the Hon. George W. Julian a Republican? Describe in brief his life.

E. K. KRONE.

Answer.—George Washington Julian was born in Centerville, Ind., May 5, 1817. After receiving a common school education he was admitted to the bar in 1840. He was chosen a member of the Legislature in 1845. From 1849 to 1851 he represented his district in Congress. The Pittsburg convention nominated him on the Free Democratic ticket for Vice President with John P. Hale for President. In 1856 he was prominent among the organizers of the Republican party. In 1861 he was re-elected to Congress, where he continued to do excellent service for several terms.

GEOLOGICAL DIVISIONS OF TIME.

Please give the geological divisions of time, beginning with the present, and a brief explanation of each.

N. JAY DEEMS.

Answer.—The divisions of time established by geologists are based upon the formations of strata and the advents of different forms of animal life. The history of the earth is divided into five "eras," seven "ages," twenty-two "periods," and the last two periods are subdivided into seven epochs. These divisions, proceeding from the fifth downward to the first, are as follows: 5. Psychozoic era, age of man, human period, and recent epoch. 4.

Cenozoic era, age of mammals—embracing the quaternary period, which comprehends the terrace, Champlain, and glacial epochs, and the tertiary period, which comprehends the pliocene, miocene, and eocene epochs. 3. Mesozoic, or middle, era, the age of reptiles, the cretaceous, jurassic, and triassic periods. 2. Paleozoic era, the carboniferous age, or age of acrogens and amphibians; the Devonian age, or age of fishes; the silurian age, or age of invertebrates, or mollusks—the names of the fourteen periods into which these ages are divided are not in common use. 1. Archaean, or eozoic era; the archaean age, and the Huronian and Laurentian periods. For an explanation of the terms used in this division consult Webster's or Worcester's unabridged dictionaries, and study the clear illustration accompanying the word "Geology" in the former work.

SUBMARINE CABLES.

EVERGREEN, Iowa.

How many telegraph cables cross the Atlantic, and where? How many ocean cables are there in all?

GUY SMITH.

Answer.—There were in 1879 seven telegraph cables between Europe and America—five from Ireland, one from France, and one from Portugal to Brazil. Since then a new cable has been laid between New York and Flores, in the Azores, from which one extension runs off to France, England, and Holland, and another to Fayal, San Miguel, and Lisbon, embracing in all 7,300 miles. The longest line before this latter was the French cable, 2,585 nautical miles. There are now some 225 ocean cables in all parts of the world, of the aggregate length of over 68,000 miles.

"I" AND "WE" IN JOURNALISM.

DAYTON, Ohio.

1. What is the rule of THE INTER OCEAN as to the use of the pronouns "I" and "we" in the office and in editorial correspondence? 2. What is your rule respecting a contributor's using "we" when referring to himself?

J. W. H.

Answer.—1. The use of the word "we," under all circumstances, is deprecated. Senator Conkling once said: "Only three classes of people are allowed to say 'we:' Kings, editors, and men with a tape-worm." In this office "THE INTER OCEAN" is used instead of "we." 2. Correspondents use "I," when necessary, but are instructed to be as impersonal as possible. "Your correspondent" is preferred.

PROVIDENCE SPRING—ANDERSONVILLE PRISON.

GILMAN, Iowa.

> Is it true that in the Andersonville prison pen, during the late civil war, at a time when the water in the creek had become very scarce and foul and the captive Unionists were dying from this cause, a spring suddenly burst out of the hillside? If this is a fact, state some of the particulars, giving the date of the occurrence.

H. W.

Answer.—It is a fact, and, whether it was a "special providence" or not, as most, if not all, of those wretched prisoners believed, it served all the purposes of one, as much as the miracle in the desert of Sinai, when Moses smote the rock, and the waters gushed forth which saved the thirst-stricken hosts of Israel. Of the origin of this spring John McElroy, who spent fourteen months in Southern prison pens, gives substantially the following account: "Toward the end of August, 1864, the water in the creek was indescribably bad. Before the stream entered the stockade it was rendered too filthy for any use by the contaminations from the camp of the guards, situated about half a mile above. Immediately upon entering the stockade its pollution became terrible. The oozy seep at the bottom of the hillsides drained directly into it all the filth from a population of 33,000. Imagine the condition of an open sewer through the heart of a city of that many people, and receiving all the offensive products of so dense a population into a shallow, sluggish stream a yard wide and five inches deep, heated by the burning rays of the sun at the thirty-second parallel of latitude.' The prisoners dug wells in the swampy earth with their pocket-knives to a depth

of 20 to 30 feet, pulling up the earth in pantaloon-legs. But a drought came on and these wells, which at the best were not free from pollution, began to fail. To approach too close, even by a hair's breadth, to the "dead-line" on the west side of the stockade, where the creek entered, in the effort to get water as free from filth as possible, was to sign one's death warrant, which the whizzing bullet of the heartless guard executed instantly. "More wicked and unjustifiable murders were never committed than those almost daily assassinations at the creek," says the historian. Sickness had multiplied in this horrible prison-pen until the wretched victims of such barbarism sat face to face with despair constantly. At this awful extremity what was the astonishment and gratitude of the camp one morning, when it was discovered that "during the night a large, bold spring had burst out on the north side, about midway between the swamp and the summit of the hill, and pouring out was a grateful flood of pure, sweet water, in an apparently exhaustless quantity." This was the morning of Aug. 13, 1864. The overjoyed Union prisoners christened it "Providence spring," the fitting name by which it is still known.

CATTLE IN THE UNITED STATES.

JETMORE, Kan.

State the total number of cattle in the United States, and what percentage of them are milch cows.

C. E. BOUGHTON.

Answer.—The statistician in the Department of Agriculture estimates the total number of cattle in all the States and Territories in January, 1882, as 35,891,870, of which number 12,611,632, or a little more than 35 per cent, were milch cows. This estimate, so far as the number of cattle in the Territories, Colorado, and Texas are concerned, is largely conjectural.

JULES SANDEAU AND "GEORGE SAND."

MENDOTA, Ill.

Who was Jules Sandeau, who is said to have given Madame Dudevant the now famous nom de plume of "George Sand?"

Why did she take that name?

ALICE.

Answer.—Leonard Sylvain Jules Sandeau, a French novelist and dramatic writer of some distinction, was born at Anbusson, France, Feb. 19, 1811. He studied law in Paris, but subsequently turned his attention to literature. In 1831 he became acquainted with Madame Dudevant, who lived with him in three small rooms in the Quai Saint Michel at a yearly rental of 300 francs. She it was who induced him to enter upon a literary career. In 1832 they produced together "Rose et Blanche," a novel in five volumes, signed "Jules Sand." It was received by the public with encouraging favor. Before she returned to Nahant she conferred with Sandeau respecting a new romance, each of them to write half of it. Fearing that he would neglect the work when she was not at hand to spur him to his task, she wrote the whole of "Indiana," published the same year, in which her splendid genius rose far above anything in "Rose et Blanche." Returning to Paris, she found that Sandeau had not written a line. Handing him her manuscript, she exclaimed: "Read that." He did so, and declared it to be such a masterpiece that he could not review it. She wished to retain the name of "Jules Sands," but as he had taken no part in the work, he positively declined to allow it. Appealing to their mutual friend, De Larouche, he advised her to take for a Christian name the name of the patron saint of the day, St. George, retaining the name "Sands," a piece of advice which she instantly adopted. M. Sandeau afterward produced numerous novels and dramas, conspicuous among which are "Mdlle. de la Sergliere," in two volumes, 1848, dramatized in 1851—generally esteemed his best novel; "La Maison de Penarvan," 1858, dramatized in 1858; "Le Gendre de M. Poirier," written in connection with Emil Angier, 1854—his best comedy. In 1853 he became keeper of the Mazurin Library, and in 1858 was elected a member of the French Academy, one of the highest distinctions to which a Frenchman can aspire. He died April 24, 1883.

MAXIMILIAN AND CARLOTTA.

CORNING, Iowa.

Please give a short biography of the Empress Carlotta and the late Emperor Maximilian of Mexico.

LILLIAN ELDRIDGE.

Answer.—Ferdinand Maximilian Joseph, Archduke of Austria, younger brother of Francis Joseph I., the present Emperor of Austria-Hungary, and now generally referred to as the Emperor Maximilian I. of Mexico, was born in 1832. He was liberally educated, with a mind enriched by extensive reading, wide travel, and intercourse with many of the leading spirits of Europe. In 1857, on July 27, he married the sister of the present King of the Belgians, Charlotte Marie Amelie, born June 7, 1840. This amiable, beautiful, and highly intellectual lady was reared by her father, Leopold I., of Belgium, the most progressive of European sovereigns, with the greatest care, until she adorned every court she moved in. In 1861, taking advantage of the troubled condition of Mexico and the civil war in the United States, France, Spain, and Great Britain commenced hostilities against Mexico, ostensibly to enforce certain pecuniary claims. But in 1862, when the real purpose of the French manifested itself, the British and Spanish forces withdrew, and the French declared war, proclaiming the intention to liberate the Mexican people from the tyranny of their President, Benito Juarez. They overran the eastern and central part of Mexico, captured the capital—receiving more or less support from the clerical party among the natives—and finally set up a provisional government, headed nominally by General Almonte, but really under dictation of the invaders. An "Assembly of Notables," so called, convened at Mexico, July 10, 1863, decided by a vote of 281 to 19 in favor of a "limited hereditary monarchy," with a Catholic prince for sovereign, under the title of Emperor. At the instigation of Napoleon, who had already begun to realize the folly of his undertaking to subdue the whole of Mexico and hold it in subjection to his own will, seeing that the Republicans of Mexico were still organized and were continually harrassing the usurpers, the scepter of this new government was proffered to Maximilian. Not until all but the four northern provinces were in possession of the French forces and their Mexican recruits did he accept this uneasy crown. On May 29, 1864, the Emperor and Empress landed at Vera Cruz and on June 12 they made their public entry into the capital amid a brilliant military and civic display, accompanied by many signs of popular welcome. Before winter the Imperialists had gained possession of all the

chief places in every State in the so-called empire. However, the fugitive President of the desperate republic still maintained a species of guerilla warfare in various places, and the sympathies of the people of the United States were with them. No sooner was the great civil war in this country ended than this sympathy began to make itself felt very sensibly. On Nov. 6, 1865, Secretary Seward directed the American Minister at Paris to represent to Napoleon III. that the presence of the French army in Mexico was a "cause of grave reflection to the government of the United States," and that the latter could on no account allow the establishment of an imperial government, based on foreign aid, in that country, or recognize there any other than republican institutions. This increased the unpopularity of the war in France. Napoleon took warning, and in the summer of 1866 withdrew his forces. Deserted by his European allies, Maximilian's empire hastened to a most melancholy end, so far as himself and the Empress were concerned. Charlotte went to Europe to enlist aid, but in vain. Her husband's perilous position, added to the bitter disappointment and mortification of her failure, at last dethroned her reason. Maximilian refused to leave with the last French detachment, though urged to do so. He felt bound in honor to remain and share the fate of his Mexican supporters. At the head of 10,000 men he made a brave defense of Queretaro against the republicans under General Escobedo. On the night of May 14, 1867, the stronghold of his position was betrayed into the hands of his foes by the Emperor's most trusted friend, General Lopez. Even then he refused the opportunity proffered him by his immediate captor to escape in civilian's dress, lest it might compromise this generous foe. Along with Generals Miramon and Mejia, he was tried by court-martial, and on the 19th of July the three were shot. "Poor Carlotta," as she is sorrowfully called, has never fully recovered her reason, although cared for with the greatest tenderness by her royal brother.

BOSS COINS OF AMERICA.

GALESBURG, Ill.

Our Curiosity Shop has given a list of American silver coins that command a high premium; now please give a list of high-

price copper coins of the United States, and colonial pieces. At least name all the "boss" coins, silver and copper.

NUMISMATIST.

Answer.—As shown in the table of United States silver coins now obtainable only at a high premium, which has already been given in Our Curiosity Shop, the "boss dollar," the rarest of all, is that of 1804, price $400 to $500, according to condition; the "boss half-dollar" is that of 1796, with sixteen stars, price $20 to $27.50—although that of 1796, with only fifteen stars, and that of 1797, each command nearly the same premium; $20 to $25. The "boss quarter-dollars" are those of 1823 and 1827, each quoted at $15 to $25. The "boss dime" is that of 1804, quoted at $4 to $6. The "boss half-dime" is that of 1802, worth $25 to $40. The "boss cent," the rarest of all the cents, is that of 1799, quoted at $4 to $6; a higher rate of premium even than that of the "boss dollar." The "boss half-cent" is that of 1796, worth $5 to $8, or from one thousand to sixteen hundred per cent more than its face.

The following are the United States cents that are worth 50 cents apiece and upward:

Year. Description.	Good.	Fine.
1793—Cent, wreath, stars, and bars on edge	$2.00	$3.50
1793—Cent, with chain ameri	2.75	5.00
1793—Cent, chain, America on the reverse	1.75	3.75
1793—Cent, clover leaf under bust	1.50	2.50
1793—Cent, liberty cap, rare	3.00	6.00
1793—Cent, dot after date, and legend "Liberty"	3.00	5.00
1795—Cent, thick planchet, edge lettered	75	1.00
1799—Cent, the rarest of the cents	4.00	6.00
1804—Cent, very rare	3.00	5.00
1839—Cent, over date of 1836		75
1855—Pattern cent, flying eagle, copper	60	70
1856—Nickel cent, flying eagle	1.50	2.00
1858—Nickel cent		50
1873—Two-cent piece	50	75

Next we give United States half-cents, valued at 50 cents and upward:

Year.	Description.	Good.	Fine.
1793	Half-cent, rare	$1.75	$2.50
1793	Half-cent of smaller planchet	1.50	3.00
1794	Half-cent of several varieties	40	50
1795	Half-cent, lettered edge	75	1.00
1795	Half-cent of thin planchet	40	60
1796	Half-cent, the rarest of all	5.00	8.00
1797	Half-cent, several varieties	50	75
1802	Half-cent	50	75
1811	Half-cent	60	75
1831	Half-cent	2.50	3.50
1836	Half-cent	2.50	3.50
1840 to 1848 inclusive	Half-cent	2.50	3.50
1849	Half-cent, small date	2.50	3.50
1849	Half-cent, large date	05	10
1852	Half-cent	2.50	3.50

The coins minted by any of the American colonies and now at a high premium are as follows:

Year.	Description.	Good.	Fine.
1786	Cent, Vermontensium Respublica	$0.40	$0.68
1786	Cent, Vermonts Respublica	30	50
1788	Cent, Nova Cesarea, horse head to left	75	1.25
1788	Mass. half-cent,	40	65
1787	New York “Excelsior” cent	2.00	3.00
1783	Chalmer’s Annapolis shilling and sixpence	2.50	3.00
1652	Oak Tree shilling and sixpence	3.00	4.00
1852	Pine Tree shilling and sixpence	3.00	4.00
1722	Rosa American half-cent	60	75

“A LITTLE BIRD TOLD ME.”

CHICAGO, Ill.

A friend says that the saying "A little bird told me so," is in the Bible, but she don't know where. Is she right? If so, please explain it.

ONE OF YOUR GIRLS.

Answer.—This mild expression for "I won't betray my informer," is not a literal quotation, but is undoubtedly borrowed from Ecclesiastes, chapter x, verse 29: "Curse not the King, no, not in thy thoughts: and curse not the rich in thy bedchamber: for a bird of the air shall carry the voice, and that which hath wings shall tell the matter."

METEORIC STONES.

WYOMING, Wis.

When and where did the largest meteoric stone, of which there is any record, fall? Please give a description of the meteoric stone that fell in Iowa a few years ago.

WILLIAM YALE.

Answer.—An immense aerolite, or meteoric stone, fell near Ægospatami, in Asia Minor, in 467 B. C., which was described by Pliny as being as large as a wagon. There is a remarkable one in the Smithsonian Institution, weighing 1,400 pounds, which fell in Mexico about A. D. 1500. The largest meteoric masses on record were heard of first by Captain Ross, the Arctic explorer, through some Esquimaux. These lay on the west coast of Greenland, where they were subsequently found by the Swedish Exploring Expedition of 1870. One of them, now in the Royal Museum of Stockholm, weighs over 50,000 pounds, and is the largest specimen known. Two remarkable meteorites have fallen in Iowa within a few years past. On Feb. 12, 1875, a very brilliant meteor, in the form of an elongated horseshoe, was seen throughout a region of at least 400 miles in length and 250 breadth, lying in Missouri and Iowa. It is described as "without a tail but having a sort of flowing jacket of flame. Detonations were heard, so violent as to shake the earth and to jar the windows like the shock of an earthquake," as it fell, at about 10:30 o'clock p. m., a few miles east of Marengo, Iowa. The ground for a space of some seven miles in length by two to four miles in

breadth was strewn with fragments of this meteor, varying in weight from a few ounces to seventy-four pounds; the aggregate of the parts discovered being about five hundred pounds.

On May 10, 1879, at about 5 o'clock p. m., a large and extraordinarily luminous meteor exploded with a terrific noise, followed at slight intervals with less violent detonations, and struck the earth in the edge of a ravine, near Estherville, Emmet County, Iowa, penetrating to a depth of fourteen feet. Within two miles other fragments were found, one of which weighed 170 pounds and another 32 pounds. The principal mass weighed 431 pounds. All the discovered parts aggregate about 640 pounds. The one of 170 pounds is now in the cabinet of the State University of Minnesota. The composition of this aerolite is peculiar in many respects; but, as in nearly all aerolites, there is a considerable proportion of iron and nickel.

A SKELETON IN EVERY CLOSET.

MADISON, Wis.

What gave rise to the expression, "There is a skeleton in the closet," and just what does it mean?

ALICE.

Answer.—There is an old story that a soldier once wrote to his mother, who complained of her unhappiness, asking her to get some sewing done by some one who had no care or trouble. Coming in her search to one who, she thought, must be content and happy, this lady took her to a closet containing a human skeleton. "Madam," said she, "I try to keep my sorrows to myself, but know that every night I am compelled by my husband to kiss this skeleton of him who was once his rival. Think you, then, I can be happy?" The inference is certainly too clear to need interpretation.

FINANCES OF CONFEDERATE STATES.

AMES, Iowa.

What was the amount of the Confederate debt at the close of the war? Was their currency a legal tender for all debts? How

much did they issue? How much, if any, remained in the Confederate treasury at the close of the war?

CASEY AND UNDERHILL.

Answer.—1. According to the "Rise and Fall of the Confederate Government," by Jefferson Davis, the foreign debt of the Confederate States at the close of the war was £2,200,000, or about $11,000,000. Besides this, the debt at home, on the books of the Register of the Treasury on Oct. 1 1864, amounted to $1,147,970,208. Davis estimates that balances in the hands of absent officers would have reduced the total public debt to $1,126,381,095, of which $541,340,090 consisted of funded debt and the balance unfunded debt, or treasury notes. What further debt was created between Oct. 1, 1864, and the downfall of the Confederacy in April, 1865, it is not easy to ascertain. Judging from the expenditure of the six months next preceding Oct. 1, 1864, the debt must have been increased at least $450,000,000. Davis says: "The appropriations called for by the different departments for the six months ending June 30, 1865, amounted to $438,416,504," which, taken together with the amount of unexpended appropriations and the small proportion raised by taxation, confirms our estimate, so that the total home and foreign debt of the Confederacy at the close of the war, omitting any claims for advances made by individual States, must have been about $1,587,000,000. 2. The treasury notes of the Confederacy were made receivable for all public debts or taxes except export duty on cotton. The terms of at least one issue, as given by Mr. Davis, "receivable for all debts or taxes except the export duty on cotton," would constitute them a legal tender. 3. In December, 1863, this currency in circulation in those States amounted to "more than $600,000,000." A considerable part of this was funded in Confederate bonds, but new issues or reissues swelled the amount again to about the old figures before the war closed. 4. Just how much specie remained in the hands of the Secretary of the Confederate Treasury when Johnston surrendered is not known, but it must have been a trifling sum; for when Jefferson Davis committed the treasury chest to General Joe Johnston's safe-keeping, according to that officer's statement on pages 408 and 409 of his "Narrative of the Rebellion," it contained but $39,000 in silver, a considerable part of which he took and divided among his troops. The fleeing members of the Cabinet, no doubt, got away with the most of the gold and foreign bills.

SAN FRANCISCO TO AUSTRALIA.

Osceola, Neb.

Will you please state the distance and rates of fare between San Francisco and Sydney? If not too much trouble give the same for all the principal ports in the Sandwich Islands, New Zealand, and Australia.

J. M. Logan.

Answer.—The following table gives the distances and rates of fare for all ports in Sandwich Islands, Australia, and New Zealand touched at by the Pacific Mail Steamship Company's steamers:

Miles.	San Francisco to	Cabin.	Steerage.
2,100	Honolulu	$75.00	$30.00
6,050	Auckland	200.00	100.00
6,625	Wellington	230.00	120.00
6,795	Lyttleton	235.00	122.50
7,000	Port Chalmers	240.00	125.00
7,200	Sydney	200.00	100.00
7,740	Melbourne	210.00	105.00
7,650	Brisbane	220.00	110.00
7,500	Rockhampton	235.00	117.50
8,245	Adelaide	223.75	117.50
7,600	Hobart Town	232.00	118.00

THE DEMOCRATIC ROOSTER.

Chicago, Ill.

Give the origin of the rooster as a Democratic emblem.

A Reader.

Answer.—We are indebted to Mr. W. F. Slater, of Hyde Park, for the following reply to this inquiry: During the Jackson and Van Buren administrations the party used the hickory pole and broom as a Democratic

emblem of victory. In the memorable campaign of 1840 the Indianapolis *Sentinel* (Democratic) was published, with Mr. Nat Bolton as editor, and George Pattison as assistant. In the town of Greenfield resided Mr. Chapman, life-long Democrat, and at that time the postmaster, but no connection with the Chapman that subsequently published the *Sentinel*. Mr. Chapman wrote a desponding letter to Pattison, and Pattison, in his answer, endeavored to encourage his fellow-townsman, and wound up his letter with, "Crow, Chapman, crow!" The letter fell into Whig hands and was published in the campaign paper of the Whig party, *The Spirit of 1876*. In 1842 and 1844, when the Whig party met with defeat, the rooster came into universal use as the Democratic emblem of victory.

TO CHINA AND JAPAN.

MARSHALLTOWN, Iowa.

Please supplement your answer of last week giving distances and rates of fare from San Francisco to the Sandwich Islands, Australia, and New Zealand, by giving the distances and rates of fare to Japan, China, and East India ports.

IOWAN.

Answer.—The following table shows the distance, fares in American gold, etc., per Occidental and Oriental Steamship Company's vessels, from San Francisco to points named:

Miles.	San Francisco to—	Cabin.	Steer'ge	Chinese
4,800	Yokohama, Japan	$250.00	$85.00	$51.00
5,100	Hiogo, Japan	268.00	75.00	58.00
5,500	Nagasaki, Japan	285.00	111.00	63.50
6,000	Shanghae, China	305.00	125.00	71.00

6,400	Hongkong, China	300.00	100.00	51.00
7,850	Singapore, India	380.00		
8,250	Penang, India	400.00		
9,900	Calcutta, India	450.00		

Children under 12 years, one-half rates; under 5 years, one-quarter rates; under 2 years, free. Servants accompanying their employers, two-thirds of cabin rate, without regard to age or sex. Round trip tickets, good for twelve months, 12½ per cent from regular rates.

CORN CROPS OF ILLINOIS AND IOWA.

AYR, Neb.

To settle a dispute, please tell which State raises the most corn —Illinois or Iowa.

J. A. SULLIVAN.

Answer.—Illinois leads all the States in the amount of corn raised. In 1882 the Illinois crop was 187,336,900 bushels, and the Iowa crop was 178,487,600 bushels. According to the same authority, the Statistician of the Agricultural Department, the average annual corn crop of Illinois for the five years ending with 1879 was 260,230,740 bushels, and that of Iowa was 163,789,120 bushels. The corn crop of Illinois in 1880, as given in the census, was 325,792,481, and that of Iowa was 275,024,247 bushels.

BEE-SWARMING.

H. J. Dunlap, Esq., of Champaign, Ill., who has made bee-culture a study, after a few words of comment on the brief answer given to "Topsy's" question on the swarming of bees, published in Our Curiosity Shop three or four weeks ago, gives us his own views on this subject as follows:

New brood is hatched early in the season—in case of plentiful stores before the earliest blossoms—while the first swarm may not leave the hive until July, or even later; the condition of the honey flowers in bloom having much to do in determining the time. [In the Southern States it often leaves in April or May, and in this latitude usually in May or June.—ED]. The first swarm is composed of old and young bees indiscriminately, and of drones. In from six to ten days a young queen is hatched. Sometimes several hatch at the same time, but all are destroyed except one, the queens engaging in deadly combat in which one or the other is the victor. The bees destroy the remaining queen cells as soon as a queen is hatched. In a day or two the virgin queen flies out to meet the male, or drone, and after copulation returns to her hive, where she usually remains until the next season, when she leads out a swarm. In some seasons, when honey is plenty, she may go out with a swarm, and even third swarms are thrown off, but such seasons are almost certain to be poor ones for honey, the swarms becoming so depleted in number that they are unable to avail themselves of the later blossoms, even if these are well-stored with honey. The second swarm thrown off will necessarily be composed mostly of young bees, but the inference that swarming continues so long as there are young queens to lead them out is erroneous.

DEATHS FROM CONSUMPTION.

Please tell what States furnished the largest percentage of consumptives, according to population, and settle a dispute.

B. F. FEATHER.

Answer.—The following table shows the total population of States reporting the greatest number of deaths from consumption in the last census year, and the number of deaths per 10,000 inhabitants:

States.	Population.	Died of consumption.	No. per 10,000.
New York	5,082,871	12,858	25
Pennsylvania	4,282,891	8,073	19
Massachusetts	1,783,085	5,207	30
Ohio	3,198,062	5,912	18

Illinois	3,077,871	5,146	16
Tennessee	1,542,259	3,767	24

This shows that whereas the deaths from consumption in the census year were 16 for every 10,000 inhabitants in Illinois, they were 25 per 10,000 in New York State, and 30 per 10,000 in Massachusetts, the highest ratio in the country. Maine stood next with 29 per 10,000, while Rhode Island lost 25, New Hampshire 25, New Jersey 23, Connecticut 21, California 21, Virginia 20, North Carolina 15, and Michigan the same as Illinois, 16, while Florida lost not quite 10, and Minnesota not quite 11 per 10,000.

RAILROAD RELINQUISHMENT TO SETTLERS.

MELROSE, M. T.

Two men had a hearing about a claim within the limits of the railroad land grant, and the General Land Office decided that neither could hold it. One of the parties procured from the Northern Pacific Railroad a relinquishment, which was sent to the General Land Office, and a patent was issued to this person. Now, had the Northern Pacific Railroad the right to relinquish its title in this way? Please give the law.

DAVID EVANS.

Answer.—By an act of Congress approved June 22, 1874, according to the statement of "Copps' American Settler's Guide," it is provided that in the adjustment of all railroad land grants, whether made directly to any State for railroad purposes, or to any corporation, if any of the lands granted be found in the possession of an actual settler, whose entry or filing has been allowed under the pre-emption or homestead laws subsequent to the time at which, by the decision of the Land Office, the right of said road was declared to have attached to such lands, the grantees, upon a proper relinquishment of the lands so entered or filed for, shall be entitled to select an equal quantity of other lands in lieu thereof from any of the public lands not mineral, and within the limits of the grant, not otherwise appropriated at the date of selection. And any such entries or filings thus relieved from conflict may be perfected into complete titles as if such lands had not been granted. Lands so relinquished are rated at only $1.25 per acre. An

inducement is thus offered to railroad companies to relinquish in favor of the settlers, and receive other lands in lieu of those surrendered. Not only this, but when the superior right of the company is ascertained, and it is found that the claim of the settler is such that it would be admitted were the railroad claim extinguished, the General Land Office will, in all practicable cases, direct the attention of the officers of the company to the fact, and request an explicit answer whether or not the land will be relinquished. At the same time it is well for the party interested to seek for himself the relief indicated, by direct application to the railroad authorities, and thereby aid in securing a speedy adjustment.

DEATHS FROM ACCIDENT.

CHICAGO, Ill.

About how many persons die from injuries by railroad collisions and other accidents every year? Also, give the number of suicides.

CRIPPLE.

Answer.—The total number of deaths due to accidents, violence, suicide, etc., as reported for the last decennial census, was 35,932, divided as follows:

Burns and scalds	4,786
Exposure and neglect	1,299
Homicide	1,336
Injuries by machinery	120
Railroad accidents	2,349
Suffocation	2,339
Sunstroke	557
Drowned	4,320
Gunshot	2,289
Infanticide	40
Suicide by shooting	472
Suicide by drowning	155
Suicide by poison	340

Suicide, other causes	1,550
Deaths by other injuries	13,980

From the above, it appears that the total number of deaths from suicide, 2,517, exceeded the total from railroad accidents, and that the latter amounted to 65 in every 1,000 deaths from accidents and violence.

SUBMARINE TORPEDOES.

HARPER, Kan.

How are torpedoes, for blowing up vessels, constructed and used?

CHARLES G. BOONE.

Answer.—There are several kinds of naval torpedoes. They may be classed, as fixed—submarine mines—and locomotive. Of the first sort there are two classes, viz., the self-acting and those which must be exploded by the electric battery operated from the shore or some other means of direct ignition.

An example of the self-acting sort may be described as follows: Take a hollow iron cone; fill this in part with gunpowder, say 150 to 250 pounds, but not enough to overcome the buoyancy of the cone. In the top of this charge of gunpowder bury an iron case containing lime, and in it a thin glass tube filled with sulphuric acid. Connect this tube or vial with an iron rod running through the top of the torpedo cone, up to within a short distance of the surface of the water. From this upright rod let other rods, called feelers, extend horizontally in every direction; let the whole be anchored in the channel to be defended, so that these feelers will be so near to the surface that passing vessels will be likely to come in contact with one or more of them; in which case the shock will break the frail glass tube containing the sulphuric acid, which latter, acting chemically on the lime, will instantly generate sufficient heat to explode the charge and destroy the vessel. For a sample of the other class of fixed torpedoes, imagine a submarine magazine filled with gunpowder, or—better still for this purpose, gun-cotton, because water does not injure it—planted in a channel,

connected with the shore by an insulated copper wire attached to a battery. Let a small piece of wire be soldered to the metal case of the torpedo, and unite this, in the priming chamber, with the shore wire by a fine piece of platinum. The moment the operator on shore connects the wire with the battery the current, meeting the resistance of this contracted bridge of platinum, heats it to incandescence and explodes the charge. By planting several parallel lines of such torpedoes across a channel, at no great distance apart, in such a way that the mines in one row stand opposite the open spaces in another, it is rendered extremely hazardous for a hostile vessel to attempt to pass. Of the locomotive submarine explosives, one of the most formidable is the Whitehead fish torpedo, the construction of which is more or less a secret, sold by the inventor to the English, Austrian, and Russian navies. The shape of the case is, as the name implies, that of a fish, and it is propelled by a screw driven by compressed air. From a peculiar carriage on shore, or more frequently on board a vessel, it is discharged in a direct line for the enemy's ship, and is exploded by impact. It is a terribly destructive engine when it happens to strike, but its aim is uncertain. The American torpedo, of similar description in many respects, Harvey's, is believed to be a more reliable and effective engine.

Finally there is the torpedo used to such good advantage in several instances during our late war, particularly in the case of the sinking of the rebel ram Albemarle. It is rigged on the end of a spar carried in the bow of a launch, and sometimes on outriggers on either side, and is exploded by contact with the vessel to be destroyed, at some point several feet below the water-line.

ANCIENT VIRGINIA.

La Junta, Col.

What were the original boundaries of Virginia, and how did it get its name?

J. P. Granger.

Answer.—There is no good ground for dispute over the question as to how Virginia got its name. This name was given by Queen Elizabeth at the request of Sir Walter Raleigh to the region discovered in 1584 by persons

sent out by him. It was applied to what is now North Carolina, and was extended, with the progress of exploration, over the country northward as far as the present city of Bangor, Me., or to the 45th degree of north latitude, and southward to the 34th parallel. One colony after another was carved out of the original Virginia until it was reduced to the boundaries it had at the time of the Revolutionary war. It claimed jurisdiction over all the Northwest territory by virtue of its first charter, made to the London company, and by conquest from Great Britain during the war; but it ceded all its rights to the Federal Government in 1787, reserving only 3,709,848 acres to reward Virginia troops.

AMERICAN TREATIES WITH CHINA.

CHEBANSE, Ill.

How long before the passage of our infamous anti-Chinese immigration law was it that our government forced its way into China at the cannon's mouth?

A SUBSCRIBER.

Answer.—The first American treaty with China was made at Wang-hia, a suburb of Macao, July 3, 1844, by the Hon. Caleb Cushing, Minister Plenipotentiary for the United States, and Commissioner Ki-ying, on the part of the Chinese. It was soon after the close of the Anglo-Chinese war known as the "Opium war," because it grew out of the persistent smuggling of opium into China by the East India Company, and resulted in the agreement of the Chinese Government to admit opium as an article of legitimate commerce. It also resulted in the opening of five ports to English trade. Thus the forcing of the Chinese "at the cannon's mouth" was done by the English, against a sincere desire of the former both to keep out opium and to have nothing more to do with Europeans that they could possibly help. The negotiations between Mr. Cushing and Ki-ying were amicable and highly creditable to both nations from first to last. Strange to say, to the utter astonishment of the English, Mr. Cushing, with the arguments of reason only, gained many important concessions not contained in the British treaty, besides all that was conceded in that instrument. The next treaty between the United States and China was signed at Tientsin, China, June

15, 1858. It contained a number of important additional concessions, all obtained without any violence or serious warlike demonstration on the part of our own government, but coincident with the English and French treaties extorted from the Chinese by the bloody war that had been waged for the two preceding years. Had not the English and French waged that war it is quite certain that neither they nor the Americans would have gained any new concessions, and they might have had to yield some of those granted in the old treaties. But having been forced to make concessions to their hated foes, it must be said that the Chinese Government yielded to Americans equal rights and privileges in a manner which showed plainly that they had no desire to withhold anything from a friendly power which they had granted to their enemies. The first article of the treaty recites, among other things: "There shall be, as there always has been, peace and friendship between the United States and the Ta-Tsing (Chinese) Empire, and between their people respectively. They shall not insult or oppress each other," etc. The next, known as the Burlingame treaty, was negotiated at Washington and ratified by the United States Senate July 16, 1868, when Mr. Anson Burlingame was here at the head of the first Chinese Embassy to this country. It was negotiated on the highest plane of American statesmanship, and breathes throughout the spirit of true republicanism, the spirit of the highest Christian civilization. It is sad to think that it was too high for the majority of our politicians to stand on, and has been lowered and narrowed to accommodate them in the present treaty, negotiated in 1880, at the dictation of Denis Kearney and the Sinophobists of California.

CATTLE IN UNITED STATES.

ELLSWORTH, Kan.

Will you please tell how many cattle there were in the United States, according to the last census; also, the number for four years past?

WM. ASHMEAD.

Answer.—The census gives the number of working oxen in the United States in 1880 as 993,841; the milch cows as 12,443,120; other cattle as

22,488,550; total, 35,925,511. The Statistician of the Agricultural Department gives the numbers for the past four years as shown below:

Jan. 1, 1879—	
Milch cows	11,826,400
Oxen and other cattle	21,408,100
Jan. 1, 1880—	
Milch cows	12,027,000
Oxen and other cattle	21,231,000
Jan. 1, 1881—	
Milch cows	12,368,653
Oxen and other cattle	20,937,702
Jan. 1, 1882—	
Milch cows	12,611,632
Oxen and other cattle	23,280,238

THE GERMAN PATRIOT, BLUM.

Mazomanie, Wis.

Tell us something of Robert Blum, the German statesman, who was shot in Vienna in 1848.

Carl Fehlandt.

Answer.—He was born at Cologne in 1807. He was well educated, served for a time in the army, which he left in 1830 to connect himself with the theater at Cologne, of which he became in time a director. Much of his time was given to literature and politics. In the latter he espoused the cause of liberalism. This was particularly the case after he moved to Leipsic, where he was first a director of the theater, then a bookseller and publisher. Here he founded the Schiller Society of Leipsic, was connected with the German Catholic movement, and was finally elected Vice President of the Provisional Assembly at Frankfort in 1848. In the National Assembly he

became leader of the Left, or Radicals. He joined the popular movement in 1848, took a prominent part in the insurrection that broke out at Vienna at the time of the struggle for Hungarian independence, headed by Kossuth, and, being arrested, he was summarily shot, Nov. 9, 1848.

SIR JOHN FRANKLIN'S LAST RECORD.

CHEBANSE, Ill.

When, where, and by whom was the cairn discovered in which was the last record of Dr. John Franklin?

A SUBSCRIBER.

Answer.—The cairn containing the written record left by the Franklin exploring party was discovered at Point Victory on the coast of King William's Island. This discovery was made in 1859 (fourteen years after Franklin's death), by Lieutenant Hobson of the British yacht Fox, purchased and fitted out by Lady Franklin, and commanded by Captain Leopold McClintock. The principal facts stated in the record are that her Majesty's ships Terror and Erebus spent the winter of 1845-6 at Beechey Island, off the southwest coast of North Devon, having ascended Wellington Channel to latitude 77 deg., and returned by the west side of Cornwallis Island. Lieutenant Gore and Charles F. De Voeux had left the ships with six men, on an exploring expedition, May 24, 1847, and on the 28th left this written statement of their journeyings. Franklin had sailed westward to longitude 98 deg., then up Wellington Channel—the course specially commended to him, but upon trying to reach the American coast he was prevented by the masses of ice sweeping southward through McClintock Channel. The record concludes with these words, in the handwriting of Captain Fitz James: "April 25, 1848—H. M. ships Terror and Erebus were deserted on 22d April, five leagues n. n. w. of this, having been beset since 12th September, 1846. The officers and crews, consisting of 105 souls, under the command of Captain F. R. M. Crozier, landed here in lat. 69 deg. 37 min. 42 sec. n., long. 98 deg. 41 min. w. Sir John Franklin died on the 11th June, 1847; and the total loss by deaths in the expedition has been to this date 9 officers and 15 men." Captain Crozier added the important statement: "We shall start on to-morrow, 26th April, 1848, for Back's Fish River." This record proved the

identity of Sir John Franklin's party with a party seen by the Esquimaux pressing southward along Fish River to reach the settlements of the Hudson Bay Company. Later many skeletons were found on the south and west coasts of King William's Island. It is certain, according to the recent reports of Captain Hall and Lieutenant Schwatka, that all of the party perished from hunger and exposure.

STEPHEN GIRARD.

James White, Fairfield, Pa.—Stephen Girard was born near Bordeaux, France, May 24, 1750; took to a seafaring life, became master of a sailing vessel, then owner of several ships in the American coasting and West India trade, in which business he amassed a fortune, the greater part of which was left to found and endow Girard College for Orphans, near Philadelphia, and other charitable institutions. He was regarded, at the time of his death, as the wealthiest man in the United States, although, compared with the money kings of the present time, he had but a moderate fortune, probably not to exceed $9,000,000. No one knows what William H. Vanderbilt or Jay Gould is worth, but it is safe to say that it is not less in either case than $150,000,000, and some say more than $200,000,000.

ELEVATION OF WESTERN SIGNAL STATIONS.

FAIRMOUNT, Ill.

Please give in Our Curiosity Shop the elevation above sea level of Huron, D.T., St. Paul, Minn., Madison, Wis., and Chicago.

E. HALLADAY.

Answer.—The best we can do is to give the elevations of the barometers of the United States Signal Service above sea-level at the several points specified, as computed for that service. That these are not certainly exact is admitted by the Chief of the Signal Service, who says, on page 1,178 of his report for 1881: "When the elevations of these planes above mean sea-level have been determined by the Coast and Geodetic Survey, it is expected that we shall be able to greatly improve on the elevations at present adopted."

The Signal Service barometer at Huron, D. T., stands at 1,300 feet above mean sea-level—marked (?) or doubtful. The barometer at St. Paul is 810.9 feet, at Madison 949.2 feet, at Chicago 660.9 feet, above sea level. The elevation of these barometers above the ground varies between thirty and seventy-five feet. As to your other question you are mistaken; Huron still appears in the "Weather Reports" printed in The Inter Ocean.

VALUES OF FOREIGN COINS.

HOUGHTON, Mich.

Can you not oblige us with a list of foreign coins and their values in this country?

WILLIAM J. WREN.

Answer.—The following table gives a list of foreign coins and their values, as proclaimed by the United States Treasury Department for the guidance of Custom House officers:

Countries.	Standard monetary unit.	Value in U. S. cur.
Austria	Florin, silver	.40.6
Belgium	Franc, gold and silver 5,10, and 20 franc coins.	.19.3
Bolivia	Boliviano, silver	.82.3
Brazil	Milris of 1,000 reis, gold	.54.5
Canada	Dollar, gold	1.00.0
Central America	Peso, silver	.83.6
Chili	Peso, gold	.91.2
	Condor, doubloon, and escudo.	
Denmark	Crown, gold 10 and 20 crown pieces.	.26.8
Ecqaudor	Peso, silver	.82.3

Egypt	Pound of 100 piasters, gold 5, 10, 25, and 50 piastres.	4.97.4
France	Franc, gold and silver 5, 10, and 20 franc pieces.	.19.3
Great Britain	Pound sterling, gold Sovereign and half sovereign.	4.86.6½
Greece	Drachma, gold and silver 5, 10, 20, 50 and 100 drachmas.	.19.3
German Empire	Mark, gold 5, 10, and 20 marks.	.23.8
India	Rupee of 16 annas, silver	.39.7
Italy	Lira, gold and silver 5, 10, 20, 50, and 100 lire.	.19.3
Japan	Yen, gold and silver 1, 2, 3, 10, and 20 yen.	.99.7
Liberia	Dollar, gold	1.00.0
Mexico	Dollar, or peso, silver Dollar, 5, 10, 25, and 50 centavo.	.89.4
Netherlands	Florin, gold and silver	.40.2
Norway	Crown, gold 10 and 20 crowns.	.26.8
Peru	Sol, silver	.83.6
Portugal	Milreis, 1,000 reis, gold 2, 5, and 10 milreis.	1.08.0

Russia	Ruble of 100 copecks, silver Ruble, ¼, and ½ rouble.	.66.9
Sandwich Islands Dollar, gold		1.00.0
Spain	Peseta of 100 centimes gold and silver 5, 10, 20, 50, and 100 pesetas.	.19.3
Sweden	Crown, gold	.26.8
Switzerland	Franc, gold and silver 5, 10, and 20 francs.	.19.3
Tripoli	Mahbub. 20 piasters, silver	.74.3
Turkey	Piaster, gold 25, 50, 100, 250, and 500 piasters.	.04.4
United States of Colombia	Peso, silver	.83.6

THE SOUTH AND PROTECTIVE TARIFF.

JONESBORO, Ark.

How is the South, and, particularly, how are Southern farmers, benefited by the tariff?

S. W. MOREHEAD.

Answer.—Just as other American farmers are. First, by escaping direct taxation for the support of the General Government, a form of taxation that always bears on farmers and the other industrial classes heavily, as illustrated in direct taxation for State and county purposes. The Southern politicians who framed the Constitution of the Southern Confederacy, a majority of them, ignored the protectionist policy of Washington, Madison, Clay, Lowndes, Bell, and other Southern statesmen of different political

parties, and, as Jefferson Davis puts it, in his "Rise and Fall of the Confederacy," "protective duties for the benefit of special branches of industry were altogether prohibited." A tariff for revenue only, export duties, and direct taxation were relied on to supply the exchequer of the Confederacy. What does Mr. Davis say of the result as regards the last of these sources? On page 495 of Volume I. he writes: "Within six months after the passage of the war tax of Aug. 19, 1861, the popular aversion to internal taxation by the General Government had so influenced the legislation of the several States that only in South Carolina, Mississippi, and Texas were the taxes actually collected from the people. The quotas of the remaining States had been raised by the issue of bonds and State Treasury notes. The public debt of the country was thus actually increased instead of being diminished by the taxation imposed by Congress." Where did most of the money come from that was raised by the Confederacy? Off the agricultural products of the South. As to the foreign loan, Davis says: "Each bond, at the option of the holder, was convertible at its nominal amount into cotton at the rate of sixpence sterling for each pound of cotton—say 4,000 pounds of cotton for each bond of a hundred pounds sterling." The farmer was paid for the cotton in Confederate currency or bonds, as a rule, and any other cotton exported from the country was compelled to pay an export duty to help pay the interest on the foreign bonds. But not only does the policy of American protection tend to keep the amount raised by direct taxation down to a minimum (as now, when, except the internal revenue tax on whisky and tobacco, nearly the entire revenue of the Federal Government is collected off of imports), but it levies the tariff mainly on such articles as can be produced in this country, so compelling consumers of Southern cotton, sugar, rice, tobacco, etc., to pay better prices for these articles, or foreign competitors to reduce their profits when selling to American consumers; while it admits, coffee, tea, and other home necessities that we cannot produce, free of duty. It lays a duty on iron and other ores, and so encourages the Tennessee, Georgia, and Alabama miner to delve for the wealth beneath his feet. It taxes cotton goods, and so holds out an extra inducement over all that nature has done to encourage the South to erect cotton factories. The same is true in a thousand other lines of manufacture. In general, it attracts capital into the South to engage in mining and manufacturing; it keeps money at home; it builds up home markets; it develops natural resources; it quickens the inventive genius of the nation,

and it diversifies industries, and so provides occupations adapted to the various talents of different persons. This last is what the South needs more, in proportion, than any other section of the Union. Diversity of occupation, like diversity of crops, is essential to the realization of the best results. In many cases the most expert mechanics would make inferior farmers. The girl who "loves dearly to attend cotton-looms" (as a female operative in the weaving department of the Southern Exposition at Louisville lately exclaimed) would not stay on a farm. Diversity of industry affords opportunity for every worker to make the most of his abilities. It is the safety-valve of labor, which prevents any one occupation from being overgorged with laborers. It is the great equalizer of wages. The South is only beginning to realize the importance of home manufactures. Georgia is alive to this matter; so are some portions of Kentucky. Other Southern States are awakening to it. If it be true that in some parts of the North the manufacturers are strong enough to stand without protection, it is not yet true of the same industries in the South, and the latter should demand that the tariff be maintained until she has acquired like strength. She has the cotton, iron, sugar, cheaper labor, and on account of the climate it costs the laborers less to live there than in the North. Why should she not rival France, of similar climate, in manufactures? Capitalists are asking "why not;" and capital is pouring into the South faster than ever before. It would be suicidal to drive this capital back. The South will be stupid if she exerts herself to keep her children shut up to agricultural pursuits and continues to spend more than half the value of her surplus products in sending them to market and bringing them back in a manufactured condition (as she always has done) instead of manufacturing them at home.

I AM DYING, EGYPT, DYING.

EVANSTON, Ill.

Who was the author of the touching poem commencing, "I am dying, Egypt, dying?" It is said that he was an army officer.

J. H.

Answer.—It was William Haines Lytle, who was born in Cincinnati, Ohio, in 1826. He belonged to a cluster of brilliant young writers whose

early ambition was to build up a school of Western literature, but who were drawn into the whirl of more active life, which left little time for courting the muses. On the breaking out of the late war he went into the army, serving as a Colonel in Western Virginia in 1861. He was wounded at Perryville, Ky., in October, 1862, was promoted for gallant services, and, finally, was killed at the battle of Chickamauga, Sept. 20, 1863. He was greatly beloved by his fellow officers for his noble social qualities as well as for his martial bearing; and nothing could be more unjust, according to the testimony of those who knew him well, than the story recently started by a flippant penny-a-liner, that he wrote the poem above referred to, properly entitled "The Death of Mark Antony," on the walls of a guard-house in St. Louis, in which he was held under arrest over night for disorderly conduct on his way home from the theater, where he had seen Booth in Shakespeare's great drama of "Antony and Cleopatra." That the poem was suggested to him by witnessing Booth's representation of this play is probably true: and it is asserted by some that he had written it, in part at least, some time before the eve of his death, but the following version of the peculiar circumstances under which this greatly admired lyric was completed and transmitted to the world corresponds with the traditions of the army, and is probably true. John M. Balthes, of Clifton, Ill., who was once a fellow-townsman of General Lytle, at Zanesville, Ohio, writing to a fellow-soldier of that gallant officer, says:

"I send you the following beautiful lines, written by him in the middle of the night, just before the next day's battle, in which he lost his life. The General being strongly impressed, or having a premonition that he should lose his life in the battle that was so soon to open, sat absorbed and alone in his tent, when an officer coming in admonished him that he needed rest before the serious business planned for the next day. Thereupon General Lytle handed him these verses, remarking that they would be the last he should ever write." This poem was published in THE SUNDAY INTER OCEAN of Oct. 7, almost precisely as given by Mr. Balthes, and as it appears in "Famous Single and Fugitive Poems," by Rossiter Johnson.

SPECIAL PARTNERS—CONSTITUTIONAL AMENDMENTS.

A. D. Bird, Tecumseh, Neb.—1. In limited partnerships the special partner's liability for the indebtedness of the firm is limited to their total interest in the firm, whereas the other partners are each liable for the whole indebtedness of the firm. In corporations "limited" stockholders are liable only to the total amount of their stock, or some specific amount over that. For a fuller answer see page 87 of Curiosity Shop for 1882, in book form. 2. The twelfth amendment to the Constitution of the United States, which terminated the old rule that the candidate receiving the greatest number of votes for President should be President, and the one receiving the next greatest number for President should be Vice President, and requiring electors to name in their ballots the person voted for as President, and, in distinct ballots the person voted for as Vice President, was adopted in 1804.

SILK FROM OSAGE-ORANGE LEAVES.

GALESBURG, Ill.

> Will silk-worms fed with the leaves of the Osage orange thrive as well and produce as fine a quality of silk as if fed on the leaves of the white mulberry?

FARMER'S WIFE.

Answer.—They seem to thrive well, and they produce fine-looking cocoons; but as to the value of these latter compared with those produced from mulberry leaves, it is not yet time to speak positively. The strength, fineness, and other elements of value have not been fully tested and pronounced upon by experts. Miss Nellie Lincoln Rossiter, of Philadelphia, who has written a little hand-book on the raising of silk-worms, says that there is no *apparent* difference between the silk crops from morette, a species of white mulberry, and Osage orange leaves. It would be well for persons interested in this question to correspond with the Woman's National Silk Association of Philadelphia. An interesting experiment in raising silk-worms has been successfully carried on the past season by the Misses Sarah Dewey and Alice Coykendall, at Canton, Ill. They procured the eggs from Philadelphia, with instructions for the management of them, and an exchange says: "They now have 3,500 worms in all stages of development, from those just hatched to those which have their cocoons fully formed.

They are kept in an upstairs room on perforated paper, over which fresh leaves of the Osage orange are spread each morning. The ladies are enthusiastic over their success, which certainly seems assured. They will be able to find a ready market for their cocoons at Philadelphia at remunerative prices."

AMERICAN KNIGHTS—SONS OF LIBERTY.

MINNEAPOLIS, Minn.

> Give some of the facts as to the origin and acts of the disloyal orders known during the war for the Union as "American Knights," "Sons of Liberty," etc.; and of the trial of Dodd for conspiring against the government.

JAS. BREWSTER.

Answer.—The treasonable organization known during the late war, at one time as the "Mutual Protection Society," again as the "Circle of Honor," or the "Circle," or "Knights of the Mighty Host," but more widely as "Knights of the Golden Circle," first developed itself in the West in 1862, about the time of the first conscription, or draft of troops, which it was designed to obstruct and resist. An association under the last of these names had existed for some years at the South being one of the chief means used to foment the rebellion before the outbreak. Because of some exposures of the signs, rituals, etc., of the Knights of the Golden Circle, Sterling Price, the Confederate general, had instituted as its successor in Missouri a secret political order, known as the "Corps de Belgique," in honor of his chief coadjutor, Charles L. Hunt then Belgian Consul at St. Louis. Its special object was to beat up recruits for Price and otherwise co-operate with him in his design of overrunning Missouri. This was afterward merged into another secret order, called the "Order of American Knights," commonly known as the "O. A. K.," organized in the autumn of 1863 by Clement L. Vallandigham, of Ohio, and P. C. Wright, of New York. It is believed that it was founded by Vallandigham in consultation with Jefferson Davis and other arch-rebels at Richmond, during his banishment within the rebel lines. At least, members of the order in Indiana boasted that the ritual was prepared by Davis himself, and Mary Ann Pitman, at one time attached to

General Forrest's command as a rebel spy, declared that Davis was a member of the order. In Indiana, in May, 1864, owing to the names of some of the leaders and the signs and passwords of the order having got into the possession of the Federal authorities, its name was finally changed to the "Order of the Sons of Liberty," or "Knights of the Order of the Sons of Liberty," and a ritual was instituted. These soon became general. Local branches of the organization used other names outside their lodges, such as "Peace Organization" in Illinois, "Star Organization" in Kentucky, "American Organization" in Missouri, "McClellan Minute Men" in New York, "Democratic Invincible Club" in Chicago, "Democratic Reading-room" in Louisville, and so on.

This order had a Supreme Council for the United States at large, of which the chief officers were a Supreme Commander, a Secretary and a Treasurer. There was a Grand Council for each State, whose chief officers were a Grand Commander, a Deputy Grand Commander, a Grand Secretary, and a Grand Treasurer, and a certain number of Major Generals, one for each of its "military districts." There was also a "Parent Temple" in each county and subordinate temples in townships. The constitution of the order declared that "the Supreme Commander shall be Commander-in-chief of all military forces belonging to the order in the various States, when called into actual service." There were four Major Generals in Indiana, each commanding "a military district and its army." In Illinois, where its organization was at one time very complete, the members in each Congressional district constituted a brigade, under a "Brigadier General." Those of each county a "regiment," commanded by a "Colonel," and those of each township a "company." In Indiana companies were subdivided into "squads." The McClellan Minute Men of New York were similarly organized.

The first Supreme Commander was P. C. Wright, editor of the New York *News*, who was subsequently incarcerated in Fort Lafayette, New York harbor, when he was succeeded by Vallandigham. Robert Holloway, of Illinois, is said to have acted as Supreme Commander in the latter's absence in Canada. Charles L. Hunt, Grand Commander for Missouri, Charles E. Dunn, Deputy Grand Commander, and Green B. Smith, Secretary, being placed under arrest, divulged facts confirmatory of the above. H. H. Dodd, the Grand Commander for Indiana, was arrested and tried at Indianapolis before a military commission "for conspiring against the government,"

"violations of the laws of war," and other charges. He was finally turned over to the civil authorities and liberated.

Vallandigham declared in a speech at Dayton, Ohio, in the summer of 1863, that the order numbered 500,000 men; others claimed 800,000, and some still more. Statements of its officers at different times, represented its numbers in Indiana as 75,000 to 125,000; in Illinois as 100,000 to 140,000; in Ohio as 80,000 to 108,000; in Michigan and New York as about 20,000 each, and so on. In March, 1864, it was represented that the total force capable of being mobilized for effective service was 340,000. Green B. Smith and other witnesses testified to having purchased and shipped arms to various points to arm the order. Another witness, once a member of the order in Indiana, testified that there were 6,000 muskets and 60,000 revolvers, besides private arms in possession of the order in that State.

The members were bound by the most rigorous oaths. Its "declaration of principles" declared that it was the imperative duty of its members to resist the functionaries of the Federal Government, "and, if need be, expel them by force of arms." The witnesses, former members, testified that the duties of members were: 1. To aid soldiers to desert and harbor and protect them. 2. To discourage enlistments and resist the draft. 3. To circulate disloyal and treasonable publications. 4. To communicate and give assistance to the enemy. 5. To recruit for the Confederate army. 6. To furnish the rebels with arms and ammunition. 7. To co-operate with the enemy in raids and invasions. 8. To harass loyal men and destroy their property when so ordered to do. 9. To assassinate officers of the government when so directed to do. 10. To establish a Northwestern Confederacy.

The above statements are compiled from the reports of the Hon. J. Holt, Judge Advocate General, to Secretary Stanton on "Secret Societies," and other State papers. Unusual space has been given to this question because it has been asked repeatedly, and our attention is called to the fact that it is not treated in the popular cyclopedias and histories.

CHIEF CITIES OF FRANCE AND ENGLAND.

RUSHVILLE, Ill.

What is the population of each of the principal cities of France?

JAMES P. CLARKE.

Answer.—The population of each of the principal cities of France and England in 1881 is given in the "Statesman's Year Book" as in the table below:

Paris	2,269,023	London	[12]4,764,312
Lyons	376,613	Glasgow	[13]647,095
Marseilles	360,099	Liverpool	552,425
Bordeaux	221,305	Dublin	[14]418,152
Lille	178,144	Birmingham	400,757
Toulouse	140,289	Manchester	393,676
Nantes	124,319	Leeds	309,126
St. Etienne	123,813	Sheffield	284,410
Rouen	105,906	Edinburgh	236,002
Le Havre	105,867	Bristol	206,503
Rheims	93,823	Bradford	180,459
Roubaix	91,757	Salford	176,223
Amiens	74,170	Wolverhampton	164,303
Nancy	73,255	Hull	161,519
Toulon	70,103	Oldham	152,511
Angers	68,041	Newcastle-on-Tyne	145,228
Nice	66,279	Dundee	140,239
Brest	66,110	Brighton	128,407
Limoges	63,765	Portsmouth	127,953
Nimes	63,552		

FOOTNOTES:

[12] This is what is known as "Police London," its broadest definition. The London covered by "Mortality Bills" contained but 3,831,719 inhabitants.

[13] Glasgow and its suburbs.

[14] Dublin County, most of the population of which is in Dublin and its suburbs.

LIQUID GLUE AND CHINESE CEMENT.

BLACK OAK, Mo.

Please tell us how to make "Spaulding's prepared glue" or some substitute for it.

D. P. STUBLEFIELD.

Answer.—The formula for making Spaulding's prepared glue is not available. The following (Dumoulin's) is quite as good: Take soft water, 1 quart; best pale glue, 2 pounds; dissolve in a covered vessel by the heat of a water bath or in a vessel immersed in boiling water; cool, and add, gradually, of nitric acid (specific gravity 1.335) 7 ounces; when cold put it into bottles. It is very strong and does not gelatinize.

The following formula, known as "Chinese cement," produces a cement for porcelain, glass, fancy work, jewelry, etc., so strong that wood or porcelain can be joined together so firmly that they will break anywhere else rather than where cemented: Take of finest pale orange shell-lac (broken small) 4 ounces; strongest rectified spirits 3 ounces, and digest them together in a corked bottle in a warm place until dissolved. It should have about the consistence of molasses.

THE MAN OF ROSS.

GREENVILLE, Ill.

Who was the "Man of Ross?"

IDA E. WHITE.

Answer.—The "Man of Ross" is a title given to John Kyrle, of Ross parish, Hereford County, Eng., because of his remarkable spirit of enterprise and great benevolence. Although only an untitled, private gentleman of moderate fortune, he did far more for the good of his community than many a wealthy lord of the manor. Pope appreciated the

true nobility of Kyrle, and has done full honor to him in the third epistle of his "Moral Essays," "On the Use of Riches." Coleridge, too, has paid a beautiful tribute to his memory in the lines:

> "Richer than miser o'er his countless hoards,
> Nobler than kings or kings' polluted lords,
> Here dwelt the Man of Ross. O, traveler, hear!
> Departed merit claims a reverent tear."

EASTERN CENTRAL ARKANSAS.

CLARENDON, Ark.

Seeing an Inquirer, in the Curiosity Shop, asks information in regard to Arkansas, I will say that the Eastern Central portion of the State is nearly level, and very fertile. All fruits, vegetables, cereals, tobacco, cotton, sorghum, sweet potatoes—in fact anything one may plant—gives large returns. Owing to this locality lying in the great cotton belt, and to the large quantities of cotton produced, the usual price per bushel of Indian corn is $1; oats, 90c, and oats will yield from forty to sixty bushels per acre, with the rude implements and tillage here in vogue—a one-horse cast-iron plow, and a small tree top for a harrow. After oats and wheat are harvested the same land is frequently planted in corn, or sown with millet, or Hungarian grass, thus producing two crops a year. Land here is cheap, water is soft and pure, and timber abundant. The rivers abound in fish, and the immense forests in game. I came from Indiana. I have lived here twelve years. Have never seen a case of consumption in the State.

DR. H. C. YOUNG,
Formerly Surgeon U. S. N.

PSEUDONYMS OF AUTHORS.

AUBURN, Ill.

I should like to have a list of the noms de plume of modern authors of reputation.

Answer.—The following is as long a list as there is room for here; although it contains but a small proportion of the over 5,000 pseudonyms known to literature:

Pseudonyms and real names.	Born.	Died.
Algernon Sidney—Gideon Granger	1767	1822
Amy Lothrop—Miss Anna B. Warner	1825	
An American Girl Abroad—Miss Trafton		
Artemus Ward—Charles F. Browne	1836	1867
Barney Cornwall—Bryan Waller Procter	1790	
Boz—Charles Dickens	1812	1870
Christopher Crowfield—Mrs. H. B. Stowe	1812	
Chrystal Croftangry—Sir W. Scott	1771	1832
C. L. I. O. (Clio)—Joseph Addison	1672	1719
Cornelius O'Dowd—Chas. Jas. Lever	1806	1872
Country Parson—The Rev. A. K. H. Boyd	1825	
Currer Bell—Charlotte Bronte (Mrs. Nichols)	1815	1855
Diedrich Knickerbocker—Washington Irving	1783	1859
E. D. E. N—Mrs. Emma D. E. (Nevette) Southworth	1818	
Edward Search (2)—Abraham Tucker	1705	1774
Edward Search (1)—Wm. Hazlitt	1778	1830
Elia—Chas. Lamb	1775	1834
Eli Perkins—Matthew D. Landon		
Elizabeth Wetherell—Susan Warner	1818	
Ellis Bell—Emily Bronte	1819	1848
Ettrick Shepherd—James Hogg	1772	1835
Fanny Fern—Sarah Parton	1811	1872
Father Prout—Francis Mahony	1805	1866
Figaro—Mariano Jose de Larra	1809	1837
Gail Hamilton—Miss Abigail Hamilton Dodge	1838	
Gamaliel Smith—Jeremy Bentham	1748	1832
Gath—George Alfred Townsend	1833	
Geoffrey Crayon—Washington Irving	1783	1859
George Eliot—Mrs. Mary Ann (Evans) Lewes Cross	1820	1880

George Fitzdoodle—Wm. Makepeace Thackeray	1811	1863
Georges Sand—Mme. Dudevant	1804	1876
Grace Greenwood—Mrs. Sara J. Lippincott	1825	
Horace Hornem—George Gordon, Lord Byron	1788	1824
Hosea Biglow—James R. Lowell	1819	
Ik Marvel—Donald Grant Mitchell	1822	
Jean Paul—Jean Paul F. Richter	1763	1825
Jedediah Cleishbotham—Sir W. Scott	1771	1832
Jennie June—Mrs. J. C. Croly	1840	
John Chalkhill—Izaak Walton	1593	1683
Jonathan Oldstyle—Washington Irving	1783	1859
Josh Billings—Henry W. Shaw	1818	
Joshua Coffin—Henry W. Longfellow	1807	1881
Junius—Probably Sir Philip Francis	1740	1818
Laertes—G. A. Townsend	1833	
Launcelot Langstaff—Washington Irving	1783	1859
Launcelot Langstaff—William Irving	1766	1821
Launcelot Langstaff—Jas. Kirke Paulding	1779	1860
L. E. L.—Letitia Elizabeth Landon	1802	1839
Little Thomas—Thomas Moore	1779	1852
Luise Muhlbach—Mme. Clara Mundt	1814	1873
Malachi—Sir W. Scott	1771	1832
Malachi Malagrowther—Sir W. Scott	1771	1832
Malakoff—Samuel Johnson, LL. D.	1709	1784
Marion Harland—Mary V. (Hawes) Terhune	1835	
Mark Twain—Samuel L. Clemens	1835	
M. Quad—Chas. B. Lewis		
Mrs. Partington—B. P. Shillaber	1814	
Old Bachelor—George W. Curtis	1824	
Oliver Optic—William Taylor Adams	1822	
Owen Meredith—Edward R. Bulwer, Lord Lytton	1831	
Paul Creyton—John T. Trowbridge	1817	
Parson Lot—The Rev. Charles Kingsley	1819	
Saxe Holm—Miss Rush Ellis	1858	

Theophilus South—Edward Chitty	1807	
Timothy Titcomb—J. G. Holland	1819	1881

CHICAGO NEWSPAPER CIRCULATION.

AURORA, Ill.

To settle a dispute, state which of the Chicago newspapers has the largest circulation.

CONOVER.

Answer.—The only criterion of newspaper circulation which there is absolutely no means of successfully disputing is the amount of postage paid on papers sent to actual subscribers. Below is given the amounts of postage paid on such circulation by each of the Chicago newspapers here named during the fiscal year ending June, 30, 1882:

The Inter Ocean	$19,609.30
The *News*	7,289.14
The *Times*	6,581.10
The *Tribune*	5,644.54
The *Herald*	1,443.68

For circulation of papers outside of the mails there is nothing that can be regarded as an impartial standard of comparison; nothing which affords the reading and advertising public such unequivocal testimony as the above, but every intelligent person will naturally conclude that the proportions of circulation through the mails and outside of the mails will not differ very greatly.

TO POLISH SEA-SHELLS.

CRESTON, Iowa.

Please inform us through Our Curiosity Shop how to polish sea-shells and prepare them for sale.

SUBSCRIBER.

Answer.—According to Cooley, one of the highest authorities on processes employed in the arts and manufactures, the surfaces of certain shells which have a natural polish should be first cleansed by rubbing with a rag dipped in hydrochloric acid (obtainable at any drug store) till the dull outer skin is removed. They must then be promptly washed in warm water, dried in hot sawdust, and polished with chamois leather. But shells destitute of natural polish may be either varnished or rubbed with a mixture of tripoli powder and turpentine, applied by means of a "wash-leather" (split sheepskin dressed with oil), and afterward with fine tripoli alone, and finally a little olive oil, the surface being brought up with vigorous use of the chamois leather. But there are shells which must first be boiled in a strong solution of potash, then ground on wheels, sometimes all the way through the outer stratum, to show an underlying one, after which they are polished with hydrochloric acid and putty powder. This last process better be left to men who make a business of shell-grinding; for it is said that "shell-grinders are almost all cripples in their hands," owing to the dangerous nature of this operation.

STATES WITH COMPULSORY EDUCATION.

STECOAH, N. C.

> Name the States and Territories which have compulsory education laws; and show how their attendance and non-attendance compare with the same in other States and Territories.

J. L. CRISP.

Answer.—Arizona, California, Connecticut, District of Columbia, Illinois, Kansas, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Vermont, Wisconsin, and Wyoming have compulsory education laws, requiring every male child between certain years—usually 8 to 14—to attend school not less than a specified period—usually twelve weeks each year. The Illinois law did not come into effect until the present school year, and in several other States these laws were not passed in time to affect the statistics of 1880, so the following table gives the total number of children of school age in none but such States as had compulsory

attendance laws before 1880. It gives not the average daily attendance, but the total enrollment of pupils in the public schools:

States.	Children of school age.	Enrollment.
California	215,978	158,765
Connecticut	140,235	119,694
Massachusetts	307,321	309,777
Michigan	506,221	362,556
New Jersey	330,685	204,961
New York	1,641,173	1,031,593
Ohio	1,043,320	747,138

The table below gives the corresponding statistics for an equal number of States not having such laws, as nearly adjacent as possible:

States.	Children of school age.	Enrollment.
Oregon	59,615	37,533
Maine	214,656	149,827
Rhode Island	52,273	44,780
Pennsylvania	1,370,000	937,310
Delaware	35,459	27,823
Indiana	703,558	511,283
Iowa	586,556	426,057

This comparison sheds very uncertain light upon the question as to the effect of compulsory attendance laws, because the school age period is different in different States, and it does not show the number of pupils in private schools. It would be far more interesting in this connection if it included only all children of the ages within the compulsory period in each State, and gave the number of such children enrolled in schools of any sort before and after the passage of the law. Nevertheless, these tables do indicate plainly enough that such laws are not strictly enforced in any State, and are, comparatively speaking, a dead letter in others.

BASHFULNESS WORSE THAN FEAR.

OREGON, Ill.

What brave man was it that said he had suffered far more from bashfulness than from fear?

SUBSCRIBER.

Answer.—It was "John Brown, of Ossawatomie," the hero of the Harper's Ferry plot to emancipate as many as possible of the slaves of Virginia and Maryland, and lead them on an exodus into Canada. Being asked, on the way to the scaffold, if he felt any fear, he replied: "It has been a characteristic of me from infancy not to suffer from physical fear. I have suffered a thousand times more from bashfulness than from fear."

CHOKE-BORE SHOTGUNS.

PECATONICA, Ill.

Please explain the difference between "full choke" and "modified choke" shotguns.

SPORTSMAN.

Answer.—In a full choke shot-gun the bore is a perfect cylinder to within a few inches from the muzzle, where it swells inward slightly all around, and then opens out in the last six or seven inches to about the same diameter as in front of the choke. In a "modified choke" gun the barrel tapers from the shell chamber to the choke curve. In a "taper bore choke" the barrel tapers regularly from the shell chamber to the muzzle.

NIGHT GLASSES.

HARPER, Kansas.

What is a night glass? Is it true that a person can see as plainly with one of these, in fair weather, at night, as he can without one in daylight?

C. G. BOONE.

Answer.—A night glass is simply a small terrestrial telescope, or spy-glass, ordinarily in the form of a large opera-glass, with an unusually large lens in the end toward the object to be viewed, called the object-glass, which serves to concentrate a large amount of light, and so render objects seen at night much more distinct than when viewed by either the naked eye or an ordinary spy-glass. Since it is a principle in optics that "it is impossible, by any optical arrangement whatever, to obtain an image whose brightest part shall surpass the brightest part of the object," it is obvious that nothing seen through a night-glass, even in the clearest night, can appear as distinct as in daylight.

AMERICAN HISTORIANS.

WANDA, Ill.

Will you please publish a list of the principal American historians?

S.

Answer.—Assuming that by "American historians" you mean historians born in America, we give the following list, naming first those who wrote chiefly of our own country, and afterward those who have written mainly of other countries: J. S. C. Abbott, b. 1805; d. 1877; George Bancroft, 1800; Richard Hildreth, 1807-1865; C. E. A. Gayarre, 1805; Francis Parkman, 1823; John C. Ridpath, 1840; John D. G. Shea, 1824; Jared Sparks, 1789-1866; James F. Cooper, 1789-1851; Hubert H. Bancroft, and Thomas H. Burton. W. H. Prescott, 1796-1859; John Lathrop Motley, 1814-1877, and Royal Robbins, 1788-1861.

SANDPAPER.

SHENANDOAH, Iowa.

Please describe the process of making sandpaper.

H. S. GALT.

Answer.—Common window glass—that having a green tint is best—is powdered and sifted through sieves of varying fineness, for coarse and fine

sandpaper. Then any coarse paper is covered with thin glue and the powdered glass is sifted upon it. After standing a day or two, the refuse sand is shaken off, and the paper is ready for use.

ALABASTER.

CLINTON, Ill.

Where is alabaster quarried and manufactured?

OLD PILGRIM.

Answer.—Alabaster, or plaster of paris, is made in large quantities at Grand Rapids, Mich., where there are extensive beds of gypsum, the stone from which it is produced. Vases and other ornamental articles can be cut from the finest quality of this stone; but generally such articles are produced in Europe, where labor is cheaper and the class of workmen accustomed to this branch of art is numerous. The chief supply of European gypsum for fine arts is obtained at Sienna and other places in Tuscany, and manufactured at Florence, Milan, Leghorn, and Volterra.

RAILROADS ENTERING CHICAGO.

CHICAGO, Ill.

Please state the total number of railroads entering Chicago on their own tracks or others, and oblige

SEVERAL READERS.

Answer.—Hardly two persons would agree as to "the number of railroads entering Chicago on their own tracks or others," for the reason that one person would count all the distinct roads named in the several coupons of every through ticket from any part of the United States, Canada, or Mexico to this city, while others would count only the roads chartered in Illinois and adjacent States running under separate managements, and entering Chicago over their own traces or leased right of way. The latter number about thirty-eight, the former amount to several hundred. There are twenty-seven great railway systems centering at Chicago and controlled mainly from this point, which embrace about 25,000 miles of track.

HARVARD, YALE, COLUMBIA.

West Lebanon, Ind.

Please give a comparison of Harvard, Yale, and Columbia Colleges in wealth, number of students, and number of graduates.

A Subscriber.

Answer.—According to the report of the Bureau of Education for 1880, these institutions compare, as regards wealth, as follows:

Colleges—	Productive funds.	Income from funds.	Income fr. tuition.
Harvard	$3,959,556	$236,889	$122,835
Yale	1,293,078	79,943	102,912
Columbia	4,816,257	320,565	24,200

Besides the above, there is a scientific school connected with each of the above colleges with property, as follows:

Scientific Dept.—	Prod'tive funds	Income fr. funds	Income fr. tuit'n
Lawrence Scientific School (Harvard)	$729,623	$46,482	$2,505
Sheffield Scientific School (Yale)	265,775	28,157	15,850
School of Mines (Columbia)			36,500

As respects students enrolled and graduates of all departments, in the year above given, these institutions compared as in the totals below:

Number of Colleges—	Number of Students.	Degrees conferred.
Harvard	974	264
Yale	952	232
Columbia	577	415

The degrees enumerated were all conferred "in course," honorary degrees being omitted from this statement.

THE MAID OF THE MIST.

DANVILLE, Ill.

Are you not mistaken as to the time when the Maid of the Mist ran through the great whirlpool in the Niagara River? Can you not give a fuller description than appeared in Our Curiosity Shop of Aug. 16?

SUBSCRIBER.

Answer.—The date here called in question is the one given for this feat in Clemens Petersen's article on Niagara in "Johnson's New Universal Cyclopedia," but in THE DAILY INTER OCEAN of Sept. 1 we gave an account from the lips of DeWitt C. McMurtry, now of Philadelphia, who claims to be the only survivor of that perilous passage. He says the trip was made June 29 1859. He gives the dimensions of the stanch little steamer at "about 150 feet over all and 16 feet beam." She was a side-wheeler, with new and powerful engines, usually carrying 125 or 130 pounds pressure of steam, but set at this time to blow off at 228 pounds. The run was made to evade the payment of a mortgage held by Judge Addington, of Buffalo, and under an offer from some Toronto parties to pay $25,000 for the Maid of the Mist if delivered at Queenstown, on the Canada side, at the mouth of the river. Joel Robinson, the captain, was offered $500, the engineer, a Mr. Jones, and the fireman, Mr. McMurtry, each $100, to undertake this task. The captain had himself lashed in the wheelhouse, and the other two were shut in below under battened hatches. The distance from the last landing above the whirlpool to Queenstown is just five miles, one mile of which is through the whirlpool-torrent. This distance was made in seven and three-quarter minutes, only two of which were spent in the rapids. The boat was dashed about at a terrible rate. "When she first struck the rapids," says McMurtry, "our boat leaped downward perhaps thirty feet. Then she was hurled clear out of the water. Down she would go, as if she would never stop, when suddenly she would right herself and, with a bound which seemed almost human, leap out of the water. The current runs forty-five miles an hour and the waves are twenty feet high. Jones and I were almost killed by the quickly succeeding shocks. I felt my strength rapidly oozing away as I clung to the hand-rails for dear life. There was barely time to catch my breath between concussions. Suddenly the current struck her sideways, she

swung around, and shot down the stream. We had escaped the whirlpool. When I got out at Queenstown the water was waist high, the boat had been so racked and wrenched in her passage." Jones died soon afterward. Robinson survived several years longer. According to this witness no one perished in the passage, as is stated in some narratives of the affair.

FEMALE SUFFRAGE IN NEW JERSEY.

CHICAGO, Ill.

What State was it that permitted women to vote ninety years ago?

J. M. SNOW.

Answer.—It was New Jersey; which organized as an independent State two days before the declaration of independence, with a constitution that allowed universal suffrage, male and female, without regard to color. This constitution was not altered until 1844, when, among other changes, the suffrage was restricted to males; largely because of the apathy shown by women, especially those of the better class, in regard to the exercise of the ballot.

UNION AND REBEL PRISONERS

SWAN, Iowa.

Give the number of prisoners taken on both sides during the late war. State how many died while prisoners; and, if possible, tell how many Union soldiers once in Southern prisons still survive. How many graves in National Cemeteries?

A PRISONER OF WAR.

Answer.—The number of Union soldiers captured by the Confederates during the late war was 212,608. The number of Confederate prisoners taken was 476,169. The number of Union soldiers who died while prisoners was 29,725, or little more than one in seven of all captured. The number of Confederates who died while prisoners was 26,774, or very nearly one in eighteen. The total number of graves in the National cemeteries is 315,555,

only 172,409 of which have been identified. There is no means of learning how many who were once Union prisoners still survive.

BATTLE OF SOLFERINO.

CAMBRIDGE, Wis.

In what war was the battle of Solferino fought; and what gave this place so much importance?

R. D. THOMPSON.

Answer.—The battle of Solferino was fought in 1859 between the French, under the Emperor Louis Napoleon, and the Sardinians, under Victor Emanuel on the side of the victors, and the Austrians, the oppressors of Italy, led by the Emperor Francis Joseph. Solferino is a place of no importance in itself, being but a village of some 1,400 inhabitants, situated in the province of Brescia, North Italy. Its position, with its famous tower, called the "Spy of Italy," because it commands a view of the whole broad plain of Lombardy, gives it great strategic importance; and in this war, which was, in fact, for the independence and unity of Italy, the battle of Magenta, twenty days earlier, in which the Austrians were driven from the field with a loss of 9,713 killed and about 11,000 wounded and missing, and this decisive victory at Solferino, in which the allies lost about 18,000 killed and wounded and the Austrians 20,000, besides 6,000 prisoners and 30 cannon, resulted in the treaty of Villafranca, ceding Lombardy to Sardinia and virtually terminating Austrian interference in Italian affairs; so paving the way to the ultimate unification of Italy, which quickly followed.

RESUMPTION OF SPECIE PAYMENT.

BLAIR, Neb.

Was the acts for the resumption of specie payments a Republican or Democratic measure? Please give the vote on the passage of the bill.

C. C. D.

Answer.—Resumption was advised by the Secretary of the Treasury under President Grant, was earnestly recommended in the President's message, was brought forward in Congress by a Republican, was reported with the recommendation that it pass from the Finance Committee of the Senate, by its Chairman, Senator Sherman, Dec. 21, 1874, when a majority of the Senate and the committee were Republicans; and passed the Senate the same day, by a vote of 32 to 14. All who voted in the negative were Democrats, except Tipton and Hamilton, of Texas, both Independents. The bill passed the House on June 7, 1875, by the following vote: Yeas, 136; nays, 98; not voting, 54. The nays were all Democrats, except Clarke, Crutchfield, Dawes, Field, Gooch, Hagans, B. W. Harris, J. R. Hawley, E. R. Hoar, G. F. Hoar, Lawson, Niles, L. C. Parker, M. Sayler, H. J. Scudder, Sherwood, W. A. Smith, W. Townsend, C. W. Willard, and Woodworth, in all 20, Republicans. All who voted yea were Republicans.

ORIGIN OF THE DEMOCRATIC PARTY.

TURNER, Ill.

When did the Democratic party originate, and what were its principal doctrines when it was in power?

L. S. M.

Answer.—We first read of a Democratic party in 1807, with such men as Thomas Jefferson and James Madison for its leaders. It is sometimes referred to by historians as the "Democratic Republican" party, and its adherents were quite as frequently termed Republicans as Democrats. Not until the first Democratic convention, in 1832, did what is now generally understood as the simon pure Democratic party assume positive shape. Thence forward it rapidly developed into the defender of slavery; the opponent of National banks and protective tariff; the advocate and administrator of the doctrine, "To the victors belong the spoils," or rotation in office; first vigorously espoused and put into practice by General Jackson; and finally the champion of State sovereignty and apologist and abettor of secession. For a synopsis of the present political salmagundi, or olla podrida, denominated Democracy, and for the doctrines of the Republican party see Our Curiosity Shop for 1882, page 134.

WILL CARLETON, THE POET.

JUNCTION CITY, Kan.

Please give us a sketch of Will Carleton, author of "Farm Ballads," and other poems.

LADY READER.

Answer.—Will Carleton was born in Hudson, Mich., Oct. 21, 1845. His parents, John H. and Celeste E. Carleton, were of English descent. They removed to Michigan from the East at an early day, where the father cleared the farm upon which he afterward lived for forty years. He was a man of great natural force of character, with a talent for extemporaneous speaking, and he soon became a man of influence, filling many offices of trust in the community, and contributing powerfully to the rapid success of the Methodist Church in Southern Michigan, of which he was a devoted member. He died in 1872. The mother is still living and resides with her son in Brooklyn, N. Y. She is a woman of decided force of character and sweetness of heart, and is beloved by all who know her. Her only other son having died on his way home, after a long imprisonment in the South during the late war, and her daughters being dead, the subject of this sketch is the only one of her five children now surviving. The boyhood of Will Carleton was passed in farm labor and study. At the district school he was particularly fond of grammar, and manifested a spirit of criticism that at times got him into discussions with his teachers which disturbed their serenity of temper. Frequently when the day for "speaking pieces" came around he would surprise his fellow pupils with original bits of humor, which, although intended for good-natured satires, ended more than once in schoolboy fights. Later he walked five miles daily to attend high school in town. At 16 he taught a country school of fifty-two pupils, and any allusions he makes to "boarding 'round" are born of experience. He graduated at Hillsdale College in 1869 with the degree of A. B., and for two years devoted himself to editorial work, being during the last of the two editor of the Detroit *Weekly Tribune*. He then returned to Hillsdale to reside, while giving more time to preparations for a literary life, and occasionally filling lecturing and reading engagements.

What may properly be called Mr. Carleton's first literary success was a political satire entitled "Fax," written during his junior vacation in the summer of 1868, at Aurora, Ill., and delivered before literary clubs during the political campaign of that year. Several thousand copies of it were published and widely circulated. His graduation poem, at Hillsdale, the next summer, was entitled "Rifts in the Clouds;" afterward incorporated in "Farm Legends." Among his other early poems is one read on Decoration Day, 1870, entitled "Cover Them Over," which was copied extensively at the time, and has since been recited on many other such occasions. The poems which first brought him into general notice throughout the country and abroad were his "Farm Ballads," which having first, many of them, appeared in *Harpers' Weekly* and other periodicals, were published by Harper & Bros., in 1873. "Farm Legends" followed, in 1875; "Young Folks' Centennial Rhymes," in 1876, and "Farm Festivals," in 1881. In 1878 he visited Europe, spending much time among the peasantry of England, Ireland, and Scotland, and visiting the continent. The same year he removed to Chicago, making that the center of a large lecturing circuit, covering most of the Western States. Wherever he went large audiences received him with cordial welcome and tokens of approbation. In 1880 he removed to Boston, and in 1882 to Brooklyn, N. Y., his present home, near the center of the Eastern lecture circuit. Mr. Carleton contributes to several periodicals, lectures from two to five evenings a week, and is meanwhile preparing another book for the press, which will appear soon. His former volumes have sold to the extent of over 200,000 copies, and the demand is well maintained.

NUMBERS IN VARIOUS OCCUPATIONS.

PARSONS, Kan.

Give the different occupations of the American people, and numbers engaged in each.

I. J. UZZELL.

Answer.—It will take too much space to name all the occupations designated in the United States census of 1880; the following are the principal ones:

In Agriculture—	
Farmers and planters	4,225,945
Agricultural laborers	3,323,876
Dairymen and dairywomen	8,948
Gardeners, nursery and vine-growers	51,482
Stock-drovers	3,449
Stock-herders	24,098
Stock-raisers	16,528
Florists	4,550
All others	11,617
Total in agriculture	7,670,493
In Manufacturing and Mining—	
Blacksmiths	172,726
Boot and shoemakers	194,079
Butchers	76,241
Cabinetmakers	50,654
Carpenters and joiners	373,143
Carriage and wagon makers	49,881
Cigarmakers	56,599
Cotton-mill operators	169,771
Engineers and firemen	79,625
Fishermen and oystermen	41,352
Glassworks operators	17,934
Gold and silver workers	28,405
Harness and saddle-makers	39,960
Iron and steel operatives	114,539
Leather-curriers, tanners, etc.	29,842
Lumbermen and raftsmen	30,651
Machinists	101,130
Manufacturers	44,019
Marble and stone cutters	32,842
Masons, brick and stone	102,473
Mill operatives, not specified	30,836
Millers	53,440

Milliners, dressmakers and seamstr’ses	285,401
Miners	234,228
Painters and varnishers	128,556
Paper-mill operatives	21,430
Plasterers	22,083
Plumbers and gas-fitters	19,383
Printers, lithographers, and stereo-typers	72,726
Saw and planing mill operatives	77,050
Ship carpenters, caulkers, riggers, and smiths	17,452
Silk mill operatives	18,071
Tailors and tailoresses	133,756
Tinners and tinware workers	42,818
Tobacco factory operatives	20,446
Wheelwrights	15,592
Woolen mill operatives	88,010
All others in mines and factories	754,888
Total	3,837,112
In Trade and Transportation—	
Clerks in stores	353,444
Draymen, hackmen, and teamsters	177,586
Employes of railroads not clerks	236,058
Telegraph officials and employes	22,809
Sailors	60,070
Salesmen and saleswomen	72,279
Saloon-keepers and bar-tenders, besides 13,074 restaurant keepers	68,461
Traders in cigars and tobacco	11,866
Traders in clothing	10,073
Traders in coal and wood	10,871
Traders in drugs and medicines	27,704
Traders in dry goods, fancy goods, etc.	45,831
Traders in groceries	101,849
Traders in iron, tin, and copper wares	15,076
Traders in liquors and wines	13,500

Traders in live stock	12,596
Traders in lumber	11,263
Traders in produce and provisions	35,129
Traders in real estate	11,253
Traders in sewing machines	6,577
Traders and dealers not specified	112,842
Undertakers	5,113
All others	387,006
Total in trade and transportation	1,810,256
In Professional and Personal Services—	
Barbers and laundresses	44,851
Clergymen	64,698
Dentists	12,314
Domestic servants	1,075,653
Employes of hotels and restaurants	77,413
Hostlers	31,697
Hotel keepers	32,453
Journalists	12,308
Laborers not specified	1,859,223
Launderers and laundresses	121,942
Lawyers	64,137
Musicians	30,477
Officials of Federal and State governments	57,081
Clerks of Federal and State governments	16,849
Employes	31,401
Physicians and surgeons	85,671
Soldiers of U. S. army and navy	24,161
Teachers and scientific persons	227,710
Other professions	2,204,199
Total in professions and transportation	4,074,238

The total number of persons in the United States reported as employed in gainful occupations in 1880 was 17,392,099, out of a total population of 50,155,783, being 34.68 per cent of the population of all ages, and 47.31 per cent of the population over 10 years of age. Of these 14,744,942 were

males and 2,647,157 were females. Of the males 825,187 were between 10 and 15 years of age, and of the females, 293,169.

ISLANDS of THE UNITED STATES.

BRISTOL, Ill.

> Please give the number and dimensions of the islands of the United States, and state their condition as to soil, water, atmosphere, vegetation, etc.; also, whether they are generally inhabited.

C. S. HOPPER.

Answer.—This is a very interesting question, or series of questions, but the full answer would fill a volume. The coast of the State of Michigan alone is gemmed with no fewer than 179 islands of all sizes, from Isle Royale, which forms an entire county of more than fifty miles in length by ten in breadth, to islets of less than an acre in surface. Their total area aggregates 404,730 acres. In "Rand & McNally's Atlas of the World" all the islands of noticeable magnitude are laid down, and by this authority it appears that Maine has 40 such islands; Massachusetts, 39; Rhode Island, 24; Connecticut, 9; New York, 22; New Jersey, 2; Delaware, 6; Maryland, 16; Virginia, 7; North Carolina, 10; South Carolina, 10; Georgia, 11; Florida, 79; Alabama, 4; Mississippi, 7: Louisiana, 24; Texas, 8; Ohio, 13; Michigan, 179; Wisconsin, 31, California, 14; Washington Territory, 26. Alaska Territory embraces more than 200 islands, many of which are of great value as fishing stations. There are hundreds of petty islets not located except in the charts of the United States Coast Survey. Many of them, like the islands in the Western rivers, are not known by names but only by numbers. But a small number of the more important islands in the above list are inhabited; less than 100 in all. The soil is of all varieties, from the fertile fields of Port Royal, Hilton Head, and Edisto, South Carolina, the home of the famous "sea island cotton," and the rich dark loam of Long Island, New York, to the bleak rocks and barren sands of Mt. Desert, and the arid isles on the coast of California.

PRE-EMPTION CLAIM QUERIES.

St. Lawrence, Dak.

1. What is necessary to constitute "continuous residence" on a pre-emption claim? 2. What more does the law require of a single man to "prove up" than of the head or a family?

Subscriber.

Answer.—1. The courts have repeatedly decided that "the sufficiency of residence and improvement is a question of fact to be decided from the circumstances of each case." In the case of *Copley* versus *Rell* it was ruled that "where, from the nature of the land entered under the pre-emption law, it would appear that the claimant has selected it for speculative purposes rather than for purposes of improvement and cultivation, the evidences of good faith and *occupation* should be of the most satisfactory character." And again, in the case of *Porter* versus *Johnson*, it was held that what constitutes residence within the meaning of the law "is simply a question of good faith, and each case must be considered upon its own merits." In the case of *Boyse* versus *Goss*, it was held that "the statute requires inhabitancy on the land pre-empted and this means actual residence or a home." In case of *Southern Pacific Railroad* versus *Newton*, it was held that "occupation and use of land for purposes other than cultivation, etc., do not constitute a pre-emption claim." While the above rulings distinctly reveal the intent of the government to exact all that is essential to actual settlement and the maintenance of a home upon the land, there are other rulings which indicate that the law will be construed liberally so long as the above essentials are preserved. For example, it has been decided that "a party while having an actual residence on his claims, may work elsewhere for other people a few weeks at a time." Again, "where a party is very poor, a dug-out in the side of a hill or a sod-house is a satisfactory residence, and four pre-emptors may combine to erect and occupy a house on the corner common to their claims, provided each pre-emptor resides in his own part of the house. Should one of them be unmarried he may board in the family of a married pre-emptor." 2. The law makes no difference between married and unmarried pre-emptors. In construing it, as regards what constitutes residence, the last ruling above quoted indicates that the government is disposed to make some allowance for the unfortunate circumstances of a

young man who has not found any girl willing to share his dug-out sod-house or tepee and cook his corn-dodgers and potatoes for the privileges of wifehood, including a dower interest in the estate. Married and unmarried pre-emptors must each make a final affidavit, declaring that they have complied with the law in every particular, are not disqualified by owning 320 acres of land elsewhere in any State or Territory of the United States, or by other reasons specified, and must file pre-emptor's proofs in the form of sworn answers to questions furnished them on printed blanks, which must be accompanied by sworn testimony of two witnesses, taken separately, in the form of answers to questions stated in another set of printed blanks prepared by the Commissioner of the General Land Office, all designed to attest that the law as to continuous residence, cultivation, etc., has been complied with in good faith.

A FATAL FEINT.

PRINCETON, Ill.

> Who was the young man who when walking on the brink of Niagara River, some years ago, in company with his intended bride and her little sister, accidentally tossed the latter into the rapids, and perished in the effort to save her? What was the child's name, and how did it all happen?

JAMES.

Answer.—It is related of a Mr. Addington, a son of Judge Addington, of Buffalo, that when standing on Luna Island, just above the Falls of Niagara, with a Miss De Forrest and her little sister, he seized the latter playfully, and, holding her over the brink, threatened to toss her into the river. The child, in a spasm of terror, sprang from his arms and fell into the edge of the fatal current. Instantly young Addington bounded after her, succeeded in seizing her, and caught a frail bush for support. Had this held they might both have been saved, but it gave way, and man and child were carried over the falls. The common traditions represent that Mr. Addington and Miss De Forrest, who was a very lovely young lady, were engaged to be married, and that in consequence of the terrible fate of her lover and sister she became insane. This was in 1844, or thereabouts.

TARANTULAS.

KINGMAN, Kan.

To settle a dispute, please give a description of the tarantula, and tell where it is found.

A READER.

Answer.—There are several varieties of tarantulas. The one from which they all take this name, the "lycosa tarantula," is the largest of European spiders, named from Taranto, Italy, where they are very numerous. Its body is from one and a half to two inches long, ashy brown above, thorax marked with gray and abdomen with three-cornered spots and curved streaks bordered with white, with a patch of saffron-color below all, crossed by a black band. It has one spiracle, or breathing aperture, on each side, one pulmonary sac, and eight eyes. It does not spin a web to snare its prey, but captures it by running it down, and it lives in holes lined with a silk-like substance. Its bite is no more severe than that of some kinds of wasps, and is certainly not nearly so dangerous to life as it is fabled to be. The notion that its bite produced a sort of delirium and was curable only by dancing to lively music until the sufferer fell from sheer exhaustion was a superstition. For a good illustration of this ugly insect see the cut accompanying the word "tarantula" in Webster's Unabridged Dictionary.

There is a variety of tarantula in our Southern States, called "lycosa Carolinensis" by naturalists, which is even larger than its European namesake, being about two inches long, and having legs spreading at least four inches. It has whitish legs, white sides, whitish dots and lines on the belly, and is of a mouse color on top and black or dark colored underneath. Like the Italian tarantula, it spins no web, takes its prey by pursuit, and lives in holes lined with a sort of silk. It is peculiar in carrying its young on its back, and it seldom bites.

There are certain spiders of the genus mygale in the Southwestern States, which are sometimes improperly called tarantulas.

PERRY'S VICTORY ON LAKE ERIE.

EVANSTON, Ill.

Can you give us the old American naval song of 1812, in which perry, pear cider, is made to pun with the name of Perry, the hero of Lake Erie.

A READER.

Answer.—A correspondent, the Rev. W. P. Jones, of Mt. Morris, Ill., a boy at the time of that victory, recalls so much of the song as is given below. It must be remembered that Captain Barclay commanded the British squadron and General Proctor the British land forces in Canada.

Bold Barclay one day
To Proctor did say,
"I'm tired of Jamaica and sherry;
Come, let us go down
To this new floating town,
And get some American Perry."

Finding that the liquor flowed more freely than it was wanted, and was too hot to suit his taste, he cries out, in the last stanza, in his vain attempt to fly:

"Your liquor's too hot;
Keep it still in the pot!
Oh, cork your American Perry!"

But there was no such thing as corking Perry until he had captured the entire British squadron, consisting of two ships, two schooners, a brig, and a sloop, with all on board, including forty-one killed and ninety-four wounded.

THE TWO U. S. CONSTITUTIONS.

BELMONT, Iowa.

Please point out the difference between the first Constitution of the United States, under which the Revolutionary war was fought, and the present Constitution.

O. T. K.

Answer.—The Articles of Confederation conferred upon Congress none but delegated powers and recognized the absolute sovereignty of the States. Aside from the right to make war and peace, regulate foreign intercourse, receive and send embassadors, control the coinage of money, and settle disputed boundaries, Congress had no power to act without the consent of nine of the States, each casting one ballot. It could not levy taxes, and before 1787 the war debt had destroyed the financial reputation of the United States abroad. The States were divided in their interests, and at the last Colonial Congress but eight of the States sent delegates. Not the least of the weaknesses of the confederation was the non-provision for a chief magistrate, or for a national judiciary. To meet these needs it was found necessary to frame a new constitution, systematically organizing a permanent form of government. This document arranges the powers of government under three heads—legislative, executive, and judicial—and places the supreme power in the people of the whole country, instead of vainly endeavoring to maintain a multitude of independent States. It replaced a disjointed confederacy of jealous States with a Nation.

CHAPLAINS IN ARMY AND NAVY.

GIBSON, Ill.

How old must a man be to be ineligible to the office of chaplain in the United States navy? How old to be ineligible to a chaplaincy in the army? How many chaplaincies are there in the army and navy and what is the rank and pay?

CONSTANT READER.

Answer.—A chaplain in the navy cannot be less than 21 nor more than 35 years of age at the time of his appointment. Limits of age of new appointees in the army are not specified in the statute. The President may retire a chaplain unconditionally after forty years' service, or after he is 62 years of

age. The President is authorized, by and with the consent of the Senate, to appoint thirty post chaplains and a chaplain for each of the cavalry and two infantry regiments of colored troops in the army, and not to exceed twenty-four chaplains in the navy. The rank and pay of chaplains in the navy are stated on page 88 of Curiosity Shop for 1882. Chaplains in the army have the rank of captain of infantry, without command, and are on the same footing with other officers of the army as to terms of office, retirement, and pensions. The pay of an army chaplain is $1,500 a year for the first five years' service, $1,650 for the next five years, $1,800 for the next five, $1,950 for the next five, and $2,100 after twenty years' service. It should be borne in mind that the duty of chaplains of colored troops and of post chaplains includes instruction of the enlisted men in the common English branches of education.

POSTAL-LAW QUERIES.

NEPONSET, Ill.

1. When were the salaries of postmasters changed from a percentage on stamps sold to a percentage on stamps canceled? 2. What is the postage on newspapers to Great Britain? 3. Can a supplement be sent without extra charge?

SUBSCRIBER.

Answer.—1. Under the postal law approved Jan. 23, 1874, the compensation of postmasters of the first, second, and third classes consisted of annual salaries, assigned in even hundreds of dollars, to be ascertained and fixed by the Postmaster General from their respective quarterly returns for four quarters immediately preceding the adjustment or readjustment, by adding to the whole amount of box rents, not exceeding $2,000 per annum, commissions, also not to exceed $2,000 per annum, on the postal revenues of the office. All postmasters whose salaries, computed by this law, did not amount to $1,000, constituted a fourth class, whose compensation was the box rents collected at their offices and commissions on other postal revenues of their offices at the rate of 60 per cent on the first $100 or less per quarter, 50 per cent on the next $300 or less, and 40 per cent on the excess above $400 per quarter. To swell the revenues of their offices,

postmasters of the fourth-class, and some of those of the third and second-classes, went into the large cities and sold stamps to mercantile firms and other heavy dealers, in some cases even sharing commissions with them. This abuse led to a revision of the law in the act of June 17, 1878, so that commissions should be allowed only "on stamps canceled as postages on matter actually mailed" at the offices in question. 2. The postage on newspapers to Great Britain and most of her colonies, the world over, is 1 cent for every two ounces or fraction thereof. Better inquire at postoffice for postal rates, or consult the United States Postal Guide, which can be seen at every postoffice. 3. That depends on the weight.

FARM AREAS AND VALUES.

ORD, Neb.

> Oblige some of your readers by giving the cultivated area of the United States; the number and value of farms, farm implements, stock, etc. Also specify the States and Territories having over 500,000 acres each under cultivation.

HENRY P. MAIDEN.

Answer.—The total number of improved acres in the United States, according to the census of 1880, was 284,771,042, embraced in 4,008,907 farms. The value of farms, including lands, fences, and buildings, was $10,197,096,776; value of live stock, $1,500,464,609; cost of building and repairing fences, $77,763,473; cost of fertilizers purchased, $28,586,397. Estimated value of all farm productions (sold, consumed, or on hand), $2,213,402,564.

The following States and Territories had each more than 500,000 acres under cultivation;

Alabama	6,375,706
Arkansas	3,595,603
California	10,669,698
Colorado	616,169
Connecticut	1,642,188
Dakota	1,150,413

Delaware	746,958
Florida	947,640
Georgia	8,204,720
Illinois	26,115,154
Indiana	13,933,738
Iowa	19,866,541
Kansas	10,739,566
Kentucky	10,731,683
Louisiana	2,739,972
Maine	3,484,908
Maryland	3,342,700
Mass'ch'setts	2,128,311
Michigan	8,296,862
Minnesota	7,246,693
Mississippi	5,216,937
Missouri	16,745,031
Nebraska	5,504,702
N. Hampshire	2,308,112
New Jersey	2,096,297
New York	17,717,862
N. Carolina	6,481,151
Ohio	18,081,091
Oregon	2,198,645
Pennsylvan'a	13,423,007
S. Carolina	4,132,000
Tennessee	8,496,556
Texas	12,650,314
Vermont	3,286,461
Virginia	8,510,113
W. Virginia	3,792,327
Wisconsin	9,162,528

Illinois leads the column with nearly double the cultivated area of the Keystone State; Iowa comes next, and Ohio, New York, Missouri, Indiana,

Pennsylvania, and Texas, in the order here given, come trudging after. The next census will make marked changes in the above list.

THE GOOSE HANGS HIGH.

BLUFFDALE, Ill.—Some one asks in Our Curiosity Shop as to the origin of the saying, "All things are lovely, and the goose hangs high." This is it: In the autumn, during the warm, hazy days of Indian summer the wild geese fly very high, so high that they cannot be seen, but their cry, which is a "haunk," is plainly heard. Therefore it was, and is, a saying in the West, "All things are lovely, and the goose 'haunks' high," a sure indication of continued fine weather. It is not "the goose hangs high," which is a corruption of language, and is, moreover, nonsense.

S. G. R.

ARCTIC EXPLORATION.

SHERWOOD, Wis.

Mention all the attempts made to explore the arctic regions, and tell where we can find a full account of these expeditions.

WILLIAM R. BISHOP.

Answer.—No one work contains a full account of all the toils and sufferings, the thrilling scenes and exciting experiences of arctic exploration. The books and charts on this subject would make a good-sized library. As respects the northeast passage, they include narratives of the expeditions of Willoughby and Chancellor (English, 1553), Burroughs (English, 1556), Pet and Jackman (English, 1580), William Barentz (Dutch, 1594-96), Henry Hudson (English, 1608, and Dutch, 1609), Wood (Dutch, 1676). Behring (Russian, 1741), Shalaroff (Russian), who with his crew perished of starvation, Wiggans (English, 1784), Billings (Russian, 1787), and finally, Professor Adolf Eric Nordenskjold (Swedish), who, after two other expeditions (severally in 1875 and 1876), in 1878-9 succeeded in sailing from the North Atlantic eastward, through the Arctic Ocean and Behring Straits, into the Pacific, thus triumphantly completing the discovery of the "northeast passage."

The search for the “northwest passage” has engaged nearly two hundred and fifty expeditions, of various nationalities. It would be useless to enumerate them all. The first attempts were made by Sebastian Cabot (English, 1498), and Martin Frobisher (English, 1576); Captain John Davis, after whom Davis’ Strait is named (English, 1585-88); Henry Hudson, after whom Hudson’s Bay is named (English, 1610); Button (English, 1615), and Bylot and Baffin, after the latter of whom Baffin’s Bay takes its name (English, 1615-16). Little more in the way of discovery in this direction was realized, although occasional attempts were made by Jens Munk, a Danish navigator, Fox, James, and others, until 1818, when Ross and Parry, under direction and support of the British Admiralty, entered upon a series of expeditions extending over more than a decade, by which a large addition was made to the knowledge of the geography of this region as far west as long 110 deg west, in Melville Sound, and north to latitude 82 deg. 45 min., and the magnetic pole was discovered. Dease, Simpson, Dr. John Rae, and other explorers followed. Then in 1845, came the memorable expedition of Sir John Franklin, whose party perished to the last man, but not until they had left records, since recovered, of discoveries showing that Sir John, had he been spared to return, was prepared to claim the honor of discovering the northwest passage. But as these records were not discovered by McClintock’s expedition (English) until 1859, and McClure (English), who went out via Behring’s Straits in search of Franklin in 1850, returned in 1852, after having brought his ship to Melville Island and his ship’s crew through from Behring’s Straits to Baffin’s Bay, had already received the award for the discovery of this long-sought passage. Besides the above, which are only the principal British expeditions, there are the American ones, under Dr. De Haven, 1850; Dr. Kane, 1853; Dr. Hayes, 1861; and Captain Hall, 1860, 1864, and 1870, full of interest, and resulting in important geographical and scientific discoveries; the Austrian Arctic Expedition of 1872-74, resulting in the discovery of Franz Joseph Land; the British Expedition, under Captain Nares, 1875-76; the Jeannette Expedition of 1879-80, which resulted in the melancholy death of Captain De Long and so many of his companions by starvation. Written and illustrated accounts of nearly all the above explorations have been published, and many of them can be found in the catalogues of the leading American publishing houses.

THE DECLARATION OF INDEPENDENCE.

ZANESVILLE, Ohio.

When was the Declaration of Independence first proposed, and when was it finally adopted? Give the hour in the day as nearly as you can, the order of proceedings, and the scenes that followed.

GEORGE M. HOFFMAN.

Answer.—That enthusiastic little rebel, Rhode Island, was the first of the colonies to declare itself "free from all dependence on the crown of Great Britain." This she did on May 4, 1776. The Assembly of Virginia in the same month instructed her delegates to the Continental Congress to present to that body a proposition "affirming the independence of the colonies from Great Britain." In compliance with these instructions Richard Henry Lee, of Virginia, on June 7, 1776, introduced his famous resolutions: "That these united colonies are, and of right ought to be, free and independent States; that they are absolved from all allegiance to the British crown; and that all political connection between them and the State of Great Britain is, and ought to be, totally dissolved. That it is expedient forthwith to take the most effectual measures for forming foreign alliances. That a plan of confederation be prepared and transmitted to the respective colonies for their consideration and approbation." John Adams seconded these resolutions, and an animated discussion ensued. On June 8 a committee, consisting of Thomas Jefferson, John Adams, Benjamin Franklin, Roger Sherman, and Robert R. Livingston, was appointed to draw up a declaration of independence embodying the sense of Lee's resolutions. On July 2 Lee's resolutions were passed by the vote of twelve of the thirteen colonies, the New York delegates refraining from voting for want of instructions from their province. On July 3 the formal declaration, almost precisely as written by Thomas Jefferson, was presented by the committee above named, and was debated with great spirit, John Adams being the chief speaker on the part of the committee. The discussion was resumed on the morning of the 4th, and at 2 o'clock in the afternoon, after one or two slight modifications, it was adopted. The announcement was hailed with the liveliest enthusiasm. "Ring! ring!" shouted the lad stationed below to give the signal to the old bellman in the State House tower; and he did ring until the whole city

shouted for joy. The King's arms were wrenched from the Court House and burned in the streets; bonfires were lighted, the city illuminated, and the exultation was prolonged far into the night. In New York City the populace hurled the leaden statue of George III. from its pedestal and molded it into bullets, and in all the great cities similar demonstrations of enthusiasm were exhibited. Washington had the declaration read at the head of every brigade of the army, and the soldiers pledged fealty to the cause of independence.

INVENTOR OF THE LIFE-BOAT.

JOLIET, Ill.

Who invented the life-boat, and when did he do it?

JAMES.

Answer.—It is not easy to determine this question. Many writers give the credit to Mr. Henry Greathead, of Shields, Eng.; others give it to Lionel Lukin, a coach-builder, of London; others to William Wouldhave, parish clerk of St. Hilda's Church, South Shields, Eng. Now that the Royal National Life-boat Institution of Great Britain alone has 271 life-boats in its service, and more than 900 lives annually, on the average, are saved, mainly by these boats, when the life-saving institutions of other countries are using them with most gratifying results, it is not strange that the honor of this invention is zealously contested. The facts seem to be these: The first patent for a life-boat was granted in England, in 1785, to Lionel Lukin. It was not satisfactory for several reasons, but was improved by Admiral Graves, of the Royal Navy, and Henry Greathead, a boatbuilder of Shields. This was improved by George Palmer, a member of the National Life-boat Institution, and remained the favorite boat in the service until 1851, when in response to the offer by the Duke of Northumberland of a prize of 100 guineas, about 100 models of improved life-boats were exhibited, and the prize was awarded to Mr. James Beeching, of Yarmouth. This boat, improved by Mr. R. Peake, of the Royal Dockyard, Woolwich, was adopted by the National Life-boat Institution, and is still its favorite model. Undoubtedly Greathead has received more credit for this invention than any one else. He received the gold medals of the Society of Arts and the Royal Humane Society. He received £1,200 from Parliament in 1802, and a purse

of 100 guineas from Lloyd's. He obtained patents and honorable awards in foreign countries and made large sums by furnishing boats for life-saving service for Great Britain and other lands. Nevertheless, the honor of inventing the self-righting life-boat is strenuously claimed for William Wouldhave, particularly by his fellow-townsmen and parishioners of South Shields. The story is that soon after a wreck, accompanied with a terrible loss of life, which occurred at Tynemouth in September, 1789, Mr. Wouldhave noticed a wooden dish floating on the surface of a well, which, on being accidentally struck by his finger, when he was assisting a woman to raise a skeel of water, turned bottom upward, and instantly righted itself again. Capsizing it again several times, he noted that it always righted itself. He discovered the self-righting principle then and there, and soon after made a model life-boat of tin, which he offered to exhibit to the ship-owners and mariners of South Shields as a suitable boat for rescuing persons from wrecks. The affair was greatly talked about, and a committee consisting of gentlemen connected with the merchant marine was appointed to test the model and any others that might be offered for inspection. Greathead, the boatbuilder above mentioned, exhibited a model at this time, and upon testing the merits of the boats Wouldhave's proved to be self-righting and unsinkable by any water it might ship. Greathead's model failed in these respects, though in others it was pronounced a good sea-boat. Mr. Greathead, however, was what Mr. Wouldhave was not, a shrewd business man. He made improvements in his model, adopting some of the features of Lukin's patent above mentioned and some of Wouldhave's, and it was not long before he had introduced it into actual service, not only in Great Britain, but elsewhere. Hence his name has become famous as the inventor of the life-boat, while Wouldhave's name was known to few but his townsmen as the actual and original inventor. The first model made by Wouldhave is now in the Free Library Museum at South Shields. His tombstone, in St. Hilda's Church-yard, bears a life-boat carved on it, and above the gaselier in the church a model life-boat is suspended in memory of him.

"BULLS" AND "BEARS."

JONESBORO, Ark.

Explain how “bulls” and “bears” operate to affect the prices of stocks and provisions.

S. W. Morehead.

Answer.—The means used to “bull” and “bear,” or raise and depress, the prices of stocks, grain, provisions, etc., are innumerable, varying with the needs of the times, but influenced much more by the combinations of capitalists and brokers. The “bulls” magnify every circumstance favorable to the appreciation of the stocks they hold or have agreed to take at a given time, while those who have contracted to deliver such stocks, or who for any reason wish to buy, do all in their power to depreciate them, and are therefore nicknamed “bears.” Any one who has ever witnessed a bull and bear fight will not question the appropriateness of these terms as applied to the combatants in the exciting wars among the kings of the stock board. The bulls struggle to toss the stocks higher; the bears squeeze and tug to force the prices down. The former resort to all kinds of expedients to induce small holders to cling fast to their stocks instead of putting them on the market. They persuade them by direct appeals, or by circulating encouraging reports, that these stocks are bound to rise rapidly in value; and they often combine to buy up the stock of the few who persist in selling, so as to “corner” the market. Not content with fair means, they sometimes enter into combinations with one another, and employ third parties to buy and sell stocks of the same description on ’Change, in such a way as to create the impression that there is a greater demand for them than there really is, when in fact the sales are never consummated, or merely amount to an exchange among themselves. Often, when neither the foreign nor home news was favorable to their purposes, false reports have been telegraphed through the country by interested parties, to affect the stock board. Similar methods are pursued on boards of trade.

ORIGIN OF POSTOFFICES.

Waukesha, Wis.

What country first established a postal system for transmitting the mail? When was postal communication established in America? Give us a few facts on this subject.

J. J. S.

Answer.—Couriers for carrying royal or government dispatches are mentioned in histories of the earliest times. Royal posts existed in Assyria, Persia, Greece, and Rome. The name postoffice originated in the posts, or stations, at intervals along the roads of the Roman Empire, where couriers were kept in readiness to start on the instant. But such posts were not used for transmitting private letters. The first postal system for commercial and private correspondence appears to have been established between the Hanse Towns early in the thirteenth century. In the reign of the Emperor Maximilian I., of Germany, letter posts were established by the Princes of Thurn and Taxis, connecting the chief cities of Austria and Lombardy, and later, 1516, the same princes connected Vienna and Brussels in the same way. Maximilian's successor, Charles V., encouraged still further extension of this private postal system by repeated enfeoffments or special franchises, until all the great commercial centers of his vast empire, from Vienna to Madrid, from the Adriatic to the North Sea, and intervening places, were brought into regular postal communication. Far back in the twelfth century the University of Paris, whose students, gathered from all civilized nations, numbered not long after this over 25,000, employed foot-runners to carry letters for its members to all parts of Europe. But not until 1524 was permission granted to the royal French posts to carry other letters than those for the government and the nobility. London merchants established a postal communication of their own with France and other continental countries as early as the fifteenth century, and it is evident that, although the royal post of England established in the thirteenth century was intended and long restricted to the transmission of government dispatches only, it had gradually become a vehicle for private correspondence. In 1581 Thomas Randolph was appointed the "Chief Postmaster" for England, with authority to establish and supervise post-houses and regulate the fees charged by postmen, but apparently without authority to receive and handle mail matter, which was left largely to the discretion of the postmen themselves. Not until the time of James I. of England was a postmaster for foreign parts appointed, and steps taken by the government to establish regular running posts, going day and night, for the transmission of letters for the general public. In 1635 such a mail was established to run weekly between London and Edinburgh, and soon eight other lines were instituted.

In this country, Massachusetts provided by legislation for the postal system as early as 1639, and Virginia in 1657. A monthly post between Boston and New York was instituted in 1672. In the beginning, letters arriving in this country from beyond the seas were delivered on board the ship. Letters not called for were left by the captain at a coffee-house near the wharf, where they were spread on a table or shelf, awaiting call. Persons calling not only took charge of their own letters, but of those of acquaintances in their neighborhood, either delivering them in person or leaving them at the minister's or some magistrate's office to be inquired for, or announced in church. These coffee-houses gradually grew into common use for letters between cities and the interiors, until regular posts were instituted. One of the first acts of the Continental Congress was the establishment of a general postoffice department, and the appointment of Benjamin Franklin, who had enjoyed large experience in the British colonial postal service, as the first Postmaster General.

FINANCIAL CONDITION OF FRANCE.

HAMILTON, N. M.

> What is the financial condition of France as compared with other European countries? Is she prepared to cope with Great Britain in case of a war between them?

E. L. EASDALE.

Answer.—France is carrying a larger national debt than any other nation. It amounted at the close of the fiscal year 1882 to $4,683,840,000—nearly a billion dollars more than that of Great Britain. Besides this, like our own States and minor political divisions, the departments and municipalities of France are carrying local debts amounting in the aggregate to an immense sum. The debt of Paris in September, 1880, was 2,295,000,000 francs, or about $450,000,000. The national debt is well distributed among the people, there being in 1881 as many as 4,617,900 holders, receiving 851,909,901 francs annually for interest. So long as this interest, or "rente," is paid promptly these holders are, for the most part, content with the government; but should the latter plunge the country into a costly war, rendering it necessary to suspend payment of the interest, and jeopardizing resumption

of such payments, a popular revolution would in all probability ensue. This enormous national debt will indisputably prove a source of weakness to the government and the nation In the event of a foreign war. The imperial debt of Germany in 1882 was only $120,197,528. Add to this the debt proper of Prussia, $493,821,812, and that of the other constituent states of the empire, $735,608,892, and the total was $1,349,728,232. The imperial debt of Austro-Hungary the same year was $1,107,978,118, which, added to the Austrian debt proper, $176,914,016, and the Hungarian debt proper, $400,532,142, made a total of $1,685,424,276. The public debt of Italy in 1882 was $2,042,000,000; of Spain, $1,826,613,093; of Great Britain, $3,814,500,000; of Russia, $4,314,607,500; of the United States, $1,918,312,294.

Undoubtedly the industrial condition of France is better than that of any other European country, except Great Britain, Belgium, and Holland. The French people have been accumulating wealth at a remarkable rate since the Franco-German war, and in this respect France is stronger than her great continental neighbors.

The following table, compiled from Mulhall's "Balance Sheet of the World," shows the estimated capital or wealth of a few of the principal nations of Europe in 1880:

Nations—	Total wealth.
Great Britain	$44,800,000,000
France	37,085,000,000
Germany	30,375,000,000
Russia	17,700,000,000
Austria	15,250,000,000
Italy	9,300,000,000
Spain	6,865,000,000
Holland	5,650,000,000

The next table gives the per capita, or rate of wealth for each inhabitant, less the per capita of the public debt:

Nations—	Per capita of wealth.

Great Britain	$1,185
France	900
Germany	650
Russia	180
Austria	335
Italy	235
Spain	255
Holland	1,310

So much for the financial condition of France. As regards her ability to cope with England in the event of war, it is largely a matter of opinion. One hazards little in predicting that, if her people stand united, France is almost impregnable at home to any assault from Great Britain. So is the latter against any attack from the former, except in Ireland. On the sea England's navy is far more than a match for that of France, whom she would easily strip of all her colonial possessions; but France, with a few Alabamas, could quite as easily drive Great Britain's merchant marine from the high seas, and injure her commerce even more than the Confederates did ours during the recent rebellion.

BAROMETRICAL QUERIES.

WILBER, Kan.

1. What causes the mercury to sink in a barometer before a storm? 2. How do persons foretell the state of the weather from the movements of the barometer? 3. How far ahead can storms be predicted?

F. J. ELLIOTT.

Answer.—The sinking of the mercury in the tube of a barometer is due to the lightness of the atmosphere, which is indicative, in most cases, of humidity, or aqueous vapor, in the air. The construction of a mercurial barometer may be stated in a few words. A glass tube, about 33 inches in length, open at one end, is filled with mercury, and while the unsealed end is covered, is inverted in a basin of mercury. As soon as the cover is

removed the mercury in the tube will flow out until it stands about thirty inches above the mercury in the basin. At that point the pressure of the air upon the liquid in the basin is equal to the pressure of the liquid in the tube (the space in the upper part of the tube being a vacuum) and the flow ceases. When the air becomes heavier its pressure upon the basin will be greater and force the mercury in the tube higher; if the air becomes lighter the mercury in the tube will sink. The barometer therefore shows directly only the weight of the atmosphere, but thereby indirectly the future state of the weather is indicated. 2. This is explained in "Our Curiosity Shop" for 1881, pages 144-5. 3. How far ahead the changes of weather can be predicted depends upon so many other considerations besides that of the mere weight of the atmosphere, varying in different seasons of the year and different localities, that no answer suited to all can be given. In some instances storms have been predicted from observations of the barometer alone as much as thirty-six to forty hours before their arrival. The United States Signal Service bases its weather predictions not only on barometric phenomena, but on telegraphic reports from a multitude of stations of the temperature, humidity, clouds, direction, force and rate of motion of the winds, etc. In some cases it has given notice of storms starting in the Rocky Mountains and traveling eastward sixty hours before their arrival on the Atlantic seaboard.

EXEMPTIONS OF PRE-EMPTIONS AND HOMESTEADS.

PLANKINGTON, D. T.

Can a judgment rendered in Iowa eight or ten years ago attach to a pre-emption after the latter is proved and title taken from the government?

C. P. WILTON.

Answer.—It is expressly declared in the homestead law that "no lands acquired under the provisions of this chapter shall in any event become liable to the satisfaction of any debt contracted prior to the issuing of the patent therefor." There is no such provision in the pre-emption law. Lands acquired under the latter law are protected from previous judgments only by the State or Territorial homestead and exemption laws.

BEST PEDESTRIAN RECORD FOR 100 MILES.

Oregon. Ill.

Oblige a reader and settle a dispute by stating whether 100 miles has ever been made by any walker or runner in a day of ten hours. Also give the quickest time for 100 miles, walking, and the same distance running.

H. W. Faragher.

Answer.—The best record for 100 miles walking, in this country, is 18 hours, 53 minutes, 4 seconds, by D. O'Leary, of Chicago; the best in England is 18 hours, 8 minutes, 15 seconds, by William Howes, London. The best record for 100 miles running, in this country, is 13 hours, 26 minutes, 30 seconds; the best in England is 13 hours, 47 minutes, and 50 seconds.

AGASSIZ, THE NATURALIST.

Spencer, Iowa.

Please give a biographical sketch of Professor Agassiz.

R. A. Coats.

Answer.—Louis John Rudolf Agassiz, the son of a Swiss Protestant clergyman, was born near Lake Neuchatel, May 28, 1807. After completing his academical course, he studied medicine at Zurich, Heidelberg, and Munich, preparatory to becoming a physician. Meanwhile Spix and Martins had returned from Brazil with a valuable collection of fossil fishes; and when, in 1826, the death of Spix made it necessary to select some one to continue the classification of his specimens, the choice fell upon Agassiz, who had already shown great ability in zoological research. Thus suddenly, at the age of 18, he began what was to be his life-long study. His next work was the study of the fresh water fishes of Central Europe, of which he published a history in 1839. In 1834 he paid his first visit to England, drawn thither by the tempting field of investigation in the fossils of the Devonian rocks. At about this time Agassiz commenced a new classification of fishes, based upon the character of the skin. Four years later he accepted a

professorship at Neuchatel; and while there published his works on “Fishes of Central Europe.” “Mollusca,” and “Glaciers.” The last named work was the result of his study with Charpentier, during the year 1840. In 1847 he came to the United States, and became Professor of Zoology and Geology in Harvard. His life in this country was characterized by increased vigor as a writer. Failing health made a change of climate necessary in 1865, and with his wife and a company of assistants he visited Brazil. Later he explored the Southern Atlantic and Pacific shores of North America, gathering much valuable material for future study. His last great work was the establishment of a school for the study of marine zoology, on the island of Penikese, the gift of Mr. John Anderson, of New York, who also donated $50,000 as a permanent endowment. Professor Agassiz’s death occurred Dec. 14, 1873.

POSTMASTERS GENERAL AND THE CABINET.

FAIRBURY, Ill.

State who was the first Postmaster General of the United States, and who was the first Postmaster General admitted to a seat in the Cabinet.

E. E. MCDOWELL.

Answer.—From the organization of the Federal Government down to the year 1829, the Postmasters General were not recognized as members of the Cabinet. The first Postmaster General under the present Constitution was Samuel Osgood, of Massachusetts, appointed by President Washington, Sept. 26, 1789. He was regarded as the head of a bureau. On the accession of President Jackson he nominated William T. Barry, of Kentucky, to the office of Postmaster General, and invited him to a seat in the Cabinet, since when the head of the Postoffice Department has been considered a member of the Cabinet

TO DISTINGUISH SEX OF FOWLS.

KEARNEY, Neb.

Is it possible to distinguish the sex of fowls by the noises they make?

SUBSCRIBER.

Answer.—An experienced poultry-raiser gives the following rules, which he says a close observer can soon learn to apply without mistake: The drake wheezes, the duck quacks. The Guinea cock and hen both have a peculiar, disagreeable chatter, but the hen sometimes says "buckwheat" or "go back" which the cock never does. The peacock can be distinguished, even when only a few months old, by the foxy red pinion feathers of his wings. In the case of turkeys, the breastbone of the cock is turned out at the front point, while that of the hen is straight. As to geese, the gabble of the common, the Embden and the Toulouse ganders is faster, finer, and higher than that of the goose, which is a slow, low bass; and the screech of the gander is fine, loud, and clear, while that of the goose is a rough bass. Both gander and goose of the English gray geese have a coarse screech and gabble, but the screech of the goose is lazy and seems to be partly broken, making two sounds, while the gander gives one clear, loud screech without any break in it. The screech of the African gander is loud and hoarse, while that of the goose is clear and stops abruptly, as if bitten off at the end. The Chinese gander gives one loud, clear screech, but that of the goose seems to be broken, making two different sounds, as if the first were made by forcing her breath out and the other by drawing it back.

INTERNATIONAL DATE LINE.

ST. PAUL, Minn.

What is meant by "an international date line?"

CONSTANT READER.

Answer.—Every person traveling around the world from west to east, with his watch or chronometer set to the time of the place at which he started, will note that the sun comes to his meridian, or noon, four minutes earlier than his chronometer time for every degree passed over, one hour for every 15 degrees, and twenty-four hours for 360 degrees, the total circuit of the earth. In other words, every one who completes such a journey gains a

day, and to dispose of this superfluous day so as to make his reckoning correspond with that of his starting place, he must call the day on which he gets back (or on which he passes some certain point or meridian line) and the next following day of the week and month by the same name and date; thus having two Mondays, for example, together. On the other hand, every person traveling from east to west loses a day in making a complete circuit of the earth, and to correct his calendar must skip one day of some week.

Suppose it were universally agreed that this correction of the navigator's reckoning should be made at the 180th degree of longitude west and east from Greenwich, Eng., then this would be the international date line. Unfortunately, now, there is no such universally accepted line, although most merchant vessels of all nations do make the correction at the meridian above named. So it often happens that sailors in the Pacific Ocean, because their vessels reach the 180th meridian coming eastward on Sunday enjoy two Sundays together, and going westward have two weeks without any intervening Sunday. It has been proposed to fix by international agreement upon this or some other line for this correction of dates so as to make all ship calendars agree, but thus far a silly national pride and other insufficient reasons have prevented such an agreement. The meridian of Rome, as the center from which Christian civilization was disseminated both towards the East and West, has been proposed by some. It has the advantage of being nearly upon the meridian of the most of the great observatories of Europe—those of Modena, Verona, Naples, Palermo, Padua, Venice, Munich, Leipsic, Prague, Berlin, Gotha, Copenhagen, Uraniburg, and Christiana. This would locate the 180th degree of longitude in Behring Straits.

If such a line could be determined, and local calendars the world over be made to correspond, it would dispose of such absurdities in reckoning as exist now, when it is a fact that during five hours of every day there are three different dates in use in different parts of the world. For example: From 5:10 o'clock a. m. to 10:10 o'clock a. m. of to-day, Sept. 17, 1883, at Chicago, the inhabitants of the Navigator Islands, in the Pacific, are in the early part of their Sept. 18, while those of the Philippine Islands, about sixty degrees further west, adhering to their old calendar, are finishing Sept. 16. That is to say, from the time any given day of the week and month begins at the earliest place of reckoning to the time it ends at the latest place is about fifty-three hours. This is accounted for by the fact that places discovered

and receiving civilization by Eastern communication from Europe, and those receiving it by Western communication, took their dates from opposite directions without allowing for the day lost in circumnavigating the globe in the one direction and the day gained in circumnavigating it in the other. The Philippine Islands were discovered by Magellan, sailing westward, and conquered by a Spanish expedition dispatched from the west coast of Mexico, which accounts for the use there of a dating later by a day than that of the neighboring island of Hong Kong, on the China coast, and the Japanese islands; in fact, the latest dating of any place on the globe.

CERTAIN RIGHTS OF MARRIED WOMEN.

FORT WORTH, Texas.

Is there any State in the Union where a man is not compelled to divide his property with his wife in case they separate? 2. What is the proper pronunciation of "dude?"

E. G. HOWARD.

Answer.—All States, except California and Indiana, give the wife a dower right in her husband's property. In case of voluntary separation, she may agree to waive a part, or all, of her right; or the husband may concede more than her dower right, and in case the agreement is reduced to writing and properly acknowledged, it is binding upon both parties, the separation being in other respects in conformity with law. In case of a divorce for the wife's fault, she loses her dower right. If it is for the husband's fault, the court will maintain her dower rights and also award her alimony proportioned to her husband's income, to be paid by him at stated periods. 2. Pronounce it dood.

QUERIES ABOUT NEBRASKA.

TABOR, Iowa,

Please inform one of your readers what portion of Nebraska is open to homesteaders. Please give some facts in regard to water and drought. I am told there are valuable lands, well watered, in

Custer County. Any facts concerning the lands of Central and Western Nebraska will be gladly received.

HOME-SEEKER.

Answer.—Most of Nebraska between Ft. Kearney and the western State line is open to homesteaders, but perhaps the greatest immigration at this time is to the Niobrara Valley. The Platte Valley is also very fertile. The agricultural country extends 180 miles west of the Missouri River, and produces great harvests of grain, flax, hemp, and all vegetables: while south of latitude 42 degrees the common small fruits grow in abundance. When Central Kansas and Nebraska are settled, what is now generally regarded as the "great corn belt" will be under cultivation. The portion of the State devoted to grazing comprises 23,000,000 acres, generally well watered, with Ogallala as a center. Except in the valleys, the water lies from 100 to 200 feet below the surface of the ground, and is obtained by boring. The sandy tracts are subject to drought, but where the subsoil is dry clay the ground is usually moist. Custer County is settling rapidly, although it has the reputation of being sandy, and adapted for the most part only to grazing. The mean temperature of the State is in winter from 22 to 30 degrees, and in summer from 70 to 74 degrees. The rainfall (greatest in May and June) averages about thirty inches in all but the extreme northwestern corner of the State.

FEUDALISM.

TOLONO, Ill.

Please give the definition of feudalism?

H. B. HASKELL.

Answer.—Feudalism is the state of society in which all landed property is considered as belonging to the crown. It is apportioned by the Kings to the nobles, as feudatories, upon condition that they render annually a certain amount of military service. These proprietors may, in turn, partition their lands to sub-tenants in consideration of like military service.

Feudal proprietors at first held their lands from a superior for life; later as an inheritance. The great feudatories lived in fortified castles, surrounded

by villages of peasants who tilled their lands. In all matters of jurisprudence they exercised supreme authority over their dependents. To other feudatory lords each might stand in the relation of friend or foe, though he met with them as peers in the periodical councils of the realm. Among the services required from their dependents or vassals, were military service, when called upon, contribution toward the expenses of war, toward ransom of their lord if taken captive, toward marriage expenses of his son, and dowry of his daughter.

ADELINA PATTI.

KANKAKEE, ILL.

Decide whether Adelina Patti is a native of this country, and settle a dispute. Also, please tell her true maiden name and the main facts of her life.

Cymbeline.

Answer.—Adelina Patti's real name before her marriage was Adele Juana Maria Patti. She is a native of Spain, being born at Madrid April 9, 1843. She inherited her talent to some degree from her mother, Mme. Barilli Patti, a prima donna of no mean reputation. It is stated that she sang "Norma" at the Grand Theater, Madrid, on the evening before Adele's birth, and, as she lost much of the power and sweetness of her voice after that event, she always maintained that it had gone from her into the child. Adele has been claimed as an American, because the family came to this country the next year after her birth, and her brilliant fame dawned upon her in New York City. At the age of 9 she made her first appearance before the public, and made the tour of Canada with Strakosch and Ole Bull. She made her debut in New York City March 3, 1854, at Paul Jullien's concert, in the City Assembly rooms. Then she accompanied Gottschalk, the great pianist, to the West Indies. It was at this time that she sung in costume with Signor Barilli at Havana the duet in the "Barber of Seville" with such effect that the audience became excited to such a pitch and clamored so wildly for her to reappear that she ran away in a fright, and nothing could persuade her to return. Returning to New York she was more popular than ever. It was in November of 1859 that the managers of the Academy of Music, New York,

after a long period of unprofitable engagements which threatened to end in financial ruin, brought forward Adelina Patti as Lucia. The result was an immense success. From that time she was the pet of the metropolis.

She made her debut in London as Amina in "La Somnambula" in 1861. In England and on the Continent she soon won her way to the first rank among prima donnas. Devotees of the opera, of all ranks, showered favors upon her. The Emperor of Russia, in 1870, conferred on her the Order of Merit. Her voice is an unusually high soprano of rich, bell-like quality, and remarkable evenness of tone, to which qualities she adds purity of style and high artistic finish. Equally at home in the tenderness of deep passion and the sprightly vivacity of light comedy, she has also sung with success in oratorio. She was married in London July 29, 1868, to the Marquis de Caux, an almost impecunious scion of the old French nobility. It was an unhappy alliance and has ended in a divorce granted by the French courts to the Marquis, in 1876. According to French law she is not entitled to marry, but, nevertheless, she now claims to be legally married to Nicolini.

VOTING—RIGHTS AND RESTRICTIONS.

MOUND, La.

1. Are there not States where citizens over 21 years of age are not permitted to vote without a property qualification? 2. If so, has the representation of such States in Congress been reduced in proportion, as would seem to be required by the United States Constitution? 3. Do the peeresses entitled to seats in the English House of Lords ever occupy them and vote as members of that body?

W. R. JOHNSTON.

Answer.—1. Yes, and we gave their names in these columns recently. Rhode Island is the most exacting one of them. 2. No. 3. Yes.

COLUMBIA RIVER.

ONARGA, Ill.

To settle a dispute, please state the precise place where the Columbia River rises. Also give its length, and tell how far it is navigable.

HUGH E. SUTTON.

Answer.—The Columbia River rises in a trivial lake on the Western slope of the Rocky Mountains, in latitude 50 deg. 31 min. north, and longitude 116 deg. west of Greenwich. It is a swift, tortuous stream, cutting its way through many wild, deep gorges, or canons, and obstructed by numerous rapids and falls, until it reaches the foot of the Cascades, a series of rapids where it makes its way through the Cascade Mountains. Here the scene on either hand is most impressive, rising in places to the height of sublimity. From where the Clarke River fork enters to the sea the Columbia forms the boundary between Oregon and Washington Territory. Its total length is variously estimated, the best authorities making it between 1,400 and 1,450 miles. It is navigable for sea-going vessels of 300 tons burden to the head of tide water, at the foot of the Cascades, 160 miles, and steamboats ply on it above this, both below and above the narrow known as the Dalles, in all 485 miles more.

THE POET LOWELL.

POPLAR CREEK, Ill.

Please give an account of the life of James Russell Lowell.

H. L. WILSON.

Answer.—During the war with Mexico there appeared a series of humorous poems by Hosea Biglow, aimed against the war and slavery, which made not a little stir, not only in literary circles but in all classes of society. The real author was James Russell Lowell, a native of Boston, and already known as a poet through his "Legend of Brittany," published in 1844. In 1854 he succeeded Longfellow as Professor of Modern Languages at Harvard. During 1857-62 he was editor of the "Atlantic Monthly," and 1863-72 of the "North American Review." In 1869 he published a volume of poems and in 1870 a second volume, followed in 1871 by "My Study Windows." Four years ago he became United States Minister to the Court

of St. James. In literature Mr. Lowell has attained to well-deserved distinction on both sides of the Atlantic, and as a diplomatist he has acquitted himself with honor.

HALLOWEEN.

LANSING, Mich.

Give the origin and history of Halloween and describe some of the sports.

A READER.

Answer.—For the origin and history of Halloween see Our Curiosity Shop for 1880, page 31. Some of the most common of the sports connected with it are these: If you go down the cellar stairs backwards or into a dark room, holding a lighted candle in one hand and a looking-glass in the other, the face of your "destiny" will appear over your left shoulder. Walk around the house three times with a broom over your right shoulder, and you will see the same person, or go down cellar backwards combing your hair and carrying a candle. These things must be done at exactly midnight. Let some one of a company "name" a number of apples, and drop them in a pail of water. Let each of the others try to take one out with the teeth alone, and so decide his or her fate. For other sports and superstitions associated with Halloween see "Chambers' Book of Days."

MARINE HISTORY—"OLD-TIMERS."

FRANKFORT, Mich.

In answer to H. H. H., of Chicago, who asks in Our Curiosity Shop which is the oldest lake craft now in service, I will say: The oldest lake craft now in service is said to be the Racine, built at Cleveland in 1844; the next is Genesee Chief, 1846. Among some of the other old-timers still in service are the barge Seminole, 38 years old; Pilgrim, 35 years; Two Brothers, 37 years; Reindeer, 35 years; schooners Arcturus, 30 years; Cascade, 30 years; Elbe, 30 years; Sonora, 29 years; Clipper City, 29 years; Vermont, 30 years; Pilot, 35 years; Harriet Ross, age unknown. The oldest American vessel now coasting on the ocean is the bark Amethyst, built in 1822. The

following will prove of interest to old Chicagoans, who will no doubt recollect the circumstances: The first craft built in Chicago was the sloop Clarisa, 1836; the first steamboats, James Allen, 213 tons; G. W. Dole, 162 tons burden, built in 1838. The first sail arrival at Chicago was the schooner General Tracy, from Detroit, in 1803. The first steamer arrival was the Superior, with United States troops, in 1832. The first tugboat in Chicago harbor was the Archimedes, a side-wheeler, exploded in 1852. The schooner Illinois was the first sail craft to enter the Chicago River over the bar, July 14, 1834. The schooners La-Grange, United States, Oregon, and Illinois were some of the pioneer packet vessels sailing between Buffalo and Chicago in 1830, carrying passengers and freight. The little steamer called Chicago plied on the river, and in 1836 carried the Governor and party up to Bridgeport, where the first shovelful of sand was dug for the canal.

In connection with the above, to show what a vessel can do in her time, I will mention as an example: The old packet ship Great Western, built over forty years ago, plying between New York and Liverpool, 1,800 tons burden. This vessel sailed twenty-nine years in the packet line without losing one of her crew; also during 116 trips she never lost a sail or spar. She has carried 30,000 passengers from Europe to America; 200 marriages, and 1,500 births occurred on board of her. Ten years ago she was sent to the Pacific Ocean, being a very successful craft. She caught fire and burned to the water's edge in San Francisco during the past summer. For marine history of United States, see my articles in THE DAILY INTER OCEAN, May 10, 1882, July 28, etc.

CHARLES BURMEISTER.

TO POSTMASTERS.

FAIRMOUNT, Minn.

What is the object of the little patch of leather, open at the top, riveted to the inside of some of the United States mail-bags, not far from the top? I have inquired of several persons, including postmasters at one or two places, but none of them seem to know. Only about one in three or four mail-bags have it.

A FRIEND.

Answer.—The small pouch you refer to is a pocket for any memorandum the postmaster may wish to send with the bag. In case a mail-bag anywhere in the Northwest needs repairs it should be sent to the Chicago Postoffice, which has a repair shop connected with it. The postmaster sending such a bag should put in this pouch a memorandum showing from what office it is sent. This is but one of many instances in which it serves a good purpose. It is to be found only in the new mail-bags.

STRONG DRINK OF THE HEBREWS.

VICTORIA, Neb.

> We read that in the time of Samuel there were people who drank no wine or any strong drink. Are we to suppose that they had any stronger drink than fermented wine? Had they any distilled spirits?

READER.

Answer.—By "strong drink" in the Old Testament we are not to understand distilled spirits, for alcohol was not discovered until the present era. The term refers to three beverages of the Jews—date honey, date or palm wine unfermented, and palm wine rendered intoxicating by fermentation, or by the admixture of stupifying ingredients while boiling. The latter was preferred, as fermentation made the wine bitter and harsh.

THE FATHERS ON PROTECTIVE TARIFF.

DAVENPORT, Iowa.

> On what authority does Our Curiosity Shop class Washington, Jefferson, Madison, Monroe, and, still more strange to say, General Jackson with the advocates of protective tariff?

FREE TRADER.

Answer.—The first Congress that assembled under our present Constitution passed the first tariff. In the preamble to that act it is expressly affirmed that such tariff was necessary "to pay the public debt, provide revenue, etc., and for the protection and encouragement of American

manufactures." The necessity of such protection was urged in the messages of Presidents George Washington, Thomas Jefferson, James Madison James Monroe, John Q. Adams, and Andrew Jackson. In his annual message of Dec. 15, 1802, among other proper objects of government, Jefferson enumerates the following; "To foster our fisheries as nurseries of navigation and for the nurture of man; and to *protect the manufactures* adapted to our circumstances." In his annual message of 1806, apprehending a surplus revenue, he says; "To what other objects shall these surpluses be appropriated, and the whole surplus of impost after the entire discharge of the public debt? Shall we suppress the impost (or tariff) and give that advantage to foreign over domestic manufactures?" He then suggests that on a few articles the impost might be wisely suppressed, but in regard to the great mass of them he says; "The patriotism of the people would prefer its continuance and application to the great purposes of public education, roads, rivers, canals, and other objects of public improvement." In his message of Nov. 8, 1808, after referring with gratification to the increase of "internal manufactures and improvements," he expresses the hope that such establishments of manufacturing industry "formed and forming, will, under the auspices of cheaper materials and substance, the freedom of labor from taxation with us, and of *protecting duties* and *prohibitions*, become permanent." Says President Monroe, in his inaugural address of March 5, 1817; "Our manufactures will likewise require the systematic and fostering care of the government. Possessing, as we do, all the raw materials, the fruit of our own soil and industry, we ought not to depend, in the degree we have done, on supplies from other countries. It is important, too, that the capital which nourishes our manufactures should be domestic, as its influences in that case, instead of exhausting, as it may do in foreign hands, would be felt advantageously for agriculture and every other branch or industry. Equally important is it to provide at home a market for our raw materials, as by extending the competition it will enhance the price and protect the cultivator against the casualties incident to foreign markets."

In his message of Dec. 7, 1830, General Jackson says: "The power to impose duties on imports originally belonged to the several States. The right to adjust these duties, with the view to the encouragement of domestic branches of industry, is so completely incidental to that power, that it is difficult to suppose the existence of the one without the other." He proceeds to say that the denial of the right of the Federal Government "to exercise

this power for the purpose of protection would he to present the anomaly of a people stripped of the right to foster their own industry, and to counteract the most selfish and destructive policy which might be adopted by foreign nations. This surely cannot be the case. This indispensable power, thus surrendered by the States, must be within the scope of the authority on the subject expressly delegated to Congress. In this conclusion I am confirmed as well by the opinions of Presidents Washington, Jefferson, Madison, and Monroe, who have each repeatedly recommended the exercise of this right under the Constitution, as by the uniform practice of Congress, the continued acquiescence of the States, and the general understanding of the people." In a letter to Dr. Coleman, of North Carolina, dated at Washington City, April 20, 1824, General Jackson wrote: "If we omit or refuse to use the gifts which Providence has extended to us, we deserve not the continuation of His blessing. He has filled our mountains and our plains with minerals—with lead, iron, and copper—and given us a climate and soil for the growing of hemp and wool. These being the great materials of our National defense, they ought to have extended to them adequate protection; that our manufacturers and laborers may be placed in a fair competition with those of Europe, and that we have within our country a supply of those leading and important articles so essential to war. I will ask what is the real situation of the agriculturist? Where has the American farmer a market for his surplus produce? Except for cotton he has neither a foreign nor a home market. Common sense at once points out the remedy. Take from agriculture in the United States 600,000 men, women, and children and you will at once give a market for more breadstuffs than all Europe now furnishes us. In short, sir, we have been too long subject to the policy of British merchants. It is time we should become a little more Americanized, and instead of feeding paupers and laborers of England, feed our own, or else in a short time, by continuing our present policy, we shall be rendered paupers ourselves." In consonance with these sentiments, Jackson, together with Martin Van Buren and Silas Wright, the leaders of the Northern Democracy, and the great mass of the Jackson representatives from the free States, voted for the tariff of 1828, the highest protective tariff ever levied in this country before the war of the rebellion. In the next subsequent decade the Democratic party, led by the cotton States, and determined to defeat the Whig party led by the great Protectionist, Henry Clay, espoused free trade.

DON CARLOS.

KINGMAN, Kan.

Who and what was Don Carlos?

A READER.

Answer.—1. There was a Don Carlos in the sixteenth century. He was the son of Philip II., of Spain; was born at Valladolid in 1545, and recognized as heir to the throne in 1560. But owing to his dullness at school, and distaste for study, the King deemed him unfit to reign over his subjects, and invited the Prince's cousin, the Archduke Rudolf, to Spain, intending to educate him for the throne. Jealous of this usurper, Don Carlos conceived a strong dislike to all the King's counselors, whom he plotted to destroy. But having foolishly divulged to his confessor that he intended to murder some one, that some one was suspected to be the King. The stupid Prince was tried and convicted of high treason, and left to the mercy of the King. Philip declared that he could make no exception in favor of such an ungrateful son, but there is found no formal record of any sentence of death. Don Carlos died soon afterward, at the age of 23. 2. The Don Carlos who has of late years been causing so much trouble in Spain, as a pretender to the throne, is the eldest son of the brother of King Fernando VII. His wife is Princess Marguerite, of Bourbon, daughter of Duke Carlos III., of Parma. He is a brother of the ex-Queen Isabella, and uncle to the present King.

EDUCATION AND CHRISTIAN BENEVOLENCE.

WEXFORD, Mich.

What proportion of the benevolent and educational institutions in the United States are built and operated by Christians, and what by infidels?

F. J. HALL.

Answer.—In the report of the United States Commissioner of Education for 1880 the following statistics of schools in the United States not under State control are given: One hundred and sixty-two commercial and business colleges, generally self-supporting, and unconnected with, or not

dependent on, Christian or other benevolent organizations or private benevolence. There were 232 kindergartens, most of which were private schools and self-supporting. Such as were charity schools, like the free kindergartens of certain cities, were supported, for the most part, by Christian benevolence. There were 1,264 "schools of secondary instruction," such as seminaries and academies; 355 asylums for orphans, 142 theological schools, and 227 "institutions for the superior instruction of women." Most of all four classes of schools were and still are under the direction of Roman Catholics, Protestants or Hebrews. Of the 364 universities and colleges, only eighty are marked non-sectarian, and to these institutions are attached nearly all the 310 theological, law, and medical schools. There are forty-nine schools of science, (mining, engineering, agriculture, etc.), endowed with the National land grants, apportioned to the several States under act of 1862, the States providing in nearly every instance the grounds, buildings, apparatus, etc., and supplementing the income of the endowment fund. Even many of these schools, such as Purdue University, Indiana, Illinois Industrial University, and others, are indebted to private individuals, or county and city subscriptions for handsome contributions in money, lands, etc. Then there are thirty-five schools and collegiate departments of science not endowed by the National land grants or State grants, but almost wholly the product of private benefactions, the benefactors in nearly all cases being pronounced Christian philanthropists. The benefactions to educational institutions of the United States, (mostly denominational), in the years ending with 1880, amounted to about $60,000,000.

If by "infidels," you intend persons who disclaim all faith in Christianity, then it is doubtful if any of the above institutions were founded or are sustained to any degree worthy of mention, by an infidel. Even Girard, the founder of Girard College was not an out and out atheist or deist, though he was bitterly opposed to all existing sects, and had a strong aversion to the clergy of every denomination.

GENERAL E. R. S. CANBY.

ANN ARBOR, Mich.

Tell us something about General Canby.

A. B. D.

Answer.—Edward Richard Spriggs Canby LL. D., was born in Kentucky in 1807, graduated at West Point in 1839, and spent the remainder of his life on the warpath. His first post was in Florida (1839-42), but he was little known until the war with Mexico, when he fought with such valor at Cherubusco and the City of Mexico as to win the brevets of major and lieutenant colonel. From 1849 to 1861 he served on the Pacific coast, in Washington, and Utah Territory, and against the Navajoes, and at the outbreak of the civil war took command in New Mexico, where he was brevetted brigadier general at Valverde. Two years later he was commander of the expedition which captured Mobile, and there won the title of brevet major general. Soon afterward Generals R. Taylor and E. K. Smith surrendered to him. In 1866 he was made a brigadier general in the regular army.

In 1869, having served in several important commissions, and being worn out, he voluntarily consented to take charge of the Department of Columbia; and there he was treacherously shot by the chief "Jack," April 11, 1873, while trying to arrange for the removal of the Modocs from Northern California.

"PRECESSION OF THE EQUINOXES."

BLUNT, D.T.

> Please explain in the Curiosity Shop the meaning of the expression "Precession of the Equinoxes," and how the climate of the earth is affected by this phenomenon?

ARTHUR SNOW.

Answer.—As the plane of the earth's orbit crosses the equator at an angle of about 23½ degrees, the attractive force of the sun, moon, and planets, constantly exerted upon the earth, has a tendency to tilt the pole away from the sun and to draw the equator toward it. As a consequence, the sun crosses the equator each time a little farther west than the point where it crossed the last time preceding, and where it would have crossed on its return if there were no disturbing force. Originally it was said that the equinoctial point, or

place of crossing, went forward to meet the sun, and hence this phenomenon was called the precession of the equinoxes. But, from the fact that the equinoctial point really falls backwards on the celestial equator, toward the west, each time about 50 seconds of a degree, it is now very frequently termed the recession of the equinoxes. In consequence of this recession the seasons begin a little earlier each year, and it is estimated that in 12,800 years they will be reversed, our summer occurring when the sun is in the constellation that he now traverses in winter time. It requires about 25,000 years for the sun to complete one circuit of precession of the equinoxes.

COMET OF 1812 AND 1813.

LAKE FOREST, Ill.

Is it true that the comet now coming into view is the same as the one of 1812? When will it become plainly visible to the naked eye, and when will it be nearest the sun?

STAR-GAZER.

Answer.—It is generally admitted that the comet discovered by Professor Brooks on the 5th of September last, and now visible, with the aid of a good opera or field glass, in the constellation Draco, between the "Great Dipper," in Ursa Major, and the "Northern Cross," in the Constellation Cygnus, is identical with the comet of 1812, which was believed by the superstitious to prognosticate our last war with Great Britain. It will reach perihelion, or the point in its orbit nearest the sun, Jan. 25. It will increase in brightness rapidly from the first of December, and be plainly visible to the naked eye by the middle of that month. At its brightest it will be brighter than in 1812, but it will not equal at any time the magnificent comet of 1882. The period, as calculated in 1812, was 70.6 years. As the interval between its perihelion time, Sept. 15, 1812, and its perihelion passage, Jan. 25, 1884, will be but 71.5 years, it is not strange astronomers—considering the imperfections of astronomical science and art then as compared with the state of astronomy now—are not surprised at this small error in this comet's calculated orbital period.

LONGEVITY OF THE CIRCASSIAN RACE.

Garden City, Kan.

Is it a fact that the longevity of our race is on the increase? If so, what are the data from which this conclusion is reached? Is our physical strength on the increase, and what is the evidence? It has been agreed to leave these questions to you. One of the parties to the dispute is an ex-judge of the Supreme Court of one of the greatest States in the Union.

J. W. HOLMES, M. D.

Answer.—The above questions having been referred to one of the highest medical authorities in the West, a member of a State Board of Health, he replies as follows:

"It is a fact that the longevity of our race [i. e., the Caucasian or white race] is on the increase. Statistics published by the British Registrar show that during the last 150 years the average length of human life in the British Islands has been increased by nearly one-third. It is also true that the physique of the race is improving. I am sorry that I have not time to look up references for you; but any reasonably well-equipped life-insurance agent should be able to furnish them readily for the first question; and the *Journal of Anthropology* would supply evidence enough for the second. Dr. Nathan Allen, of Lowell, Mass., has made the subject a special study."

RAILROADS IN ILLINOIS.

COOPERSTOWN, Ill.

How many companies are there owning railroads in Illinois?

E. P. R.

Answer.—According to the commissioner's report for 1880-81, there were during the year fifty-four railroad companies operating roads in Illinois. Poor's "Manual" gives the names of sixty-five companies operating roads in the State in 1882. It is difficult to state how many companies own these roads, for every year many of them change hands by lease or sale. There are more companies owning roads than there are operating

companies. For instance, during the years 1880-81 six railroads were merged into the Wabash system, another was purchased by the Chicago, Milwaukee and St. Paul Railroad Company, and still another was leased for an indefinite period by the Cincinnati, Indianapolis, St. Louis and Chicago. Probably the next annual report of the Railroad and Warehouse Commission will show exactly how many proprietary companies are still in existence. We have no data for an answer to your other question.

FOREIGN IMMIGRATION.

MOUNT VERNON, Iowa.

From what countries is most of the immigration to the United States? What proportion of the immigrants can read and write? Are any of them well educated? What was the immigration last year?

F. P. F.

Answer.—During the sixty years included between 1820 and 1880, the following countries were represented in the immigration to the United States, as here shown:

England	894,444
Ireland	3,065,761
Scotland	159,547
Wales	17,893
Netherlands	44,319
Poland	14,831
Portugal	9,062
Russia	38,316
Austria-Hungary	65,588
Belgium	23,267
Denmark	48,620
France	313,716
Germany	3,002,027
Greece	385
Spain	28,091

Sweden and Norway	306,092
Switzerland	83,709
Turkey	619
Italy	70,181
All other countries	1,161,875

Most of the immigrants from Sweden and Norway, Germany, Austria, Denmark, Netherlands, and Scotland, are able to read and write; the majority of the others are illiterate. Many are very well educated, having enjoyed college privileges, and the advantages of travel. The total number of immigrants during 1882, was 788,992.

BASE OF THE METRICAL SYSTEM.

OMAHA, Neb.

Is it true that the unit of the metrical system is exactly the ten-millionth part of a quadrant of the earth, measured on a meridian? Please answer and settle a controversy.

AARON.

Answer.—It is not true. After all the pains taken by scientists to obtain the exact measure of a quadrant of a meridian of the earth, it is now conceded that this problem is still unsolved. In the latter part of last century, certain French astronomers and geodetic surveyors persuaded the French Academy of Sciences that they had succeeded in measuring so much of such an arc as enabled them to accurately determine the whole arc by geometrical calculations. In this belief what is now known as the metric system of measures was constructed, and under the French Republic, in 1795, the existing standards of French measures were adopted, based on the meter, the ten-millionth part of the earth's meridian quadrant as thus computed. According to this a meter is 39.368 American inches, or 39.37 English inches. But while later surveys have failed to determine the quadrant with absolute certainty, it is conceded that they have demonstrated the inaccuracy of the earlier surveys and computations, and what is now generally accepted as a very close approximation to an exact measure shows that the standard French meter falls short of the ten-millionth part of

the earth's meridional quadrant by its 1-5,400 part. That is, according to the progress of more extended geodetic measurements, brought down to 1875, the earth's meridional quadrant exceeds 10,000,000 meters by about 1,850 meters. Nevertheless the International Bureau of Weights and Measures very wisely adheres to the original standard meter, represented by the platinum meter of the French archives as the fundamental unit of the metric system.

EXECUTING FOR WITCHCRAFT.

OSHKOSH, Wis.

> Will our Curiosity Shop please tell us the facts about witchcraft at Salem and elsewhere. Respecting Salem witchcraft, give causes, number killed, cruelties practiced, and names and characters of the men upholding the persecutions?

H. F. FEHLANDT.

Answer.—The Salem witchcraft was only one of the results of the superstition, as old almost as man himself, that certain persons, through intimate connection with the spirit world, possess superhuman influence for evil over their fellow-men. The early Christians inherited the idea from their pagan forefathers, and in 1484 Pope Innocent issued a bull directing the inquisitors to search out and punish all guilty of such crimes. For nearly three centuries following the delusion reigned, so that in Germany alone more than 10,000 persons were executed in consequence of this bull, and in England, during the 150 years following the reign of Elizabeth, over 30,000 persons were sacrificed to this wild superstition. In fact witches were hung in the latter country as late as 1716, and in Scotland until 1722. Under these circumstances it is not strange that Englishmen in America partook of the fanatical excitement, and when in 1688 four children of John Goodwin, a respectable man in North Boston, began to show strange symptoms, immediately after receiving abuse from a disreputable Irish woman, the people should at once attribute them to witchcraft; the more so since three Bostonians had been hung already for that offense, and lately a book had been published in defense of the popular belief. Four years later the excitement culminated at Salem. The first alleged victims were in the

family of Samuel Parris, a clergyman. His daughter, niece, and two other girls began to show symptoms like those of the Goodwin children, and accused Tituba, an Indian squaw in the family, of bewitching them, though she stoutly protested her Innocence. Soon the number of bewitched increased, and likewise the number of accused. The excitement grew, being constantly fanned by those who should have been foremost in checking it. None were safe from accusation, and many, to save their own lives, accused their dearest friends and relatives. When Sir William Phipps became Governor of Massachusetts, in May, 1692, his first act was the appointment of a court for Suffolk, Essex, and Middlesex, consisting of seven judges: William Stoughton, the Lieutenant Governor; Chief Justice Nathaniel Saltonstal, who refused to act, and was replaced by Jonathan Curwin; John Richards, Bartholomew Gedney, Wait Winthrop, Samuel Sewall, and Peter Sergeant. Cotton Mather and Samuel Parris were among the chief Instigators of the prosecutions that followed. Under this tribunal twenty persons were hung, fifty or more tortured into confession of guilt; the jails were filled, and hundreds more were under suspicion, when the reason of the community awoke to a realization of the injustice and barbarity of such proceedings, and fanaticism was soon succeeded by bitter remorse. There is not space here to enumerate many of the tortures employed to extort confessions. The lash, the stocks, binding the sufferers in painful postures, as with neck and heels together; starvation and thirst, and other barbarities were exercised, until hundreds falsely accused themselves, their friends and neighbors, and even their dearest relatives, to obtain release.

AN ARMY LEGION.

CHICAGO, Ill.

> Please state how many men the Austrian and Belgic legions enlisted for the service of Maximilian I. of Mexico, contained. I would like to know somewhere near the number, whether it was 500 or 5,000 men.

CHARLES SEYMOUR.

Answer.—It is impossible to give a definite answer to this question. The military term “legion” was not a very definite term, as regards numbers,

even in the case of the old Roman legion, where it corresponded somewhat to the modern "army corps." Sometimes it numbered 3,000 men and at others 6,000 or more. In 1792 the whole army of the United States was officially designated the "Legion of the United States" the Infantry regiments being styled "sub-legions." This was not a popular organization and nomenclature with army men, and was soon abandoned. The term has been applied in modern times to divisions in the German, French, and other European armies, variously organized, and numbering from 2,500 to 5,000 men. It would be impossible, without reference to official records of Maximilian's government, to say what number of Belgians and Austrians were enlisted in his service; but it was less than 10,000 all told, and most likely, judging from facts in our possession, not more than 7,000.

RAPHAEL'S SUPREME MADONNA.

WINCHESTER, Ill.

Where was the Sistine Madonna executed? Where and by whom was it taken to Dresden?

MAGGIE HUSTON.

Answer.—The "Madonna di San Sisto" was executed by Raphael as an altar-piece for the Church of St. Sixtus at Piacenza, in Northern Italy. It is perhaps the most widely known of Raphael's works, and universally regarded one of his supreme efforts. Mrs. Jameson, renowned as an art critic, says of it; "For myself, I have seen my ideal once, and once only, there where Raphael—inspired, if ever a painter was inspired—projected on the space before him that wonderful creature which we style the Madonna di San Sisto." It was painted between 1517 and 1520. We are not positive as to when and by whom it was removed to Dresden, but think it was during the reign of Frederick Augustus II., King of Saxony from 1797 to 1854. This King did more than any of his predecessors to embellish Dresden.

AUTHOR OF "THE FLAG OF OUR UNION."

STANBERRY, Mo.

Will your Curiosity Shop give a short sketch of the author of the poem entitled, "The Flag of Our Union"?

J. M. H.

Answer.—George P. Morris was a native of Pennsylvania, born in 1802. From early manhood he followed journalism, and was the originator of the two newspapers, *The Mirror* and *The National Press*. For several years he was associated with N. P. Willis, and, under their united efforts, the *Mirror* became a leading literary, magazine, having among its contributors Poe, Bryant, Halleck, and Paulding. In 1853 Morris and Willis edited "Prose and Poetry of Europe and America." His reputation, however, chiefly rests upon his original poems, and of these the most familiar are "Woodman, Spare that Tree," and "The Flag of Our Union."

PENSIONS OF SOLDIERS OF 1812.

HAZELHURST, Miss.

Are the soldiers of 1812 entitled to pensions or land warrants? If so, how may they obtain them?

H. J. BRAINARD.

Answer.—By the act of Congress, approved March 9, 1878, any soldier of the war of 1812, or his widow, is entitled to a pension of $8 a month, provided he is not already receiving that amount, or more, as a pension; or, if receiving a pension of less amount, he is entitled to enough more to raise it to $8 per month. In addition he may claim 160 acres as a land warrant, granted to all soldiers who fought in the American army before 1855. For further information write to the Commissioner of Pensions, W. W. Dudley, Washington, D. C.

COUNTY LICENSES FOR DRAM-SHOPS.

HAMILTON, Iowa.

Can whisky be sold in Illinois outside of the corporate limits of a city by the drink? Are they not limited, under government license, to quantities of one gallon or more?

READER.

Answer.—Spirituous liquors cannot be legally sold in quantities of less than one gallon in any part of Illinois without a license, either from city, incorporated town, or village or county authorities. Counties are empowered to license dram-shops outside of incorporated cities, towns, etc.

CERTAIN CANADIAN AND AMERICAN CITIES.

RIVERTON, Iowa.

1. What is the population of the four largest cities of Canada and the four largest cities of the United States next the Canadian border? 2. If a man having a family takes a homestead claim must he forfeit his claim if his family refuse to accompany him?

SUBSCRIBER.

Answer.—1. In Canada: Montreal, 140,863; Toronto, 86,455; Quebec, 62,446, and Hamilton, 35,065. In the United States: Cleveland, 155,946; Buffalo, 149,500; Detroit, 116,340; Toledo, 50,143. 2. No.

M. TAINE, THE AUTHOR.

OMAHA, Neb.

Can you give me some information regarding M. Taine, author of a "History of English Literature?" 2. Where does Louis Kossuth reside?

DON QUIXOTE.

Answer.—Hippolyte Adolphe Taine, one of the foremost essayists and critics of our time, was born at Vouziers in Ardennes, France, April 21, 1828. After completing his education at the College Bourbon and the normal school of Paris, he published several works which attracted attention, and marked him as a polemic writer of power. In 1864 he was given the professorship of æsthetics in the School of Fine Art, Paris. Besides his controversial writings he has published several works on art and literature. 2. In Turin, Italy.

FATHER TAYLOR.

VESPER, Wis.

Please give a short sketch of, "Father Taylor," the sailor-preacher in Boston.

S. BOYNTON.

Answer.—Edward T. Taylor, better known as "Father Taylor," was a sailor during the war of 1812, and first acted a preacher while a prisoner at Dartmoor, England. In 1819 he was ordained by the American M. E. Church, and in 1828 was appointed to the Seamen's Bethel, in Boston. Warm-hearted and quick-witted, he won the hearts of the rough men there, and from them received his "title." He revisited England in 1832, and traveled in Palestine in 1842. During the famine of 1846 in Ireland he was chaplain in the United States relief frigate. He was born in 1794, in Virginia, and died in 1871.

LONDON.

COLUMBUS, Wis.

Please give us the derivation of the word "London."

WILL SMITH.

Answer.—There is a fable that London was founded by Brute, a descendant of Æneas, and called New Troy, or Troy-novant, until the time of Lud, who surrounded it with walls and named it Caer Lud, or Lud's town. But Haydn's "Dictionary of Dates" contradicts this statement, and writes the old name Llyndin, meaning "the town on the lake." The name is evidently of Celtic origin. It is claimed by some that there was a city on that same spot 1107 B. C., and it is known that the Romans found a city there called Londinium, A. D. 61.

THE HULLS—ALEXANDER HAMILTON.

LAWLER, Iowa.

1. Was General Hull, who surrendered at Detroit, a relative of Commodore Hull, of the United States frigate Constitution? 2. Of what nationality was Alexander Hamilton?

D. HALL.

Answer.—l. The distinguished revolutionary soldier, General William Hull, who was afterward condemned for surrendering to the British at Detroit early in the war of 1812-15, was an uncle of the naval hero who commanded the Constitution for a time. 2. Alexander Hamilton was born on the British West India island, Nevis, one of the lesser Antilles.

OLD POSTAL RATES.

CHICAGO, Ill.

Will you please inform us what the postal rates have been since the foundation of the system, and particularly the rates to Europe? If not convenient to give the latter for the whole period, give them for twenty years ago.

J. M.

Answer.—A detailed reply to this question cannot fail to interest the readers of Our Curiosity Shop, since it will enable them to appreciate more fully the strides of progress made in interstate communication since this government was formed. It is impossible to fully estimate the service cheap postage on letters, newspapers magazines, and books, and of late on seeds, samples of merchandise, etc., has rendered in the marvelous intellectual, moral, and material development of this country. The postal service is one of the most beneficent, as it is one of the most potent, forces in the control of the Federal Government. As a bond of union between the States its influence is of inestimable value. It is a life-long school of patriotism, minifying and almost annihilating the alienating force of distances, keeping the links of friendship bright and strong between old friends scattered throughout the land, familiarizing voters with the condition of all parts of the country, and fostering the common good in innumerable ways.

From the organization of the Postoffice Department, in 1786, to 1816 the rates on domestic letters (or letters for any place within the United States) were as follows: “For each piece of paper of which a single letter, or letter packet, may be composed,” under 40 miles, 8 cents; under 90 miles, 10 cents; under 150 miles, 12½ cents; under 300 miles, 17 cents; under 500 miles, 20 cents; over 500 miles 25 cents.

In 1816 the following schedule went into force: For a single letter carried not over 30 miles, 6¼ cents; less than 80 miles, 10 cents; less than 150 miles, 12½ cents; less than 400 miles, 18¾ cents; over 400 miles, 25 cents. Provisions for mailing newspapers were made as follows: Newspapers, under 100 miles or within the State where published, 1 cent; over 100 miles and out of the State, 1½ cents.

By the act of March 3, 1845, the rates were modified as follows: For each letter weighing less than half an ounce, if carried less than 300 miles, 5 cents; over 300 miles, 10 cents; each additional half ounce, double rates; drop letters delivered from the office where posted, 2 cents. The newspaper rates were: For papers containing less than 1,900 square inches, 1 cent each, if delivered within the State where printed and mailed, or out of the State but within 100 miles of publication office; for any greater distance, 1½ cents each; if conveyed less than 30 miles, free. Papers measuring over 1,900 square inches were charged magazine postage. Magazines, pamphlets, and other printed works were charged 2½ cents for the first ounce, and 1 cent for each additional ounce or fraction of an ounce, for any distance whatever. Bound books were unmailable. Carriage by private individuals on mail carriages, or by express, thenceforward, was prohibited. Two years later transient newspaper rates were raised to 3 cents, and prepayment was required; postage on unsealed circulars was raised from 2 cents to 3; newspaper postage to Oregon and California was placed at 4½ cents, and letters, via Chagres and Panama, 40 cents; between post towns in California, 12½ cents.

In 1849 the postage on transient newspapers was reduced to ordinary rates, but prepayment was maintained.

In 1851 the single letter was defined by weight instead of by piece, at a half ounce or under, and rates were greatly cheapened, as follows: For a single letter under 3,000 miles, 3 cents, if prepaid; otherwise, 5 cents; over

3,000 miles, 6 cents, or 12 cents. The postage on newspapers, which had been almost prohibitory in the early days, and had been maintained at high rates until this time, was now (1851) greatly reduced, as will be seen by comparing the following quarterly charges with the charges per copy given above:

Weekly newspapers, to actual subscribers in the county, free; under 50 miles and out of county where published, 5 cents a quarter; over 50 and under 300 miles, 10 cents; over 300 and under 1,000 miles, 15 cents; over 1,000 and under 2,000, 20 cents; over 2,000 and under 4,000, 25 cents; over 4,000, 30 cents. Postage on transient newspapers and circulars was also proportionately reduced, and books under 32 ounces were admitted to mail at 1 cent an ounce if prepaid, if not prepaid 2 cents.

Slight changes were made in 1852 and 1855, but it was reserved for the Congress of 1863 to make the next great step forward by making the rate of postage on all domestic letters uniform throughout the Union, at 3 cents for each half ounce or fraction thereof. At the same time the quarterly postage on newspapers and periodicals sent to subscribers, and not exceeding 4 cents, was made uniform for all distances, at the following rates; Weekly, 5 cents; semi-weekly, 10 cents; tri-weekly, 15 cents; six times a week, 30 cents; seven times, 35 cents. But in 1868 the law was so amended as to allow weekly newspapers to go to regular subscribers in the county free. No modification of domestic letter rates occurred after this until the new postal law of this year, which went into effect Oct. 1, reducing the single letter rate to 2 cents. An important change as to newspapers and periodicals was made in 1872, requiring prepayment in advance either at the mailing or the delivery office. In 1874 it was made payable at mailing office exclusively, and a still more important change was made in the reduction of the rate on such matter to only 2 cents per pound or fraction thereof.

Stamps and stamped envelopes were first introduced in 1851, the registry of valuable letters in 1855, the carrier delivery system in 1863, the money-order system Nov. 1, 1864, the postal-cards, at 1 cent each, in 1872.

The foreign postal rates not being subject to the will of this government only, but being a matter of international agreement, will be treated in a separate article.

STEAM PLOWS.

WEBSTER CITY, Iowa.

When and where were steam plows first used? How are they constructed, and how many acres will they plow per hour?

H. C. B.

Answer.—An apparatus for steam plowing was first patented in the United States Nov. 19, 1833, by E. C. Bellinger, of South Carolina. It was not received with sufficient favor by farmers or planters to encourage the manufacture of the machines. In England, Francis Moor took out a patent as early as 1769 for an engine to plow, harrow, and do other farm work without the aid of horses. Several other attempts at inventing steam plows were made, but all to no practical purpose, until 1810, when a Major Pratt patented a steam-plowing apparatus, employing two engines stationed on opposite headlands, and drawing plows by means of endless chains or ropes. An improved form of this machine was patented by Mr. Heathcote, M. P., in 1832, which is said to be the first that was ever worked successfully in the field. Alexander McRea made improvements on Mr. Heathcote's machine in 1846 and 1849; still the practical results were insignificant until in 1854, when John Fowler, also of England, brought forward an improvement on the plans of Bellinger, Pratt, and others, since which time various changes and additions have been made, and steam plowing has gone into successful practice on many of the large estates of Great Britain and in the East and West Indies; about 1,500 steam plows being now in use in England alone.

Many attempts to invent a successful traction engine for steam plowing have been made, particularly by Mr. J. Boydell, of England, in 1846, Mr. Calloway and Mr. Pukis, of England, in 1851, and in this country by Joseph W. Fawkes, by Henry Corning in 1850, David Russell in 1855, B. Crawford in 1857, Judd Stevens in 1858, particularly, by Thomas H. Burbridge, of St. Louis, in 1858, and Mr. W. R. Hinsdale, of New York, about 1870, who invented a gang of three plows to go with Messrs. Aveling and Porter's traction engine, imported from England by the late Mr. A. T. Stewart, to be used on his estate at Garden City, Long Island.

The plan called cable traction, invented in part by Pratt, in part by Bellinger, and improved by Fowler, has been operated with greater success than any other. It consists of a single locomotive engine, of from twelve to fourteen-horse power, with a windlass under the boiler, around which passes a single steel-wire cable, which, by means of hinged clips, lays hold of the cable with a grip proportioned to the strain. This continuous cable, twice the width of the plat to be plowed, passes around a sheave, or pulley-block, fastened to a self-acting anchor placed on the opposite side of the field from the engine. This "anchor" consists of a low truck on four wheels, with sharp, disk edges, which cut so deep into the soil that it will not drag when the traction is applied. A box loaded with stones, or some other weight, on the outer side of this truck keeps it from tilting when the power is applied to the plows. A sheave on the truck gives motion to a drum which winds up another cable attached to a post or anchor in the direction in which the furrows are to succeed each other, so that the machine warps itself along the headland on which it is stationed just as fast as the plowing progresses, keeping at all times directly opposite to the locomotive engine, which is moving down the opposite headland in the same direction. The plows are attached to a balance frame, the especial invention of Mr. Fowler, and are in duplicate, pointing to each other, so that when the set at one end of the frame is at work the opposite set is carried along the cable in the air. The plow frame is hauled from one side of the field to the other, between the engine and the movable anchor, by reversing the action of the windlass. It is adapted to turning from two to eight furrows at once, according to the power of the engine and toughness of the soil. The amount of ground plowed by such a machine varies from three to eight acres a day for a three-furrow gang, according to depth of furrow from twelve inches to four inches. An eight-furrow gang will do a little more than twice this amount of work per day.

For various reasons steam plowing is not practiced to any noticeable extent in the United States, but it is probable that as the advantages of this mode of turning up the soil to a depth not practicable by animal draft, become better understood, and other changes transpire, it will go into successful operation here as it has done in England.

THE "BAD LANDS."

ELDORA, Iowa.

Where is the district of country called the "Bad Lands?" Is it true that it is very remarkable for fossil remains, and that wood or any animal substance, if left there for a short time, becomes petrified?

A. J. P.

Answer.—The "Bad Lands," or "Mauvaises Terres," of the old French fur-traders' dialect, are an extensive barren tract in Dakota, Wyoming, and Northwestern Nebraska, between the North Fork of the Platte and the South Fork of the Cheyenne River—west, south, and southeast of the Black Hills. It lies mostly between the 103d and 105th degrees of longitude, with an area as yet not perfectly defined, but estimated to cover about 60,000 square miles. There are similar lands in the Green River region of which Fort Bridger is the center, and in southeastern Oregon. The following description applies directly to the district named in the question, so commonly known in the Northwest as the "Bad Lands." They belong to the Miocene period, geologically speaking. "The surface materials are for the most part white and yellowish indurated clays, sands, marls, and occasional thin beds of lime and sandstone." It is fitly described as one of the most wonderful regions of the globe. It is held by geologists that during the geological period above named a vast fresh water lake system covered this portion of our continent, when the comparatively soft materials which compose the present surface were deposited. As these lakes drained off, after the subsidence of the plains further east, resulting in the formation of the Missouri Valley, the original lake beds were worn into canyons that wind in every conceivable direction. Here and there abrupt, almost perpendicular portions of the ancient beds remain in all imaginable forms, some resembling the ruins of abandoned cities. "Towers, spires, cathedrals, obelisks, pyramids and monuments" of various shapes appear on every side, as far as the eye can range. Says Dr. Hayden, the earliest explorer of this region, "Not unfrequently the rising or setting sun will light up these grand old ruins with a wild, strange beauty, reminding one of a city illuminated in the night, as seen from some high point. The harder layers project from the sides of the canyons with such regularity that they appear like seats of some vast weird amphitheater." Through all this country rainfall is very light, the earth absorbs the most of what rain does fall, and water and grass are very

scanty. The surface-rock is so soft that it disintegrates rapidly, covering the lower grounds in many places to a depth of several feet with a soft, powdery soil unsuited to vegetation, into which animals sink as in snow, while when wet it becomes a stiff mud of impassable depth. The fitness of the Dakota name for this region, signifying a land hard to travel over, cannot be called in question. These lands are plainly unsuited for agriculture, and with rare exceptions, here and there, are of little value for grazing purposes. But they are one of the most astonishing treasuries of fossil remains to be found anywhere. The soft clayey deposits are in some places literally filled with the bones of extinct species of the horse, rhinoceros, elephant, hog, camel, a deer that strongly resembled a hog, saber-toothed lions, and other marvelous creatures, which have rendered this section of the earth a study of the highest interest to geologists of all lands. Fossil trees and shrubs and fruits abound here. All these petrifactions are the result, in part, of conditions that do not now exist in the same degree, and required no one can tell how long. The soft clays of this region and the climate are still peculiarly conducive to petrifying animal and vegetable substances, but this process requires many years to convert such substances to stone.

GRAIN PRICES AND ENGLISH CORN LAWS.

LISTOWEL, Can.

What was the price of grain in England for a few years preceding and following the repeal of the corn laws?

H. MARTINSON.

Answer.—From 1835 to 1855 the average prices in England of wheat, barley, and oats, per imperial quarter of eight bushels, were as follows. The corn laws were repealed in 1846.

	Wheat,		Barley,		Oats,	
Years.	s.	d.	s.	d.	s.	d.
1835	39	4	29	11	22	0
1836	48	6	32	10	23	1
1837	55	10	30	4	23	1

1838	64	7	31	9	22	5
1839	70	8	39	6	25	11
1840	66	4	36	5	25	8
1841	64	4	32	10	22	5
1842	47	3	27	6	19	3
1843	50	1	29	6	18	4
1844	51	3	33	8	20	7
1845	50	10	31	8	22	6
1846	54	8	32	8	23	8
1847	69	9	44	2	28	8
1848	50	6	31	6	20	6
1849	44	3	27	9	17	6
1850	40	3	23	6	16	5
1851	38	6	24	9	18	7
1852	40	9	28	6	19	1
1853	53	3	33	2	21	0
1854	72	5	36	0	27	11
1855	74	8	34	9	27	5

Reckoning the pound sterling at its present value at the United States Custom House, it appears from the above table that an imperial bushel of wheat was worth $1.18⅓ in England in 1839, $1.51 in 1845 (the year before the corn laws were repealed), $2.10 in 1847, owing to the unusual scarcity in Europe and other special causes; about $1.52 in 1848; that the following year it dropped to $1.22; and that in 1855, owing to the Crimean war and other influences, it rose to $2.25. The price continued to decline after 1855 until it reached $1.33 in 1859. Then the opening of our civil war sent prices up temporarily, but even before it closed they dropped to the lowest point touched since the corn laws were repealed, viz., 40s 2d per quarter, or $1.20 per bushel—still a shade higher than the price in 1839, six years before the repeal. The good effects of that repeal must be looked for in other matters than in the reduction of prices of grain: in the general revival of manufacturing industries, the increase of the volume of trade, better wages, and many other items of prosperity.

HOW "SCALPERS" MAKE MONEY.

GLASGOW, Ohio.

1. How can "scalpers" sell tickets at lower rates than railroad companies? 2. Did Senator Wade vote for the impeachment of President Johnson?

D. M. MCINTOSH.

Answer.—The following are some of the many ways in which "scalpers" or ticket-brokers supply themselves with tickets that they can afford to sell at a reduction from the regular prices and still make a profit: 1. They purchase at a discount partly-used through tickets between the large cities, from travelers getting off at intermediate cities and way stations. As the fares between the prominent Eastern and Western railroad centers are usually proportionately lower than to way stations, where there is no competition, travelers often find that they can purchase through tickets at such prices as make it more economical for them to get such tickets and sell the unused mileage to the scalpers, even at a considerable discount, than to pay full way-passenger rates. Second—During excursions many persons use but half of a ticket, and sell the "return" to the "scalpers" at a discount on full rates. Third—In railroad wars they can buy quantities of tickets cheap to retail later, the railroad companies selling tickets in large quantities at such times to speculators, who transfer them to "scalpers" to sell at their convenience, when the war is ended and rates have increased. Fourth—Sometimes, while a railroad company is bound by contract not to sell at less than a specified rate, it will offer to "scalpers" a commission large enough to enable them to undersell the regular ticket agents, who are bound by the agreements entered into between railroad companies to sell only at fixed prices. 2. He did.

LIBERIA.

VINTON, Iowa.

Please give the principal facts in the history of Liberia.

A READER.

Answer.—The negro republic of Liberia owes its origin and much of its prosperity to American philanthropy and enterprise. Dec. 31, 1816, a body of energetic men organized themselves into the American Colonization Society, with Henry Clay for President, their aim being to establish an African colony for freed negroes. Not until six years later did they succeed in inducing the African princes of Guinea to favor their plan; but in 1821 a treaty was concluded by which they obtained a tract of land 500 miles long and 50 miles wide on the grain coast of Upper Guinea. Thereupon the society began at once the exportation of colonists. To each man was given 30 acres, together with the means for cultivating the land. The first town was Monrovia. The form of government adopted was that of the United States, and the country is universally recognized as an independent republic. Since 1847, when the protection of the United States was withdrawn, Liberia has enjoyed a certain prosperity, since more schools and churches have been established in proportion to the population than in Great Britain or America. But as to wealth and political influence it has failed. Only about 19,000 negroes have emigrated from our country, but surrounding tribes have been added gradually to their territory, and the present population is estimated to number 1,068,000, of whom about 18,000 are Americo-Liberians. About 50,000 have learned the English language and 3,000 are Christians. The chief products are sugar, palm oil, cocoa, cotton, coffee, arrow-root, and rice.

THE ARGENTINE CONFEDERATION.

PILZEN, Neb.

Be so kind as to name the States composing the Argentine Confederation, their areas and population, and a few of the chief facts as to the government and condition of the country.

VESPER.

Answer.—The Argentine Confederation is composed of a group of fourteen States or Provinces, and four Territories, whose population, according to the census of 1869, and estimated areas are as follows:

Provinces—	Areas.	Population.
Buenos Ayres, on the coast	63,000	495,107

Santa Fe, on the coast	18,000	89,218
Entre Rios, on the coast	45,000	134,235
Corrientes, on the coast	54,000	129,023
Rioja, Andes	31,500	48,746
Catamarca, Andes	31,500	79,962
San Juan, Andes	29,700	60,319
Mendoza, Andes	54,000	65,413
Cordova, Central	54,000	210,508
San Luis, Central	18,000	53,294
Santiago del Estero, Central	31,500	132,898
Tucuman, Central	13,500	108,904
Salta, Northern	45,000	88,933
Jujuy, Northern	27,000	40,362
Total	515,700	1,736,922
Territories—		
Gran Chaco	125,612	45,291
Missiones (1879)	23,932	32,472
Pampas	191,842	21,000
Patagonia	347,400	24,000
Total	688,796	122,763

This shows a total population in 1869 of 1,859,685. The present population is believed to be over 2,500,000. By the treaty of 1881 between the Argentine Confederation and Chili, the latter concedes to the former all the territory east of the crest of the eastern ridge of the Andes, including a small part of Terra del Fuego, and the greater part of Patagonia. The form of government is republican. The President is elected for six years by an electoral college, composed of 133 representatives chosen by the several states. The National Congress is composed of a Senate of twenty-eight members, two from each state, or province, and a house of fifty members, apportioned according to population. There are five ministers, viz.: The Ministers of Foreign Affairs, the Interior, Finance, War, and Education. Each of the provinces has a governor and legislature elected by a popular vote. A large part of this vast country consists of rich, alluvial plains, called pampas, similar to the prairies of this country, with a soil four or five feet thick, formed for the most part, like our prairie soil, by the decay of

luxurious vegetation. Immense herds of cattle and sheep are raised on these grand prairies, furnishing the principal exports, hides, tallow, wool, and canned meats. In 1881 the horned cattle were estimated at 18,000,000 head, and the sheep at 100,000,000. The exports of the country amounted to $56,497,423, and the imports to $54,029,545. Most of this trade is between Buenos Ayres—the capital, having a population of about 200,000, and European, chiefly English, ports. Twelve lines of steamers run to Europe, making the trip in an average period of twenty-nine days. The revenue for 1881 was $24,349,450, derived almost wholly from import and export dues. The expenditures amounted to $26,747,480, and the national debt has grown to $107,681,639, a considerable part of which is represented by recent public improvements: railways, bridges, roads, etc. There are now about 1,600 miles of railway and 10,000 miles of telegraph in the country. The laws recognize no difference between natives and foreigners, and of late foreign immigration, mostly from Spain and Italy, has been flowing in at a steadily increasing rate, amounting now to about 50,000 per annum.

THE OLD CALIFORNIA MAIL.

CHICAGO, Ill.

By what route was the first California and Oregon mail, via the Isthmus, carried; where was it first opened; what was the postage on letters: and what was the distance run?

JOHN ALBRIGHT.

Answer.—On the 1st day of December, 1848, the Falcon sailed from New York to Chagres, stopping at Havana en route, and carrying the first regularly established United States mail via the Isthmus. From Chagres it was carried up the Chagres River, thence overland to Panama, where it was taken by the California Steampacket Company's vessels to San Francisco, Cal., and Astoria, Oregon. The distance between New York and Chagres, by this route, was given as 2,860 miles, and from New York to Astoria, 7,500 miles. The postage on letters between places in Oregon and California and places on the Atlantic was 40 cents for each half ounce, or fraction thereof; while local postage between offices in Oregon and California was 12½ cents per single letter.

MEASURING HAY.

White Lake, D. T.

How many cubic feet constitute a ton of hay, and what length of time is required for it to settle sufficiently to make measurement correct?

W. A. Rogers.

Answer.—Measuring is a very crude, unsatisfactory method of estimating the weight of hay. There are times, however, when it is impracticable to use the scales, and a close approximation to the true weight will answer all purposes. Then, by taking into consideration that fine, soft hay will pack more closely than a coarser, stiffer quality, that when cut early in the season it will become more solid than stiff, late-cut hay, that the degree of dryness when stacked will affect the weight, that the compactness of the lower part of a stack or lead is affected by the height, the time it has stood, or distance and kind of roads it has traveled over, it is quite possible for a person of ordinary experience and judgment to make an estimate of the quantity in a load or mow. It is estimated that, with all the above-mentioned conditions at an average, timothy, in stacks of ten feet high and upward, measures about 500 cubic feet to the ton; clear clover, between 600 and 700 cubic feet; new mown hay, about 675 cubic feet; fine hay, well settled, 450 to 500 cubic feet. To find the cubic feet in a circular stack, multiply the square of the circumference by four one-hundredths (.04) of the height. Below is given a set of rules for computing the number of cubic yards in a ton of hay in the field, stack, or load, which can be easily reduced to cubic feet by multiplying the result in cubic yards by 27:

1. The number of tons of meadow hay in windrows is the quotient of the product of the length, breadth, and height, in yards, divided by 25.

2. To find the number of tons of hay in a mow, divide the product of the length, height, and width by 15, if the stack be well packed. If shallow, and the hay recently stacked, divide by 18, and by any number from 15 to 18 according to the density of the stack. In square or long stacks the number of tons is the quotient of the product of the length of the base, the width, and half the height, in yards, divided by 15.

3. In loads the number of tons of hay is found by multiplying together the length, width, and height, in yards, and dividing the product by 20.

BRAVE BARCLAY'S BRAVE BRIDE.

CHICAGO, Ill.

The allusion to the British commander in the battle of Lake Erie, made last week in Our Curiosity Shop, when giving the fragment of the popular old song of the war of 1812, reminds me of an incident I have read which goes to show that Captain, afterward Commodore, Barclay, our defeated enemy, was not only a brave but a noble-minded man. He was sadly crippled in that battle, and having been previously engaged to marry a lady of rank and fortune in England, after his return to that country he sent a message to her by a mutual friend, saying that although his love for her was not abated, yet, as he was so badly mutilated, if she desired it, he would release her from her engagement. The noble lady replied "Tell Commodore Barclay that I will marry him if he has only body enough left to *hold the soul*."

A READER.

DEFINITION OF LITERATURE.

WEYAUWEGA, Wis.

What is included under the term "Literature?" Is all prose literature?

H. L. A.

Answer.—It would be difficult to improve upon the definition of literature in Webster, quarto edition: "1. Learning; acquaintance with letters or books. 2. The collective body of literary productions, embracing the entire results of knowledge and fancy preserved in writing; also the whole body of writing upon a given subject, as the *literature* of biblical literature, of chemistry, etc. 3. Belles-lettres, or the class of writings distinguished for beauty or style of expression—as poetry, essays, or history—in distinction from scientific treatises and works on positive knowledge." Which of the

above senses is intended must be judged from the subject and context. Webster further says: “Literature, in its widest sense, embraces all compositions, except those on the positive sciences, mathematics, etc. It is usually confined, however, to belles-lettres, or works of taste and sentiment, as poetry, eloquence, history, etc., excluding abstract discussions and mere erudition. A man of *literature* is one who is versed in the belles-lettres; a man of *learning* excels in what is taught in the schools, and has a wide extent of knowledge, especially in respect to the past; a man of *erudition* is one who is skilled in the more recondite branches of learned inquiry.” The perspicuity of the above definitions leaves nothing obscure. Prose is the common language of men, in distinction from verse. All of literature that is not in verse may be classed as prose, but so may ordinary social and business correspondence, text-books of science, court records, State statutes, and city ordinances, and much else which is plainly excluded from literature by the definitions given above.

“OLD GRIMES.”

MARION, Ind.

Your correspondent, C. N. H., of Chicago, says: “For several years I have seen notices, or sketches, of ‘Old Grimes,’ generally without age, date, and other items to identify the real ‘Old Grimes’ as I knew him. Ephraim Grimes was born about 1770, in Connecticut.” C. N. H. further states, after giving something of his history, that he finally “landed at Fort Covington, N. Y., where he remained, making shingles, until about 1834, when his son came and took him to Connecticut.”

Now, I wish simply to say that I am sure that Ephraim “Grimes,” born in 1770, and living and making shingles in 1834, was not, as C. N. H. declares, the real “Old Grimes” about whom was composed the song:

Old Grimes is dead, that good old soul.
We ne’er shall see him more;
He used to wear a long blue coat
All buttoned down before.

I heard this old song sung when I was a lad going to school, about 1825. So that if "Old Grimes" was dead in 1825 your correspondent is mistaken in stating that he has seen and known the "real Old Grimes." Again, the real "Old Grimes" is said, in the rhyme, to be a "good old soul;" but C. N. H. states that "Ephraim Grimes was a dealer in counterfeit money, was convicted, imprisoned, and had the tip of his right ear taken off and was banished the State." Not a very "good old soul," was he?

H. H. H.

Answer.—The article above referred to, as from "C. N. H.," was not published in Our Curiosity Shop. Beyond doubt the subject of the rhyme quoted was not the Grimes who died in Connecticut in 1834. The original Grimes was first immortalized by the English poet Crabbe, who was born in 1754 and died in 1832. Grimes was the subject of one of his tales in rhyme. Later, the American poet Albert G. Greene, of Rhode Island, wrote the humorous ballad which has rendered "Old Grimes" familiar to every American boy and girl.

LORD CHANCELLOR AND CHIEF JUSTICE.

MATTOON, Ill.

What are the duties of the Lord Chancellor of England, and of the Lord Chief Justice? Tell something of the courts over which they preside.

READER.

Answer.—The Lord High Chancellor of Great Britain is the highest legal authority in the kingdom, the confidential adviser of the sovereign, and in rank precedes all except the members of the royal family and the Archbishop of Canterbury. He is a political officer, and one of the Cabinet, the President of the Supreme Court of Judicature, and also a member of the Privy Council, a Court of Appeal composed of the Lord Chancellor, the Judges of the High Court of Justice, and four other judges. He is created

without writ or patent, by the simple delivery of the great seal, of which he becomes the keeper, and during his term of office he acts as prolocutor for the sovereign in Parliament.

The High Court has five divisions: The Queen's Bench—the Supreme Court of Common Law—presided over by the Lord Chief Justice of England, assisted by four "puisne justices;" the Chancery, presided over by the Master of Rolls and three vice chancellors; the Common Pleas, by the Lord Chief Justice of Common Pleas, and four "puisne justices;" the Court of Exchequer, by the Lord Chief Baron and four "puisne barons;" the Court for Probate, Divorce, and Admiralty cases, by a president, judge, and admiralty advocate, Queen's proctor, and admiralty proctor.

RIVERS, RAILROADS, AND MINES.

BERLIN, Neb.

Please to give the coal area, product of gold and silver, and number of miles of river navigation and railroads in the United States and in other countries.

PETER THOMAS.

Answer.—The coal area of the world is distributed as follows, according to a late estimate made by the geologist Le Conte:

	Square Miles.
United States	192,000
British America	18,000
Great Britain	12,000
Spain	4,000
France	2,000
Germany	1,800
Belgium	518
Rest of Europe	100,000
China	2,000
Japan	5,000

The estimated production of gold and silver from 1800 to 1880 is, according to "The West in 1880," as follows:

U.S.	$1,780,000,000
Australia	1,260,000,000
Spanish A	$900,000,000
Other coun'ts	330,000,000

The railroads of the world were distributed thus in 1880:

	Square Miles.
United States	93,000
Canada	6,145
Rest of N. America	1,738
Germany	21,275
Great Britain	17,696
France	15,375
Russia	14,698
Austria	12,160
Spain and Portugal	5,260
Scandinavia	5,167
Italy	5,096
Belgium and Holland	3,910
Turkey, etc	1,870
Switzerland	1,650
South America	6,830
Africa	5,897
Australia	4,350
India	8,611
Rest of Asia	1,203

We have not within reach the number of miles of river navigation, except by the tedious process of adding the navigable waters of all the rivers and streams of the world. It may be said, however, that the corps of United States civil engineers has estimated that there are 20,000 miles of navigable

waters, or waters that can easily be rendered navigable, in the Mississippi system, and in the St. Lawrence system there are about 15,000 miles more, under the control of the United States alone and with Canada.

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CHICAGO, Ill.

Is it right or permissible for one paper to copy engravings or cuts appearing in another paper or magazine? If not, why?

CONSTANT READER.

Answer.—Not if the paper, magazine, or book is copyrighted in this country, as most American illustrated papers, magazines, and books are. The copyright law is intended to give artists and publishers exclusive control of their productions. The right course to take to get the privilege of using copyrighted works of any kind is to negotiate with the publishers, who will, in some cases, make very moderate terms, particularly for the use of wood-cuts and other engravings that are several years old. There is no law against pirating the illustrations published in European periodicals, and this is done in this country by photo-engraving and other means, to an unlimited extent. Last winter an enterprising contemporary astonished all Chicagoans by loading our newsboys with illustrations of the still flaming ruins of the Newhall House, Milwaukee, before noon of the day of the conflagration. It turned out that the illustration was a photo-engraving of the ruins of a London theater, pirated from the London *Illustrated News*.

CHRISTADELPHIANS.

PEWAUKEE, Wis.

Please give a description of the sect called Christadelphians.

H. G. PURINTON.

Answer.—This sect is one lately organized in America. The principles of the church are thus briefly stated: The Old and New Testaments are equally important; those who love God in this life He will restore to immortality; others He will annihilate; there is no personal devil; Christ is the son of

God, deriving from Him moral perfection, but from his mother a human nature. He appeared upon the earth as a prophet; He now mediates between God and man as a priest; he will again appear on earth to reign as a king of the house of David.

A BEAUTIFUL HYMN.

ANN ARBOR, Mich.

The lines asked for in THE INTER OCEAN of Nov. 3, beginning:

"Those everlasting gardens, etc."

are from the concluding stanza of Sir John Bowring's hymn, "From the Recesses of a Lowly Spirit." I found it as No. 2,546, in Foster's Cyclopedia of Poetical Illustrations. It is set to a beautiful chant in Baker's Church Music.

R. B. POPE.

THE GLACIAL PERIOD.

MIDLAND, Wis.

How long has it been since the "Glacial Period" ended? How far south did the glaciers extend.

D. W. BROWN.

Answer.—It would be a rash geologist who would undertake to say how many years it has been since the Glacial Period. Geological periods cannot be reckoned by years with any approach to certainty. Even the dates of geological events in the "Recent," or "Human Period," immediately following the Glacial Period, cannot be arithmetically computed. The order of their succession is about all that can be established with reasonable certainty. Such events belong, practically speaking, to an era of which it has been said: "Then time was not." In America evidences of glacial action extend as far south, at least, as Washington and the Ohio River; in Europe to 50 degrees north latitude, and in some places down to 45 degrees.

LOUIS PHILIPPE.

ARGYLE, Minn.

In what year did Louis Philippe ascend the throne? Give a brief history of his life and death.

J. G. LEGRANGE.

Answer.—Louis Philippe, son of Louis Philippe Joseph, Duke of Orleans, was born at Paris in 1773, and, having held the title of Lieutenant of the Kingdom since the abdication of Charles X., as a result of the revolution of July, 1830 ascended the throne of France Aug. 9, 1830. During the first revolution, in which he fought on the side of the people, he became suspected of aspiring to the throne, and, his arrest having been ordered, he sought refuge for himself and sister in Switzerland. There for a time he taught under the assumed name of Chabaud-Latour. Later he visited Northern Europe and America, and in 1800 settled at Twickenham, near London. Upon the restoration of the royal family, he returned to Paris, and recovered his estates. Though coldly received by his suspicious kinsman, Louis XVIII., he was extremely popular elsewhere, and in recognition of his plain manners and attention to the bourgeoisie he received the title "Citizen King." His reign was prosperous, and his wise government did much to restore France to a state of quiet industry. But suddenly the cry arose for a reform in the electoral system, and receiving no friendly response from the King or ministry, the people grew rebellious. The King used military force, the people became their own army, and Feb. 24, 1848, Louis Philippe fled from Paris, with his faithful minister, Guizot. He and his queen were concealed in Normandy for a few days, and then passed on a British steamboat to Newhaven, Eng., as Mr. and Mrs. Smith. He died quietly at Claremont in 1850.

POSTAL EXPENDITURES NORTH AND SOUTH.

NASHVILLE, Tenn.

It was stated not long ago, in Our Curiosity Shop, that the postal expenses in the Southern States have long exceeded the postal revenue from the same States, while in the Northern

States the opposite is true. I challenge you to show that this was the case before the late civil war.

A CONFEDERATE.

Answer.—That is not at all hard to show. It has been the case pretty much ever since the government was formed. In the Northern States the postal revenue has almost always been in excess of the expenditures, while the reverse has been true in the South. In 1846-7 the transportation of the mails throughout New England cost $256,464, while the postal revenue collected in those States amounted to $443,648. The expense of mail transportation in New York and Pennsylvania was only $384,719, while the postal revenue collected amounted to nearly double that amount, say $746,933. In Virginia, Maryland, the Carolinas, and Georgia, during the same time, the expenditures aggregated $770,044, while the amount received for postage was but $311,569, or less than half as much. At the same time Alabama paid in less than $50,000, while the expenditures were over $136,000; and Texas returned but $3,246 for an expenditure of $24,102; though Wisconsin, in which the expenditure reached but $15,043, returned to the general postoffice $56,703, and Iowa, then in its infancy, came within less than $500 of meeting all the cost of her postal service. This is a fair sample of how it was before the war.

WEALTHIEST STATES.

CHICAGO, Ill.

Will you kindly state in Our Curiosity Shop which State in the Union is considered to be the richest? Say if Pennsylvania does not rank the highest in the aggregate of products. If not, what State does? and what is Pennsylvania's rank?

ENQUIRER.

Answer.—According to the census of 1880 the four States showing the highest assessed valuation of real estate and personal property are: New York, $2,651,940,006; Pennsylvania, $1,683,459,016; Massachusetts, $1,584,756,802; Ohio, $1,534,360,508. Assessed valuations are so far from being the true values of property, and there is such divergency in the

practice of the various States—some assessing at nearly the true value, others at scarcely 25 per cent of it, and most of them at rates ranging between 40 per cent and 50 per cent of it—that there is no great amount of satisfaction in a comparison based on these valuations. For example, the total assessed valuation of personal property for the State of New York is $322,657,647, when it is generally believed that four men, Mr. Vanderbilt, Jay Gould, Russel Sage, and Augustus Belmont, together, own very nearly this amount in bonds, mortgages, and other personal property.

As to the value of their chief products, the States holding the highest rank are as follows:

States.	Number of establishments.	Value of products.
New York	43,739	$1,080,696,596
Pennsylvania	31,232	744,818,445
Massachusetts	14,352	631,135,284
Illinois	14,549	414,864,673
Ohio	20,699	348,298,390

In agriculture: States.	Value of live stock.	Value of all farm products.
Illinois	$132,437,762	$203,980,137
New York	117,868,283	178,025,695
Ohio	103,707,730	156,777,152
Iowa	124,715,103	136,103,473
Pennsylvania	84,242,877	129,760,476

In mining: States.	Value of product of precious metals.	Value of non-precious metals
Pennsylvania		$65,559,576
Colorado	$19,249,172	1,041,350
California	18,301,828	
Nevada	17,318,909	

Michigan	25,858	14,279,437
Illinois		8,911,279
Ohio		8,077,488

From the above it appears that in the aggregate value of their agricultural, manufacturing, and mining products, New York leads all the other States, with a total of over $1,381,000,000; Pennsylvania follows, with $1,024,000,000; Illinois marches third, with over $760,000,000; Massachusetts fourth, with over $676,000,000; and Ohio fifth, with nearly $617,000,000.

PENSION-ATTORNEY'S FEES.

TIPTON, Iowa.

> Is it true that a pension attorney cannot lawfully charge more than $10 for his services in procuring a pension? If so, when was this law passed? It used to be $25: at least that was what pensioners around here paid.
>
> OLD SOLDIER.

Answer.—Prior to June 20, 1878, it was lawful for an attorney to make a contract with a pension claimant for $25 as a fee, which amount was paid by the Commissioner of Pensions, or on his order, when the pension was allowed, out of the first pension payment. It was wholly contingent upon the successful prosecution of the claim. In 1878 Mr. Bentley, then Commissioner of Pensions, arrayed himself against claim attorneys, and procured the enactment of the present law, approved June 10, 1878, making it unlawful for an attorney to receive a greater sum than $10 for his services in procuring a pension. This amount the attorney can collect from the applicant and keep, whether the claim is allowed or not. It is doubtful whether Mr. Bentley's well intended endeavors to benefit applicants through this law have not resulted in more harm than good, as hundreds, if not thousands, of applicants have paid attorneys this $10 in advance, and therefore the latter, having nothing more to gain, have merely filed the applications, and left the cases to take the regular red-tape course, and be thrown out for informalities or for want of a little additional testimony, which defects the attorneys would have strived to cure if the fee had

remained at $25, and been wholly contingent on the allowance of the pensions.

HEADLIGHT OIL.

ALDEN, Iowa.

Please give the composition and properties of "headlight oil," such as is used by the railroad companies in lanterns and headlights.

P. M. EDWARDS.

Answer.—Strictly speaking, headlight oil of the first quality is what its discoverer, Joshua Merrill, named mineral sperm. It is an illuminating oil intermediate between kerosene and neutral lubricating oil, the specific gravity of kerosene being .804, that of mineral sperm .847, and that of lubricating oil .883. The boiling points of these are respectively, 350 deg. Fahr., 425 deg., and 575 deg. It is volatile only at very high temperature, therefore, and cannot be ignited at less than 300 deg. Fahr., which is one reason why it is preferred to kerosene, particularly on railroad cars and locomotives and ocean steamers. The headlight oils in common use do not conform strictly to the above descriptions, being, some of them, only a fine quality of kerosene. The chemical constituents of refined petroleum are hydrogen and carbon, in the proportions of 75 of the former to 85 of the latter. We have not the precise chemical formula for headlight oil.

UNITED STATES NATIONAL CEMETERIES.

BUCYRUS, Ohio.

How many United States National cemeteries are there, and where are they? What salaries are paid to superintendents? Are they kept in good condition?

OLD SOLDIER.

Answer.—The National cemeteries consecrated to the remains of the fallen patriots of the late civil war are all well cared for by salaried superintendents, and are examined from time to time by competent

inspectors, whose duties require them to report any neglect. Every grave is marked with a headstone; the grounds are handsomely laid out; the walks, winding among the green swarded lots, are neatly graveled; and shade trees, ornamental shrubs and flower beds are tastefully arranged to beautify these "God's acres," sacred to the Nation's dead. The cemeteries west of the Missouri contain the graves of a good many soldiers who have died since the rebellion, in the regular army service on the frontiers. There is an United States National cemetery near the City of Mexico, consecrated to the gallant fellows who fell at Chapultepec, and Contreras, and in other brilliant actions of the war with Mexico. The locality of the awful massacre of General Custer and his entire command by the Indians, led by Sitting Bull and Crazy Horse, is marked by a National cemetery and a suitable monument. The following is a full list of the National cemeteries, with the salaries of their superintendents:

Cemeteries.	Salaries.
Mobile. Ala.	$840
Little Rock, Ark.	900
Fort Smith, Ark.	840
Fayetteville, Ark	780
Soldiers' Home, D. C.	900
Battle Ground, D. C.	720
Barrancas, Fla.	780
St. Augustine. Fla.	
Andersonville, Ga.	900
Marietta, Ga.	900
Camp Butler, Ill.	780
Mound City, Ill.	900
Quincy, Ill.	
Rock Island, Ill.	
Crown Hill, Ind.	720
New Albany, Ind.	780
Fort Gibson, I. T.	780
Keokuk, Iowa	780
Ft. Leavenworth, Kan.	840
Fort Scott, Kan.	840

Cave Hill, Ky	720
Camp Nelson, Ky.	900
Danville. Ky.	
Lebanon, Ky.	720
Lexington, Ky.	840
Logan's Cross Roads, Ky.	840
Mill Springs, Ky.	
Alexander, La.	840
Baton Rouge, La.	480
Chalmette, La.	900
Port Hudson, La.	900
Annapolis, Md.	780
Antietam, Md.	900
Laurel, Md.	
Loudon Park, Md.	720
City of Mexico, Mex.	900
Corinth, Miss.	900
Natchez, Miss.	900
Vicksburg, Miss.	900
Jefferson Barracks, Mo.	900
Jefferson City, Mo.	780
Springfield, Mo.	780
Custer Battlefield, M. T.	
Fort McPherson, Neb.	720
New Berne, N. C.	840
Raleigh, N. C.	840
Salisbury, N. C.	900
Wilmington, N. C.	840
Beverly, N. J.	720
Finn's Point, N. J.	720
Cypress Hills, N. J.	720
Woodlawn, N. J.	
Gettysburg, Pa.	900
Philadelphia, Pa.	840

Florence, S. C.	840
Beaufort, S. C.	900
Chattanooga, Tenn.	900
Ft. Donelson, Tenn.	780
Knoxville, Tenn.	840
Memphis, Tenn.	900
Nashville, Tenn.	900
Pittsburg Landing, Tenn.	900
Stone River, Tenn.	900
San Antonio, Texas	720
Brownsville, Texas	840
Alexandria, Va.	840
Arlington, Va.	900
Balls Bluff, Va.	
City Point, Va.	840
Cold Harbor, Va.	780
Culpeper, Va.	840
Danville, Va.	780
Fort Harrison, Va.	720
Fredericksburg, Va.	900
Glendale, Va.	720
Hampton, Va.	900
Poplar Grove, Va.	900
Seven Pines, Va.	720
Richmond, Va.	900
Staunton, Va.	720
Winchester, Va.	720
Yorktown, Va.	780
Grafton. W. Va.	720

In all, there are 315,555 graves under the supervision of the Quartermaster General, according to a late report, only 172,409 of which had been identified.

A TRULY REMARKABLE EGG.

CHAMPAIGN, Ill.

SIR: Having read a short time since in your columns an account of a "Wisconsin hen" having laid a double egg, I enclose the following:

"About fifteen years ago a Mr. Green, of Toledo, Ill., had a hen which laid an egg as large as a goose egg. Inside the outer shell was another perfect egg inclosed in a shell, and between the two shells, two yolks and two whites. It is needless to remark that the hen died in a few hours. There are a number of people now living in or about Toledo who can vouch for the truth of this story.

L. W. A."

FOREIGN POSTAGE.

CHICAGO, Ill.

Please state the rates of postage between this country and Europe as far back as possible, but particularly the rates in force twenty years ago.

J. M.

Answer.—It is not easy to ascertain the rates of postage between the United States and each of the States of Europe for the whole period of our history, nor would the information repay the research. The Whig Almanac for 1849 gives the following rates of foreign postage prevailing at that time: Letters, per half ounce, to Bremen, paid or unpaid, if mailed at New York, 24 cents; within 300 miles of New York, 29 cents; over 300 miles, 34 cents. If to Prussia, 12 cents additional; to Hamburg, 6 cents additional; to Austria, 18 cents; Bavaria, 22 cents; Switzerland, 21 cents; Egypt, 37 cents—each additional, per quarter-ounce letter. To Denmark, 22 cents; Sweden, 39 cents; St. Petersburg, Russia, 24 cents—each additional, per half ounce. To British West India Islands, by British West India mail steamers, 25 cents per half ounce; to Martinique, Havana, Porto Rico, St. Thomas, or other islands not British, 50 cents; to Chagres, Panama, Valparaiso, or any port on the Pacific coast, 75 cents. The same year the postal difficulties with Great Britain and her colonies were adjusted by the adoption of a uniform rate of

sea and port postage not to exceed 24 cents, the inland rates (5 cents to 10 cents here and 2 cents to 4 cents in Britain) being added. In 1860 the following foreign postal rates prevailed for one-half ounce; to France and Algeria, by French mails, 30 cents; to the German states, 30 cents; to Great Britain, 24 cents, except from Washington, Oregon, and California, (29 cents); to Bremen, 10 cents; to Hamburg, 10 cents; to Frankfort or Wurtemburg, 22 cents; to Luxemburg, 25 cents; to Holland and the Netherlands, 42 cents; to Austria, 30 cents; to Russia, 29 cents; to Prussia, 30 cents; to the Papal States and Tuscany, 35 cents; to Spain, 42 cents; to Portugal, 42 cents; to Denmark, 35 cents; to Sweden, 42 cents; to Norway, 46 cents; to the West India Islands, (not British) 34 cents for less than 2,500 miles, and 44 cents for more than 2,500 miles: to the British West India Islands, 10 cents for 2,500 miles or less, and 20 cents for any greater distance; to the two Sicilies, 30 cents; to Parma and Modena, 33 cents; to Lombardy, 33 cents; to the Sardinian States, 38 cents. In 1865 the postage was about the same; but after the formation of the postal union, in 1874, an uniform postage was adopted of 5 cents on prepaid, and 10 cents on unpaid letters, weighing not more than one-half ounce, between all members of the union; newspapers not exceeding 4 ounces, 2 cents; books and all other printed matter and patterns of merchandise, not exceeding 8¾ ounces, at the rate of 2 cents per 2 ounces; postal cards, 2 cents.

HIGH TARIFF AND CHEAP GOODS.

OSKALOOSA, Iowa.

In a recent political dispute the free-trader declared that the consumer pays all the tariff. How can the protectionist answer this?

INQUIRER.

Answer.—This question has been answered, substantially, several times before, but the following extract from the speech made before the Fair Trade Congress, Leamington, by Robert P. Porter, formerly editor of Our Curiosity Shop, author of "The West in 1880," and member of the late United States Tariff Commission, is so much in point that it is given here:

"In the cotton industry need I say that we have practically robbed England of 50,000,000 of customers, increased the number employed in our mills to 200,000 persons, and, in the last two decades, doubled the value of the product. Imports of cotton goods have steadily declined from 227,000,000 yards in 1860 to 23,000,000 yards in 1881, while exports reached the same year 150,000,000 yards. Has the consumer been injured? No! With the exception of a few special lines which we do not manufacture, cotton goods are as cheap, and even cheaper, with us than in England. A more remarkable progress has been made in the silk industry, which before the Morrill tariff gave employment to 5,000 persons; in 1880 it employed over 30,000, a six-fold increase. The importation of silk goods has remained stationary since 1860 at about £6,000,000, the production of our own mills increasing from £1,200,000 in 1860 to over £8,000,000 in 1880. Yet the cost of the manufactured goods to the consumer, estimated on a gold basis, has steadily declined at a much greater rate than the cost of the raw material."

Further on Mr. Potter says: "I have this year made a careful comparison of the average earnings of labor in the important branches of industry in Great Britain, Germany, France, Belgium, and Holland, with the average earnings of the same class of workers in the United States. In prosecuting this inquiry I have visited the industrial centers of these countries, and am prepared to further substantiate my conclusions with details if necessary. I find that in the United States wages are from 60 to 150 per cent higher in the various industrial pursuits than they are in the mentioned European countries. At the same time the difference between the purchasing power of a dollar in free trade and protection countries is absurdly exaggerated by the Cobden Clubites. In Germany and France (under protective tariffs), especially in the former country, the workmen can live far cheaper than in England. The purchasing power of a dollar, so far as the wants of the working man is concerned, when the cost and quality of food is taken into consideration, is about the same in the United States as in England, though wages are often 100 per cent higher in America."

HALBIG, THE SCULPTOR.

CHICAGO, Ill.

Please give a sketch of John Halbig, the sculptor.

OTTO F. H. MASCH.

Answer.—John Halbig was born in Bavaria in 1814, and educated at the Munich Academy, where he is now professor of statuary. Since 1846 he has modeled more than 1,000 works, chiefly busts. The most noted is the lions at the Gate of Victory, Munich. In 1873 the King of Germany ordered him to make a colossal group representing the crucifixion, to be placed on a lofty mountain peak overlooking Oberammergau, the village where the "Passion Play" is so religiously represented.

HELEN AND THE TROJAN WAR.

DANA, Ill.

1. Will Our Curiosity Shop tell me how to pronounce the name of the President of France, and what his salary is? 2. Who was Helen? I heard a gentleman say that, when looking at a certain lady, he could easily believe in Helen's smile and the siege of Troy. Please tell me about her.

IGNORAMUS.

Answer.—1. Gravy. His salary is 600,000 francs ($120,000), and an additional 300,000 francs for household expenses. 2. Helen, according to tradition, was the daughter of Zeus and Leda, the wife of Tyndareus, King of Sparta, and was so extremely beautiful that at the age of 10 she was stolen by two mighty Greeks, from whom her brothers, Castor and Pollux, rescued her. Later Tyndareus bound her suitors to the number of about thirty to save her, in case of another abduction. She became the wife of Menelaus, King of Lacedæmon, but, during his absence from home, Paris, a prince from Troy, in Asia Minor, induced her to elope with him. Thereupon Menelaus called upon the thirty to fulfill their oath, and with a large army they sailed against Troy, laid siege to it, and were victorious after ten years. There are conflicting stories of her fate.

WHEAT IN OHIO AND NEBRASKA.

TRIADELPHIA, Ohio.

Which years, the odd or even, have produced the most wheat in Ohio for the last ten years? State same for Nebraska.

P. M. P.

Answer.—The following table, compiled from the reports of the Agricultural Department, Washington, gives the estimated wheat crops of Ohio and Nebraska for the ten years closing with 1882, in bushels. How much support these figures give to the notion that the even years bear better crops than the odd ones, or vice versa, the reader can estimate for himself:

Year.	Ohio wheat crop.	Av. yield per acre.	Nebraska wheat crop.	Av. yield per acre.
1882	45,453,600		14,947,200	
1881	38,520,000	13.3	13,840,000	7.1
1880	49,790,475	17.3	12,922,677	8.5
1879	36,591,750	19.3	13,043,590	11.3
1878	33,120,000	18.0	13,872,900	13.1
1877	26,000,000	15.0	5,640,000	15.0
1876	21,750,000	11.8	4,330,000	11.5
1875	17,500,000	9.5	3,400,000	9.8
1874	25,993,000	15.0	3,619,000	11.6
1873	18,567,000	12.0	3,584,000	15.5

Certainly, in the case of Ohio, the aggregate yield of even years surpassed that of the odd years, and the same was true in all but one pair of years for Nebraska. As regards the average yield per acre, the even years were not so uniformly better than the odd ones, and this is the only test measure. But the following table, from the same source, showing the average yield of wheat per acre for the whole United States, for the ten years from 1872 to 1881 inclusive, is calculated to explode the notion that the oddness or evenness of the year makes any difference:

Year.	Av. yield per acre.
1872	11.9
1873	12.7

1874	12.3
1875	11.0
1876	10.4
1877	13.9
1878	13.1
1879	13.8
1880	13.1
1881	10.1

One of the most interesting facts to note in the above table is the rapid increase of wheat raising in Ohio, which is due in large degree to the improved methods in farming—deep plowing, use of fertilizers, tile drainage, and so forth. Another matter worthy of special notice is the large increase of the Nebraska wheat crop, owing to the steady extension of the cultivated area of that State. The falling off in the average yield per acre points to the lesson that Nebraska must learn from the example of Ohio—the necessity for improved cultivation as the country grows older.

DEMOCRATIC PARTY.

HILLSBORO, Iowa.

When was the Democratic party first organized? How long did it ever hold unbroken control of the government?

W. N. GALES.

Answer.—The birth of the Democratic party, or "Jacksonian Democracy," as it used to be called, dates from the disruption of the old Democratic-Republican party, consequent upon the election of John Quincy Adams as President Soon after the Inauguration of Adams in 1825 the Adams and Clay factions of the Democratic-Republican party separated from it. The Jackson and Calhoun factions rallied around these men, and the Presidential election contest of 1828 was fought on almost purely personal issues. Jackson was elected President over Adams by 178 electoral votes to 83, although the popular vote stood 647,231 for Jackson and 509,097 for Adams. At the same time Calhoun was elected Vice President by 171 electoral votes to 83 for Richard Rush, of Pennsylvania. Before the next

Presidential canvass Jackson and Calhoun had become inimical to each other; the "Jackson men" carried the day, and, through the *first* National Democratic Convention—held in Baltimore in May, 1832—nominated Jackson for re-election, and Van Buren in place of Calhoun for Vice President. Dating from Jackson's first term, the Democrats held unbroken control of the Executive office until the end of Van Buren's term, in all twelve years, which is the longest period of consecutive Democratic administration of our Federal Government. The next longest was from March 4, 1853, to the bankruptcy of the National Treasury and the civil war, reached before its close, eight years later.

FIRST WHITE CHILD BORN IN CHICAGO.

PEKIN, Ill.

> I was born in Chicago, Oct. 1, 1827, and my elder brother tells me there were but four houses there at that time, and two of them belonged to Frenchmen. I claim the honor of being the first white child born at that place. I am the son of Reuben and Hannah Reed.
>
> LEVI REED.

Answer.—The first white child born in Chicago was a girl, Ellen Marion Kinzie, sister of the late Colonel John H. Kinzie. According to the testimony of Mrs. Whistler, wife of Lieut. William Whistler, this was in December, 1804. Mrs. Whistler was the mother of the first white boy born in Chicago, Merriweather Lewis Whistler. He first saluted the light in old Fort Dearborn in the autumn of 1805. He was drowned at the age of 7, at Newport, Ky. Your brother is certainly mistaken as to the number of houses in Chicago in 1827, for a series of reminiscences dictated by the early pioneer, John H. Fonda, quoted in Hurlburt's "Chicago Antiquities," says that when Fonda visited Chicago in 1825, though it was then but an Indian agency and trading post, the place contained "about fourteen houses."

INSTITUTIONS FOR FEEBLE-MINDED CHILDREN.

EVANSTON, Ill.

What State provisions are there for the benefit of feeble-minded persons? Give the number of the blind, deaf, and feeble-minded in this State.

CATHARINE DONNOVAN.

Answer.—According to the report of the Commissioner of Education, the number of idiots and feeble-minded children in Illinois in 1889 was 4,170; of blind, 2,615; of deaf mutes, 2,202. The United States makes no provision for these classes. That is left to State legislation. State institutions for the feeble-minded are located at Syracuse, N. Y.; Columbus, Ohio; Faribault, Minn.; Glenwood, Iowa; Frankfort, Ky., and Lincoln, Ill. At Columbus, Syracuse, and Faribault children are taught the elementary branches, and have various occupations for physical exercise; at Glenwood much attention is given to kindergarten training; at Frankfort, to physical development. In our State institution the children are divided into ten classes, the three highest being graded, and, in addition to the common branches, they are taught vocal music and calisthenics:[;?] also sewing, gardening, and other occupations.

ARTICHOKES.

JUNIATA, Neb.

Please state the value of artichokes as food for hogs. How should they be raised?

JOHN COWAN.

Answer.—At one time artichokes were supposed to be very watery and injurious food for swine, but a careful analysis has proved that they are not less nutritious than potatoes. In the Western States they grow wild in great quantities, and the roots are greedily devoured by the hogs. The Brazil variety should be extensively cultivated in a well-drained soil, as it is hardy and easily raised. The American Encyclopedia of Agriculture gives the following instructions for cultivating them: “Furrow the ground four feet apart and plant the tubers an inch below the surface and about ten inches apart, covering about two inches. Keep free from weeds with the ordinary two-horse corn-cultivator. Dig in the fall and leave the tubers to be rooted

out by the hogs in autumn, winter, and spring. They bear great heat and drought, and are excellent food for horses, cows and sheep in winter if used in connection with food and salt.

UNITED STATES MILITIA.

CHICAGO, Ill.

What is the total militia force of the United States, organized and unorganized?

N. SNYDER.

Answer.—The organized militia force of the United States, according to the latest returns made to the Adjutant General of the United States army, as given in the report of the Chief of Ordnance to the Secretary of War, for the fiscal year ending June 30, 1880, was as follows: Total non-commissioned officers, musicians, and privates, 117,037. Add 145 general officers, 921 general staff officers, 1,605 regimental field and staff officers, 8,869 company officers, and the aggregate is 125,906. Of these, New York had the largest number, 20,280; Arkansas the next largest, 16,377, South Carolina the next, 11,805; Pennsylvania the next, 9,750; Ohio the next, 8,374, and Illinois the next, 7,394. These figures are altered somewhat now, but cannot be given accurately. The number of men subject to military duty, but unorganized, on June 30, 1880, was 6,516,758.

MISSISSIPPI NAVIGATION.

DES MOINES, Iowa.

Give your Iowa readers a few facts as to the navigation of the Mississippi River. About what proportion of the time is it closed by ice or on account of low water?

Answer.—Averaged for the nine years from 1865 to 1873, the depth of water below St. Louis was eight feet or over for about one-half the year, and less than four feet not quite three and one-half days a year. The time that navigation was arrested by ice in the ten seasons from 1870 to 1880 averaged thirty-five days a year; and the time that barges could not be

loaded to eight feet draft on account of low water or ice, during the seven years ending with 1880, averaged about one hundred and twenty-six days a year. In the canals around the Mississippi rapids and between the Mississippi and the lakes, navigation is suspended above five months each year. To appreciate the significance of the above figures as to depth of water, it must be borne in mind that, where the depth of water is eight feet and over, grain is transported at less than half what it costs when the depth is four feet. There are years when navigation below St. Louis is not obstructed by ice all winter through; as for example, in the winters of 1868-69, 1873-74, 1875-76, while in the rigorous winter of 1877-78 the river was closed at St. Louis seventy days. Between St. Louis and Quincy navigation is obstructed by ice about four months every year, and by low water about thirty-five days more, while between Quincy and St. Paul navigation is practically closed about half of every year either on account of ice or low water.

MILLAIS' PICTURE OF THE HUGUENOT.

DENVER, Col.

> Kindly inform us through Our Curiosity Shop what is the significance of the handkerchief in Millais' picture of "The Huguenot." I have gone to the limit of my resources and can find no allusion whatever to any such badge.
>
> F. G. WOODBRIDGE.

Answer.—On the eve of the bloody massacre of French Protestants, which commenced in Paris in the dead of night of Aug. 24, 1572, the Duke of Guise, to prevent the assassination by mistake of any of his own party, the Catholics, issued a secret order that every Catholic bind a strip of white linen around his arm, as a badge to be known by. This incident is vividly depicted in Millais' celebrated painting of "The Huguenot," where the Catholic maiden, who is aware of this secret order, seeks to save her bold Protestant or "Huguenot" lover by pledging him to wear her handkerchief around his arm until they meet again.

NORTH AMERICAN POULTRY ASSOCIATION.

FAIRFIELD, Iowa.

What is the object of the poultry association, formed in Ohio some time ago? Is it merely for speculative purposes, or has it a public mission to perform? Who are the officers and who can become members?

POULTRY RAISER.

Answer.—Probably the organization referred to in the above question is what calls itself the North American Poultry Association. Its declared purpose is "to take united action in the extension of the business of producing poultry and eggs for market, and for the mutual protection and advancement of the interests of producers." This it proposes to do by showing people that "poultry-raising is more profitable than any other branch of stock-raising;" by keeping its members informed as to the best markets for poultry and eggs at different seasons of the year; by uniting to get the lowest shipping rates; by efforts to protect each other from dishonest poultry dealers or commission men; by imparting to one another useful information as to cures for diseases of fowls, and improvements in feeding and taking care of them. Whether some of the principal members are using this organization for selfish purposes to any reprehensible degree, as has been charged by one or more correspondents, we are not prepared to affirm or deny. Some of them are engaged in raising and selling fancy fowls and eggs at high prices, but as that is one of the declared objects of the association, it may only prove that it is fulfilling its mission. Any one in any part of the United States or Canada who wishes to become a member is invited to send $2 to the Treasurer, with a request that his name be presented to the association for admission to membership, the money to be returned in case he is not elected. In the opinion of some correspondents, the reason for demanding this prepayment is very obscure. Hoping to obtain official enlightenment as to the character of this association, THE INTER OCEAN addressed an inquiry to W. L. Chamberlain, Secretary of the Ohio State Board of Agriculture, to which he returned the following reply, which renders us unwilling to publish the names and postoffice address of officers of the so-called association:

"COLUMBUS, Ohio, Nov., 1883.—Dear Sir: Yours relative to American Poultry Association, of——, Ohio, to hand. We have no official knowledge of any such association, as no reports from it are made to this department, as there are from all the other various agricultural organizations of the State. Inquiry at the Secretary of State's office fails to reveal any incorporation of said association. Might also add that we have no personal knowledge of the association in question. Respectfully,

W. I. CHAMBERLAIN,
"Secretary Ohio State Board of Agriculture."

LAKE TAHOE.

RICHMOND, Ind.

What are the dimensions of Lake Tahoe, why is it so admired, and how near is it to the Central Pacific Railroad?

TRAVELER.

Answer.—Lake Tahoe is a lovely sheet of water at the eastern base of the Sierra Nevada Mountains, and fourteen miles southward from Truckee, on the Central Pacific Railroad. It is about 6,250 feet above the ocean, and is environed by scenery full of picturesque loveliness. The length, according to the latest authorities, is 35 miles, its width about 15 miles, and its depth 1,500 feet. Its waters are clear as crystal, cold as ice, and full of trout. Pleasure steamers ply on it in summer. Its outlet is the Truckee River. The surrounding scenery, the perfect transparency of its waters, the fishing, and the delicious atmosphere render it a favorite summer resort.

THE NATIONAL CAPITOL.

MONTICELLO, Ind.

When was the Capitol of the United States begun; when finished; and what was its cost? Give its dimensions.

JAMES COBLE.

Answer.—The southeast corner-stone of the Capitol was laid Sept. 18, 1793, "by Brother George Washington, assisted by the Worshipful Masters and Free Masons of the surrounding cities, the military, and a large number of people." The north wing was ready for occupancy in 1800, the south wing in 1808; but both were partially destroyed by the British in 1811. The foundation of the main building was laid in 1818 (March 24), the restoration of the wings having been commenced three years earlier; and the whole was completed in 1827. July 4, 1851, the corner-stone of the south extension was laid by President Fillmore, and this was finished in 1857. The north extension was occupied by the Senate in 1859. The present dome, commenced in 1855, was completed eight years later, and Dec. 12, 1863, the American flag floated from its summit. Thus far the cost of the entire building has been $13,000,000—main building, $3,000,000; dome, $1,000,000; extensions, $8,000,000; miscellaneous items, $1,000,000. The length of the entire building is 751 feet 4 inches; its greatest breadth, 324 feet; and it covers a little over 3½ acres. The distance from the ground to the top of the dome is 307½ feet; the diameter of the dome, 135½ feet.

MONEY AND GOODS BY TELEGRAPH.

SPIRIT LAKE, Iowa.

What is the method of sending money by telegraph; and about what does it cost? Is it true that telegraph companies will fill orders for household supplies? If so, explain how it is done, and oblige several

SUBSCRIBERS.

Answer.—It is not telegraph companies, but express companies that do such business. One of the leading express companies will send money from any one of its important city or village agencies to another at the following rates, in addition to the cost of telegraph service: For sums of $100 or less, 1 per cent; for sums between $100 and $200, $1.25; between $200 and $300, $1.50; between $300 and $400, $1.75; between $400 and $500, $2; for larger sums special rates, to be learned only of agents. The same company will purchase goods for family consumption, without extra charges; and will advance the money for orders not exceeding $5 each,

provided deposit is made with the agent at the office from which order is sent. Similar accommodation is provided for by other express companies.

ALCOHOL IN A BUSHEL OF GRAIN.

LAFAYETTE, Ill.

How much pure liquor can be made from a bushel of corn, rye, wheat, or barley, as a general rule?

CHARLES OSENBAUGH.

Answer.—Corn affords 40 pounds of spirits of the specific gravity of 0.9427, containing 45 per cent of absolute alcohol for each 100 pounds of grain; wheat, 40 to 45 pounds of spirits; barley, 40; oats, 36; rye, 36 to 42; buckwheat, 40. Now, 40 pounds of such spirits equal 3½ (3.5) gallons of government-proof spirits. Taking corn at 56 pounds per bushel, rye at 56 pounds, wheat at 60, barley at 48, oats at 32, and buckwheat at 52, these grains should afford the following quantities of proof spirits per bushel: Corn and rye, each, 1.96 gallons, or almost 2 gallons; wheat, 2.1 gallons; barley, 1.68 gallons; oats, 1.12 gallons, and buckwheat, 1.82 gallons.

U. S. LOANS IN 1860.

MINONK, Ill.

Did this government borrow money during James Buchanan's administration? If so, at what interest? What interest did the government pay for money borrowed to carry on the Mexican war?

Answer.—In June, 1860, Congress authorized the loan of $20,000,000, and in October, $1,000,000, at 5 per cent, was put upon the market; but, owing to the Presidential election of that year and the consequent change in the aspect of politics, the final amount issued was but $7,022,000. On Dec. 17 a law was passed permitting the issue of $10,000,000; $5,000,000 was offered, and but $500,000 was bid, at 12 per cent. Other offers at 24 to 36 per cent were rejected. By the 31st of December most of the remainder had been taken by banks and bankers upon certain conditions securing the

interest. In January, 1861, the remaining $5,000,000, under the act of December, was awarded as follows: $10,000 at 8¾ per cent, $30,000 at 9 per cent, $10,000 at 9¼ per cent, $140,000 at 9½ per cent, $67,000 at 9¾ per cent, $721,000 at 10 per cent, $265,000 at 10¼ per cent, $543,000 at 10½ per cent, $1,267,000 at 10¾ per cent, and $1,947,000 at 11 per cent. Feb. 8 Congress passed another bill, authorizing a loan of $25,000,000, at 6 per cent interest, to run not less than ten nor more than twenty years, the stock to be sold to the highest bidder. The amount offered was $14,355,000, of which all below 90 per cent were rejected, and the stock as awarded ranged from 90½ to 96 per cent. The tariff bill, which was passed March 2, authorized a loan of $10,000,000, and restored the highest protective character to the tariff. During the Mexican war, in 1847, the government made loans to the amount of $9,415,250 at 6 per cent interest.

VAUXHALL GARDENS.

MARSHALLTOWN, Iowa.

> I remember reading, when a boy, in a Baltimore paper, an account of the destruction by fire of the art gallery of Vauxhall Garden, London, and I think it stated also "with a loss of all the valuable paintings." Please state in what year that conflagration occurred, Any information regarding this garden would be of interest to many, I am sure.
>
> JOSEPH ROGERS.

Answer.—Vauxhall Garden, named from its site in "La Salle Faukes," was first opened to the public in 1660, and was for nearly two centuries the favorite resort for a large class of London pleasure-seekers. It was laid out with beautiful walks, fountains, booths, and buildings, and was nightly thronged by a gay and brilliant company, eating and drinking, while they gossiped or made love to the sound of constant music. But toward the latter part of the eighteenth century the garden fell into disrepute, through the increasing laxity of many of its patrons, and on July 25, 1859, the garden was forever closed, its site being soon covered with streets and buildings. We cannot find the date of the fire you mention. It is consoling, however, to

know that few, if any, of the paintings had great merit. A vivid description of Vauxhall is given in Thackeray's "Vanity Fair."

ARMY—RIVERS, AND HARBORS.

CHICAGO, Ill.

A friend asserts that the cost of the United States army is nearly fifty million dollars a year? I say it is not much more than half that amount. What does Our Curiosity Shop say?

JOHN ALLEN.

Answer.—It says that you are nearer right than your friend. It is likely that he gets his notion from noting the total expenditures for the "military establishment" as given in Secretary Folger's report a few days ago, amounting to $48,911,382.93. Let him look at the items and he will see such ones as this, "Improving rivers and harbors," $13,639,381.27 included under the above head. Owing to the important bearing of the transportation question and the condition of our harbors upon the subject of National defense; in deference to the State rights advocates of early times; and also because of the prevailing confidence in the ability of the engineer corps of the United States army, the appropriations made by Congress for the improvement of the National water-ways have, as a rule, been expended under the direction of army engineers. Below are given all the items that enter into the grand total of nearly fifty millions which your friend erroneously charges up as the annual cost of the United States army. This is a statement for the fiscal year closing June 30, 1883:

Pay Department	$12,659,814.60
Commissary Department	2,062,922.17
Quartermaster's Department	13,179,792.45
Medical Department	377,647.82
Ordnance Department	1,861,826.37
Military Academy	144,332.46
Improving rivers and harbors	13,639,381.27
Contingencies	26,676.19
Expenses of recruiting	100,646.45

Signal Service	294,466.54
Expenses of military convicts	93,085.37
Publishing official records of the rebellion	33,486.68
Support of National Home for Disabled Volunteers	1,122,088.03
Support of Soldiers' Home	162,928.48
Construction of military posts, roads, etc.	268,707.69
Fortifications	174,312.72
National cemeteries	211,156.55
Fifty per cent arrears of army transportation	296,379.38
Construction of military telegraphs	48,989.00
Bounty to soldiers, act of July 28, 1866	75,214.30
Expenses of arctic exploring expedition	53,000.00
Bounty to volunteers	244,550.91
Mississippi River Commission	165,000.00
Reimbursing the State of Missouri	234,580.10
Reimbursing the State of Oregon.	70,268.08
Claims for quartermasters' and commissary supplies	311,062.75
Refunding to States expenses in raising volunteers	454,163.07
Operating and care of canals	199,200.00
Horses and other property lost in the service	105,061.60
Purchase of the Arlington estate	125,000.00
Miscellaneous	115,641.90
Total military establishment	$48,911,382.93

The first five of the above items, aggregating a little over thirty million dollars, constitute almost the entire expenditure on account of the existing army and its operations during the year named.

ESTIMATING WEIGHT OF CATTLE.

HASTINGS, Neb.

Give us a rule, if there is any, for calculating the weight of cattle by measuring them.

A. C.

Answer.—No rule will lead to anything more than an approximation to the actual weight. Every stock-raiser should have his own scales. The following is as good a rule as any for estimating the weight of animals by measure: Multiply the girth in inches, taken immediately behind the shoulder blade, by the length in inches from the square of the buttock to the point of the shoulder blade, and divide the product by 144, which gives the number of superficial feet. If the animal has a girth of 3 to 5 feet, multiply the number of superficial feet by 16, and you will have its approximate weight. If the girth is 5 to 7 feet multiply by 23, and if 7 to 9 feet multiply by 31. If less than 3 feet girth, as in the cases of small calves, hogs, sheep, etc., multiply by 11. Allowance must be made for the build of the animal, conditions of fattening, etc. The above rule is for grass-fed cattle; it being estimated that in the cases of grass-fatted sheep, calves, and kine, or steers, each superficial foot, when the girth is 3 feet or under, represents a weight of 11 pounds; when 3 to 5 feet, 16 pounds; when 5 to 7 feet, 23 pounds, and when 7 to 9 feet, 31 pounds. Thus an ox measuring eight feet girth and seven and a half feet in length should weigh about 8x7½x31 pounds, or, say 1,860 pounds. Under this rule it is customary to deduct one-twentieth of the whole for half-fatted cattle; from 15 to 20 pounds on a cow having had calves, and if not fat an equal amount.

SMUT IN WHEAT.

ILIA, N. Y.

What is the cause of smut in wheat, and what is a sure preventive?

G. F.

Answer.—Smut is a fungus with very minute spores, that feeds upon the grain, replacing or destroying the organs upon which it feeds. The best preventive used is a pound of blue vitriol in two gallons of water. But it is not enough to sprinkle this over the wheat. Put the grain into enough of the solution to cover it, and stir slowly to allow the light material to rise. Skim, and at the end of an hour spread the wheat on a dry floor, and sprinkle it with quick-lime, previously so slacked with chamber lye as to leave the lime in powder. So continue until you have all the wheat treated. In this

state it may be heaped, and remain several days before sowing, if the heap be occasionally turned. If the wheat remains damp, it must be still further dried, so it will pass easily from the drill, if it is to be drilled. The above plan is recommended by the "American Encyclopedia of Agriculture" as the only certain preventive. Yet even this may fail sometimes.

FIRST REVOLVING TURRET.

LACON, Ill.—Reading an article in Our Curiosity Shop some time ago set me to thinking of some papers of my former husband, H. G. Hamlin, showing that in 1842 he and a Mr. Nathan I. Styles assisted Mr. Theodore L. Timby, who afterward secured the first patent for a turret-ship, to build a model. After much consulting and experimenting, in 1843 they changed their plan and built a working model called a "revolving battery for offensive and defensive warfare on land and sea," expense not to exceed $1,800. It was finished in June, 1843. The said model consisted of a circular icon tower, about five feet high and eight feet in diameter, with three decks, and pierced on each deck for thirty-five guns, with two perfect engines worked by steam to cause the said tower to revolve. The cost when finished was $2,230. Said model was built in Syracuse, N. Y., and I saw it on exhibition. I will here copy a letter from F. E. Spinner (I cannot copy his signature):

"It is found on inquiry at the Navy Department that the government pays no one for the use of the patent for the revolving turret. It seems that the company with which Mr. Ericsson is connected has paid a Mr. Timby $100,000 for the use of the patent, and Mr. Hamlin and Styles never received $1."

After knowing this, Mr. Hamlin applied to Timby for his share; he denied that Mr. H. ever had any interest in it. This was in 1863. He had the papers all made out for his claim, but was taken with congestion of the lungs, and died in a few days.

I heard Mr. Timby say that he conceived the idea when he was only 18 years of age. I don't like the way he treated his partners, but I like to give credit where credit is due. Mr. Ericsson deserves much of his country for his energy and perseverance in making the application when he did.

Please excuse all blunders, as I am an old woman, almost 74 years of age, and this is the first time I ever wrote to an editor. My present husband is nearly 81. We intend to read THE INTER OCEAN as long as our sight will permit.

MRS. WM. MAXWELL.

CLIFF DWELLINGS IN SONORA.

WHITEWATER, Wis.

Is it so that there has been a recent discovery of ancient dwellings in Sonora cut in the sides of the mountains, in solid rock? If so, is it known who made them?

ABORIGINE.

Answer.—There are some remarkable ruins about four miles southeast of Magdalena, Mexico, in the State of Sonora, which have of late attracted a good deal of notice. There is among these one pyramid, with a base of 4,320 feet square and an elevation of 750 feet. It has a winding roadway, leading by an easy grade from bottom to top, wide enough for carriages. This is several miles long. In the sides of this mountain, as one ascends, he passes hundreds of chambers cut in the solid rock, with walls, floor, and ceiling hewn to an even precision truly remarkable. These chambers vary in size from five to ten, sixteen, and even eighteen feet square. There are no windows and but one entrance, which is always from the top. The height of the ceiling, usually, is eight feet. The walls are covered in places with hieroglyphics and figures of men and animals. In some places feet and hands of human beings are found cut in the rock. Who constructed these dwellings is not now certainly known. Some claim that they were the ancestors of the ancient Aztecs or Toltecs. It is not improbable that they are the remains of ancient Zuni tribes.

GOVERNORS OF INDIANA.

GREENCASTLE, Ind.

Will the Curiosity Shop give me the names of the Governors of Indiana from 1800 to the present time and the time when each was in office.

C. E. JACKSON.

Answer.—Territorial Indiana had but three Governors: William H. Harrison, 1800-1811; John Gibson, 1811-1813; Thomas Posey, 1813-1816. Admitted to the Union in 1816, its first State Governor was Jonathan Jennings, who served until 1822. His successors were William Hendricks, 1822-1825; James B. Ray, 1825-1831; Noah Noble, 1831-1837; David Wallace, 1837-1840; Samuel Bigger, 1840-1843: James Whitcomb, 1843-1848; Paris G. Dunning, 1848-1849; Joseph A. Wright, 1849-1857; Ashbel P. Willard, 1857-1861; Oliver P. Morton, 1861-1867; Conrad Baker, 1867-1873; Thomas A. Hendricks, 1873-1877; James D. Williams, 1877-1881; Albert G. Porter, 1881-1885.

LOYAL CONFERENCE—DIAMONDS.

OHIO, Ill.

1. I was told that some religious body of persons—as a conference—cheered on hearing the news of a political achievement. What body was it, and where? 2. Is there a tariff on diamonds brought into this country? 3. Are the women of Utah allowed to vote at general elections?

NELSON SHIFFLET.

Answer.—In several instances during the late war the Methodist Episcopal Church Conferences cheered and sang the doxology when news of great victories for the Union was announced; and in religious meetings of several denominations the announcement of President Lincoln's Emancipation Proclamation was received with shouts or cheers and songs of thanksgiving. 2. Glaziers diamonds are on the free list, but on other diamonds, cut or uncut, there is a duty of 25 per cent ad valorem. 3. Utah women have the right of suffrage in all Territorial elections. None of the Territories have any voice in the Presidential elections.

STATE OFFICERS OF WISCONSIN.

SHARON, Wis.

1. What steps must be taken before a Territory can be admitted to the Union as a State? 2. Please name the different State officers of Wisconsin, the salary of each, and when each term began and will end.

A READER.

Answer.—The answer to your second question would fill one or two columns of our paper, and we must, therefore, refer you to the Secretary of State, Madison, Wis. The following is a list of the present State officers:

Governor, J. M. Rusk	$5,000
Lieutenant Governor, S. S. Fifield	1,000
Secretary of State, E. G. Timme	5,000
Treasurer, E. C. McFetridge	5,000
Attorney General, L. F. Frisby	3,000
Adjutant General, C. P. Chapman	500
Superintendent Public Schools, Robert Graham	1,200
Secretary Agricultural Society, C. Babbitt	2,000
Commissioners of Lands, Secretary of State, State Treasurer, and Attorney General, ex-officio	
Insurance Commissioner, P. L. Spooner, Jr	3,000
Railroad Commissioner, N. P. Hanger	3,000
State Librarian, J. R. Berryman	1,500
Chief Justice, Orsamus Cole	5,000
Associate Justices, W. P. Lyon, H. S. Orton, David Taylor, and J. B. Cassady, each	5,000
Clerk, Clarence Kellogg, $5 per day and fees.	

The terms of the first four officers named, and of the Superintendent of Public Schools, began Jan. 2, 1882, and will end Jan. 7, 1885; the Adjutant General is appointed by the Governor, as is also the State Librarian; the Secretary of the State Agricultural society is elected by the board; the term of the Insurance Commissioners began Jan. 5, 1882, and will end Jan. 5,

1885. Your first question has been answered recently as well as we can do it.

MAINE LIQUOR LAW.

Mt. Ayr, Iowa.

Please tell us what the Maine liquor law is, and its effects. Are the Prohibitionists generally satisfied with the law?

M. J. Donahoe.

Answer.—The "Maine law," briefly stated, is this: The sale of all intoxicating liquors shall be controlled exclusively by a special agent, appointed by the State; and he shall superintend their lawful sale for medicinal, mechanical, and manufacturing purposes. All other persons are prohibited from selling any liquors, except unadulterated cider and wine, and from manufacturing for unlawful sale. The authorized commissioner, violating the law, shall be fined not less than $30, and imprisoned for not more than three months. A common seller shall be fined not less than $100 nor more than $250, with imprisonment for from three to four months. Any one receiving injury from an intoxicated person may sue the one who sold the liquor. The lessee or owner of the saloon is also liable. As to the effect of the law, we quote from the address of Governor Dingley to the Legislature, in 1875: "The statistics (in the Attorney General's report) show that during the past year, in the Supreme Court alone, there have been 276 convictions, 41 commitments to jail, and $30,898 collected in fines under these laws—more of each than in any other year, and four times as many convictions and ten times as many fines as in 1866, when the general enforcement of these laws was resumed after the close of the war. It is significant, also, that during these nine or ten years of gradually increasing efficiency in the enforcement of the laws against dram-shops, the number of convicts in the State Prison has fallen off more than one-fourth." Governor Sidney Perham, in his message to the Legislature in 1872, says; "The present law, when it is enforced, is, so far as I can judge, as effective in the suppression of the traffic as are other criminal laws against the crimes they are intended to prevent." And Governor Chamberlain, in his message of 1870, said; "The laws against intoxicating liquors are as well executed and

obeyed as the laws against profanity, unchastity, and murder." These are a few of the testimonies given to the efficiency of the Maine law. As a rule prohibitionists are satisfied with the efficiency, but not the sufficiency, of the legislation. Still the cause of temperance has been greatly aided by the Maine legislation, and the progress has probably been as great as could be expected.

GREAT SALT LAKE.

FREDONIA, N. Y.

What is the extent of Great Salt Lake? Has it any outlet? Are the waters salt enough to make good salt? Is Salt Lake City on the margin of the lake, or some distance off? Is it navigable?

Answer.—Great Salt Lake is a remarkable body of water, in some respects the most remarkable in the world. Like the Dead Sea and the Aral Sea, in Asia, it has no outlet. Its extent is given variously by different authors. One explanation of this may be the generally conceded fact that the rainfall of the region between the Rocky Mountains and the Sierra Nevada is increasing, and the average level of Salt Lake seems to be steadily rising, so whereas one authority states the length of the lake as about ninety miles and the breadth as from twenty to thirty-five miles, another says it is seventy miles long and forty-five broad. One says its area is about 3,200 square miles, and another says it is between 3,000 and 4,000 square miles. One says it is about 4,200 feet above sea level, while another says it is 4,250 feet above, and still rising, and a still later statement sets it at 4,260 feet above tidewater. One gives the mean depth at 12 feet, and another at about twenty feet. Its maximum depth is variously given at sixty feet and seventy-eight feet. It contains numerous rocky islands, the longest of which, Antelope, is fifteen miles long. Some of these islands are used as sheep pastures. The Bear, the Weber, and the Jordan rivers empty into this lake, and are for the most part absorbed by the sandy plain or evaporated by the dry air of the Great Fremont Basin. Only the Bear River is navigable, and that near its mouth. A line of steamers plies between Corinne, on the north shore, and Black Rock, on the south. Its waters contain about 20 per cent of common salt; some salt is manufactured from this natural brine, and there is no doubt that in time this industry will develop here into great importance.

Unlike the Dead Sea, this lake abounds with animal life, insects, shrimps, etc., but not, like the Aral Sea, with fish. The United States Fish Commission has undertaken the experiment of stocking it with certain salt-water fish, and with some prospect of success. Salt Lake City is about eleven miles from the lake in a straight line, and fifteen miles by the traveled road.

INDIAN EDUCATION.

CARLINVILLE, Ill.

> An Indian-hater in this neighborhood asserts very positively that the attempts made to educate the Indians are all time and money thrown away. What figures can you give us to disprove this assertion?

A READER.

Answer.—The last report of the Commissioner of Indian Affairs furnishes proof positive that "Indian-hater" is either utterly unprepared to make assertions on this subject, or wilfully misrepresents the facts. Last year there were 5,113 Indian pupils being taught at boarding-schools, and 5,014 in day-schools. There are seventy-eight boarding-schools upon Indian reservations, having in all 4,396 pupils, and in these industrial training has been carried on so successfully that the pupils have cultivated 1,526 acres, raising 18,334 bushels of corn, 4,952 bushels of oats, 19,340 bushels of vegetables, and have made 1,171 tons of hay, and 4,325 pounds of butter. Of the boarding pupils in schools not on reservations, 641 have attended the Indian training-schools at Hampton (109), Carlisle (390), and Forest Grove (151), and 106 have been distributed among various white schools in the States. At Hampton, since 1878, the government has contributed in all $52,000, and private charity $81,000, or, taking the existing number of students as the standard for the five years, $244 per year per student. In these training schools the industrial and mechanic arts are kept in the foreground, and the main object is to inspire the minds of the young Indians with habits of faithful, continuous work. During the past year Carlisle, in addition to much other work, has turned out ten spring wagons to be sent to Indian agencies, and Carlisle and Hampton propose to furnish during the

present fiscal year 2,000 pair of shoes, 3,350 dozen articles of tinware, 22 dozen bridles and halters, and 450 sets of harness. An effort is made to teach every Indian girl pupil sewing and housework and the boys farming and mechanical trades. The various religious societies have expended $74,689 in aid of the government work of education strictly, besides $70,142 expended on their own missionary work. This is besides $13,278 contributed by them in aid of Forest Grove and Carlisle training schools, the $26,668 in aid of the pupils at Hampton, $30,504 expended by the societies on their own seminaries, academies, and missions among the five civilized tribes, and $24,149 devoted to schools and missions in Alaska. The Commissioner pays a high tribute to the value of this religious aid.

CHINESE PROVERBS.

LaSalle, Ill.

> I have just read that the Chinese are exceedingly fond of proverbs, and make great use of them. That many of these proverbs are full of lofty sentiment and wisdom. Can the Curiosity Shop give us a few of them as specimens?
>
> A Regular Reader.

Answer.—The Chinese are indeed remarkably fond of proverbs. They not only employ them in conversation—and even to a greater degree than the Spaniards, who are noted among Europeans for the number and excellence of their proverbial sayings—but they have a practice of adorning their reception rooms with these sententious bits of wisdom, inscribed on decorated scrolls or embroidered on rich crapes and brocades. They carve them on door posts and pillars, and emblazon them on the walls and ceilings in gilt letters. In 1875, W. Scarborough published a collection of 2,720 Chinese proverbs; and these are but a small part of the great collections to be found in the "Jeweled Mirror for Illumining the Mind," "The Coral Forest of Ancient Matters," and other Chinese works. The following are a few specimens of this sort of literature, taken from "The Middle Kingdom," by S. Wells Williams, for many years Secretary of the United States Legation at Peking, and several times de facto United States Minister. As a sneer at the use of unnecessary force to crush a contemptible

enemy, they say; “He rides a fierce dog to catch a lame rabbit.” Similar to this is another, “To use a battle-ax to cut off a hen’s head.” They say of wicked associates: “To cherish a bad man is like nourishing a tiger; if not well fed he will devour you.” Here are several others mingling wit with wisdom: “To instigate a villain to do wrong is like teaching a monkey to climb trees;” “To catch fish and throw away the net,” which recalls our saying, “Using the cat’s paw to pull the chestnuts out of the fire;” “To climb a tree to catch a fish,” is to talk much to no purpose; “A superficial scholar is a sheep dressed in a tiger’s skin;” “A cuckoo in a magpie’s nest,” equivalent to saying, “he is enjoying another’s labor without compensation;” “If the blind lead the blind they will both fall into the pit;” “A fair wind raises no storm;” “Vast chasms can be filled, but the heart of man is never satisfied;” “The body may be healed, but the mind is incurable;” “He seeks the ass, and lo! he sits upon him;” “He who looks at the sun is dazzled; he who hears the thunder is deafened,” i. e., do not come too near the powerful; “Prevention is better than cure;” “Wine and good dinners make abundance of friends, but in adversity not one of them is to be found.” “Let every man sweep the snow from before his own door, and not trouble himself about the frost on his neighbors’ tiles.” The following one is a gem of moral wisdom: “Only correct yourself on the same principle that you correct others; and excuse others on the same principles on which you excuse yourself.” “Better not be, than be nothing.” “One thread does not make a rope; one swallow does not make a summer.” “Sensuality is the chief of sins, filial duty the best of acts.” “The horse’s back is not so safe as the buffalo’s”—the former is used by the politician, the latter by the farmer. “Too much lenity multiplies crime.” “If you love your son give him plenty of the rod; if you hate him, cram him with dainties.” “He is my teacher who tells me my faults, he my enemy who speaks my virtues.” Having a wholesome dread of litigation, they say of one who goes to law, “He sues a flea to catch a bite.” Their equivalent for our “coming out at the little end of the horn” is, “The farther the rat creeps up (or into) the cow’s horn, the narrower it grows.” The truth of their saying that “The fame of good deeds does not leave a man’s door, but his evil acts are known a thousand miles off,” is illustrated in our own daily papers every morning. Finally, we close this list with a Chinese proverb which should be inscribed on the lintel of every door in Christendom; “The happy hearted man carries joy for all the household.”

SHINTUISM—BUDDHISM—CONFUCIANISM.

Castleton, Ill.

Please give us a statement in the "Curiosity Shop" of what is known as Shintuism, Buddhism, and Confucianism, as now existing in China and Japan.

W. H. Jordan.

Answer.—Shintuism, Sintuism, Sintoism, or Sin-syuism, is the prevailing religion of Japan, the worship of the sun-goddess, Ten-sio-dai-sin. The descendant and viceregent on earth of this deity is the Mikado, who is therefore worshiped as a demi-god. Two ecclesiastical judges, with monks and priests, complete the hierarchy, and the latter minister at innumerable shrines and temples, raised for the worship of the chief deity and a legion of canonized heroes and benefactors. In these temples there is no idol visible, but on the shrine is a mirror, symbolizing purity. Sintuism requires pre-eminently heart purity and general temperance, and as aids to these prescribes pilgrimages to holy places, observance of holy days, and mortification of the body. Buddhism, one of the oldest existing religions, traces its origin 2,460 years back, to Siddhartha, or Buddha, a Hindoo prince. Its two most prominent doctrines are the transmigration of the soul and the cursed condition or total depravity of human existence in its natural state. The first teaches that at death every soul immediately assumes another body, corresponding in form and habitation to the previous character of the spirit. If noble, it may become a divinity, or dwell in some high place upon the earth, while the wicked wander as reptiles and vermin, or inhabit the hells in the interior of the earth. The least term of suffering is 10,000,000 years, of happiness 10,000,000,000 years. But however long or short, it must have an end, and the soul enters a new body. Buddha himself, it is said, has passed through every form of existence. The second doctrine is embodied in the "Four Sublime Verities:" Pain exists; its cause is desire; it may be ended by Nirvana; the way to Nirvana is a rise through eight gradations, from simple faith to complete regeneration. Theoretically this religion has no priests nor clergy nor public religious rites. Every man is his own priest and confessor, and the monks are ascetics only for their own advancement in holy living; but, in fact, Buddhist countries swarm with

priests, or religious teachers, so reputed. Confucianism is epitomized in the following words of the great teacher: “I teach you nothing but what you might learn yourselves, viz., the observance of the three fundamental laws of relation between sovereign and subject, father and child, husband and wife; and the five capital virtues—universal charity, impartial justice, conformity to ceremonies and established usages, rectitude of heart and mind, and pure sincerity. Confucius did not profess to have received any revelation from “Shan-te”—the Supreme Ruler—or to have any clear conceptions of Him, although he acknowledged the existence of such a being, and taught that His will as learned by studying and practicing the wisdom of the ancients by the light of nature, should be implicitly obeyed, as the only means of living virtuously and happily and avoiding both in this life and the life to come the penalties of evil-doing.

MERMAID TAVERN AND CLUB.

Chicago, Ill.

Please give in the Curiosity Shop a description of the famous club founded by Sir Walter Raleigh and called the “Mermaid Club.” I have searched in vain for information on this subject.

Fannie Mack.

Answer.—Tradition states that Sir Walter Raleigh, before his unfortunate engagement with Cobham, gathered a number of his most eminent friends in “The Mermaid,” and there instituted what was known as the “Mermaid Club.” “The Mermaid” was a tavern so situated as to have three entrances—on Bread, Cheap, and Friday streets, and was the favorite resort of the leading actors and literary men in the reign of Queen Elizabeth; but the Raleigh club was acknowledged to combine “more talent and genius than ever met together before or since.” Here Jonson, Beaumont, Fletcher, Selden, Carew, Donne, and Shakespeare met for convivial enjoyment, and this was the scene of the famous disputes between Jonson and Shakespeare, the two eminent dramatists.

THE BLACKSMITH KING.

QUINCY, Ill.

Did any king crown the blacksmith king of all trades, as illustrated in the heading of the *Industrial Worker*? If so, what is the story?

JAMES ALBERTS.

Answer.—In reply to this query we received the following explanation from the editor of the paper mentioned: Our heading illustrates an old Scriptural and Masonic legend, that of "Solomon and the Iron-worker," otherwise known as "Tubal Cain." The scene is the celebration of the completion of the great temple at Jerusalem. It has been announced that on this occasion the one who of all others has been most instrumental in the erection of the sacred structure shall be given the chief seat of honor, and the guests are horrified to perceive that the lowly blacksmith has, unobserved, placed himself in it. Loud murmurs arise, and a movement is made having for its object his ejectment. Nothing daunted, the man rises and declares his supremacy over all the other artificers, in that he wrought all their tools, and without his work they could have done nothing. The correctness of his position is thus proven to the satisfaction of the king, complaints are silenced, and all honor accorded the humble smith. The dignity of labor, however unpretending, is thus demonstrated. The Rabbinical legend of which we have here traced a sketch, is full of beauty in its entirety, giving in detail the challenge of the assembled guests, the defense of the man, and the speech of the king.

NEBRASKA STATE NORMAL.

WAHOO, Neb.

What are the principal facts as to the State Normal School of this State? How long has it been in operation? What is the amount of the normal school fund? What is the amount of the annual appropriation to meet current expenses? What results have been obtained? Please answer and throw as much light as possible upon this subject, about which there is a good deal of discussion going on in this part of Nebraska just at the present time.

SUBSCRIBER.

Answer.—The State Normal School of Nebraska is located at Peru, near the Missouri River, about fifty miles north of the Kansas line. This is a town of 567 inhabitants, according to the census, accessible only by a branch of the Burlington and Missouri Railroad. It secured the location of the school by a donation of site and other inducements at a time when the population of the State was only about 100,000. It graduated its first class, consisting of two members, in 1870. The total number of graduates to date is 73. Total enrollment last year, 318—the largest number in the history of the school. The normal endowment fund, in notes and bonds, aggregated $16,308.35 last year, and the income from all sources in 1881 amounted to $2,423.58. The total appropriation asked of the last Legislature, was as follows, the several items being represented by the principal as "absolutely necessary to the efficient working of the school for each of the next two fiscal years:"

Salaries for teachers, per year	$11,000
Fuel and lights, per year	1,000
Repairs, per year	500
Board's expenses, per year	500
Janitor's wages and help, per year	500
Apparatus, per year	500
Printing, stationery, advertising, per y'r.	300
Furniture, per year	300
Wells and cisterns, per year	200
Imp'ts of grounds and buildings, per y'r.	200
Incidentals, per year	200
Postage and postal expenses, per year	100
Expense special inst'n and lectures, p. yr.	100
Total	$15,400

The total amount granted averaged about $14,300 a year.

BLACK HAWK'S TOWER.

SPRINGFIELD, Ill.

Where is Black Hawk's Tower, and what is it like? Is it built of masonry or earth?

A. H. C.

Answer.—It is a natural rock near the Falls of Rock River, near the southeastern angle of Rock Island bluffs, a few miles from the city of Rock Island. It commands an extensive view of the surrounding country for ten miles up the Rock River Valley, and northward nearly eight miles to the Mississippi. Black Hawk's chief village was situated in the forks of the Mississippi and Rock River, just below this, and this wooded rock formed a natural lookout tower for him on the side most open to attack. The name was given to it by the pioneers.

WILLIAM ELLERY CHANNING.

CHARLES CITY, Iowa.

Please give a short account of the life and writings of Dr. Channing.

MRS. R. W. MAY.

Answer.—The great apostle of Unitarianism, as he has been called, was born at Newport, R. I., April 7, 1780, and in his 15th year entered Harvard University. In 1798, on his graduation day, he delivered an oration that captivated the whole audience, and foretold his future fame as an orator and writer. While teaching in Richmond, Va., he became impressed with the evils of slavery, and deemed the surest cure for all such abuses to be the spread of Christianity. Returning to Harvard, he began his theological studies, acting at the same time as regent of the university. In 1803 he assumed the pastorate of Federal Street Church, Boston, and at once became known as an eloquent and brilliant orator, as well as an efficient minister. His finest oration, perhaps, is the one delivered upon the fall of Napoleon, in 1814, and entitled "The Goodness of God in Delivering the Christian World from Military Despotism." In 1820 he received the title of Doctor of Divinity from Harvard. Two years later, while visiting in Europe, he met Coleridge, who said of him, "He has the love of wisdom and the

wisdom of love." His "Remarks Upon the Life and Character of Napoleon Bonaparte," which appeared in 1828, did much to spread his fame throughout the civilized world. His greatest theological work is, probably, the "Evidences of Christianity." An earnest minister of the Unitarian Church, he was always a sincerely devout Christian. A friend of the anti-slavery and temperance movements, when they had but few, his last public speech was in commemoration of the abolition of slavery in the British West Indies. His death occurred in 1842, and his body was laid in the cemetery of Mount Auburn.

SIR WILLIAM WALLACE.

POSTVILLE, Iowa.

1. Please give a sketch of Sir William Wallace, the Scottish patriot. 2. In what year was the Crimean war.

MAUD MURLIN.

Answer.—William Wallace was the youngest son of a knight of good family in southwestern Scotland. The place of his birth is uncertain, but the date was probably about the middle of the reign of Alexander III. When Edward offered pardon to the Scottish leaders, after the subjugation of Scotland and the surrender of Baliol, Wallace was excepted by name, being ordered to surrender unconditionally. This he refused to do, and for many years eluded the search of those who coveted the handsome price put upon his head. In 1305, however, he was seized and carried to London, and there, after a mock trial, on the 23d of August, he was hanged, drawn, and quartered, as a traitor. But his cause lived, and a year later Robert Bruce was crowned at Scone, King of independent Scotland. 2. The Crimean war lasted nearly two years, from 1854 to 1856.

"HOBSON'S CHOICE."

MARSHALLTOWN, Iowa.

Please tell us the origin of the expression,"Hobson's choice."

F. W. WILDER.

Answer.—The *Atlantic Monthly* for December, 1883, contained the following: "The explanation of the proverbial saying about 'Hobson's choice' is given by Steele in the *Spectator*, No. 509," The passage referred to is this: "Tobias Hobson was the first man in England that let out hackney horses. * * * When a man came for a horse he was led into the stable where there was a great choice, but Hobson obliged him to take the horse which stood nearest to the stable door: so that every customer was alike well served, according to his chance, from whence it became a proverb, when what ought to be your election was forced upon you, to say, 'Hobson's choice.'"

CALIFORNIA.

FONDA, Iowa.

> Will you be kind enough to give your readers a description of California—the climate and resources of the different parts of the State, and the price of land to each; what places are best adapted to fruit trees, and what fruits grow there, and the amount of teachers' wages?

HENRY JOHNSON.

Answer.—The State of California is divided into three entirely distinct sections: the coast region, the valleys of the Sacramento and San Joaquin rivers, and the deserts. Owing to the irregularity of the surface, only about one-third of the State is arable, and in northern California the crops are wholly dependent upon the rainfall. In the southern part of the State the land is irrigated by numerous streams. The chief products of California are wheat, barley, fruit, timber, and gold; the raising of cattle and sheep is also profitable business. The coast region is fertile and beautiful, abounding in vineyards and orchards. The climate, varying from 51 degrees to 75 degrees in summer, and in winter seldom colder than 15 degrees, is well suited to the cultivation of such fruits as apples, peaches, pears, oranges, lemons, almonds, olives, and figs. In this region also, is the great gold belt, most of the mines being on the western slope of the Sierra Nevadas. All of the gold, however, is not found here, as the earliest mining was on the southeastern slope, and the precious metal is distributed over the most of the State. The

valleys of the Sacramento and San Joaquin Rivers occupy the country between the coast range and the Sierras. This fertile region is devoted to farming and grazing, and produces more barley than is raised in any other State, while its wheat harvests increased 133 per cent from 1860 to 1870. Here, during the rainy season, the mercury falls to 45 deg., and seldom rises higher than 85 deg. In the Colorado desert the difference between the mean temperature of January and July is greater, being some 45 deg., while the mean annual temperature ranges from 68 to 75 deg. Little land here is arable, owing to the lack of irrigation. California has an excellent public school system, closely resembling that of Massachusetts. In 1880 the average monthly pay of male teachers was $79.50; of female teachers, $64.73. Land in California is by no means cheap. The fruit lands are scarce, and for the most part in the hands of private individuals; when well cultivated and irrigated they sell for $150 to $300 per acre. Grain lands in Northern and North Central California sell for $50 to $100 per acre, though some at a great distance from railroads and rivers may be bought for $20 to $30. Grazing lands vary in price from $1.25 to $10 per acre, according to locality. There are fruit lands in Southern California, far from Los Angeles and any good market, which can be had for from $30 to $50 per acre.

THE "BRANDED HAND."

BEAVER CITY, Neb.

Please give an account of the "Man with the Branded Hand," who died a few years since. Why was he branded, and what was the name of the miscreant who officiated?

B. W. HAWKINS.

Answer.—The man who has become so famous was Jonathan Walker, captain of a small vessel off the Florida coast. He was born at Harwich, Mass., March 22, 1799, and died at Lake Harbor, Mich., April 20, 1878. June 23, 1844, though quite ill, and daily expecting death, he attempted to carry seven slaves to Nassau, in the British island, New Providence; but, when only a short distance out, he was challenged by the sloop Catharine, and taken back to Key West. There he was brought before a justice of the peace, and committed first to jail, and afterward to the filthy hold of a

steamboat that carried him to Pensacola, where a new trial awaited him. This time, when he was imprisoned, a chain of half-inch iron secured him to a huge ring bolt, being fastened at the other end to a shackle around his ankle that weighed half a ton. Owing to his feeble health his sufferings were excruciating, but his further sentence read thus; "One hour in the pillory, pelted with unmerchantable eggs; one year in prison for each slave—seven in all; $600 for each slave, and all the costs; and to be branded on the right hand with a large S, by a redhot branding-iron." But he bore his tortures without flinching, and lived to be restored to his family after much unjust litigation. We do not know who may have officiated at the branding; but Ebenezer Dorr, of Maine, was at that time the United States Marshal for that district. A beautiful monument to the memory of Captain Walker has been erected in Muskegon, Mich.

THE OLDEST ARCHITECTURAL RUINS.

DES MOINES, Iowa.

What is the oldest architectural work known to exist?

SCHOLAR.

Answer.—Perhaps it is safe to say, with the editor of the "People's Cyclopedia," that it is the remarkable rock-cut temples at Ipsambul of Abousambul, in Nubia, on the left bank of the Nile. The largest temple contains fourteen apartments hewn out of the solid rock. The first and largest of these is 57 feet long and 52 feet broad, and is supported by two rows of massive square pillars, four in each row, and 30 feet high. To each of these pillars is attached a standing colossus, or human figure, of enormous proportions, reaching to the roof, overlaid with a kind of stucco and painted with gaudy colors, apparently as brilliant now, after the lapse of over 4,000 years, as when first laid on. In front of this temple are seated four still larger human figures, two of them being 65 feet in height—presumed to represent Rameses the Great, more frequently termed Sesostris, whose marvelous military exploits are depicted in drawings and paintings on the temple walls.

PRODUCTION OF SPIRITS.

HURON, D. T.

Is the production of spirits increasing or decreasing? Some temperance advocates maintain that it is growing less, owing to the efforts of the various temperance organizations.

ANTI-SALOONIST.

Answer.—The best answer to this question is contained in the latest report of the Secretary of the Treasury. Mr. Folger says: "The quantity of spirits produced and deposited in distillery warehouses during the fiscal year ended June 30, 1883, is less than the production of 1882 by 31,839,853 gallons, and of 1881 by 43,741,842 gallons." He distributes this decrease as follows:

Decrease in production of—		Gallons.
Bourbon whisky		20,913,422
Rye whisky		4,440,123
Alcohol		4,482,965
Gin		23,366
Highwines		2,260,428
Miscellaneous		241,385
Total decrease		32,361,689
Increase in production of—	Gallons.	
Rum	97,876	
Pure neutral or Cologne spirits	423,960	
Total Increase		521,836
Net decrease		31,839,853

There were remaining in distillery warehouses at the dates below specified distilled spirits as follows:

Dates.	Gallons.
June 30, 1883	80,499,993
June 30, 1882	89,962,645

There should come out of bonded warehouses, under the present law, and pay tax, distilled spirits as follows:

Dates.	Gallons.
By June 6, 1884	26,104,531
By July 6, 1884	3,495,512
Total	29,600,043

It is to avert taking this large amount of spirits out of warehouse and throwing it upon the market more rapidly than it is called for that the distillers are so lustily petitioning Congress to postpone the date of withdrawal. Several causes have conspired to bring about the decrease in production of spirits above shown, of which the vigor with which the temperance movement has been pushed of late years is indisputably one.

ART, HISTORICAL, AND SCIENTIFIC SOCIETIES.

BATTLE CREEK, Mich.

I am satisfied that many keen observers of climatic changes and other scientific phenomena, and many old residents of this country who are in possession of historical information of pioneer times which should be preserved, would communicate what they know to societies interested in such matters if THE INTER OCEAN would only publish a list of some of the most important of such societies. "Will not Our Curiosity Shop favor us with such a list? Also, give the names of a few of the most noted societies or academies of Europe.

AMATEUR.

Answer.—Taking the world at large there are many hundreds of societies for the promotion of science, literature, or the arts. It is not worth while to enumerate more than a few of those in foreign countries. In France they have the famous Institute of France, with its four academies, viz: The French Academy, the Academy of Inscriptions and Belles Lettres, the Academy of Sciences, the Academy of Fine Arts. There is the Royal Academy of Sciences at Berlin; the Academy of Science at Manheim; the Electoral Bavarian Academy of Sciences at Munich; the Imperial Academy of Sciences at St. Petersburg; the Academy of Sciences at Stockholm; the

Royal Academy of Sciences at Copenhagen; the Royal Academy of Sciences at Amsterdam; the Academy of Sciences at Madrid; the de Screti. or Academia Secretorum Naturæ, at Naples; the Royal Academy of Sciences at Turin; the Academy of Sciences at Lisbon; the Royal Academy, London; and the Royal Irish Academy. Then there are academies for the advancement of literature in nearly all European countries. There were no fewer than 171 of these in Italy alone as early as the sixteenth century, many of which still exist. Then there are many academies of archæology and history, such as the Academy of Herculaneum, Italy; the Academy of Inscriptions and Belles Lettres, constituting one of the four academies of the Institute of France, as above shown; the Celtic Academy, and others. There are academies of medicine and surgery in various parts of the old world. As to painting, sculpture, and music, they have such powerful auxiliary societies as the Royal Academy of Arts, the Royal Academy of Music, and the Academy of Ancient Music, in London; the Academy of Painting and Sculpture and the Royal Academy of Music, in Paris; and similar academies at Rome, Turin, Madrid, Berlin, Munich, and elsewhere. There are geographical societies at all the principal capitals of Europe. Of these the most conspicuous are the Royal Geographical Society, London, the Geographical Society of France, Paris, the Geographical Society of Berlin, and the Royal Asiatic Society, London, with branches at Calcutta and Shanghai.

For the practical purposes stated above, and other laudable causes, which are certainly worthy of encouragement, the following list of some of the most important societies in the United States is of much greater consequence to readers of THE INTER OCEAN:

Academy of Sciences, Chicago.
Albany Institute, Albany, N. Y.
American Academy of Arts and Sciences, Boston, Mass.
American Antiquarian Society, Worcester, Mass.
American Association for Advancement of Science, Salem, Mass.
American Association for Advancement of Social Science, Boston, Mass.
American Bible Society, New York.
American Colonization Society, Washington.
American Geographical Society, New York.
American Institute, New York.

American Museum of Natural History, New York.
American Numismatic and Archæological Society, New York.
American Oriental Society, New Haven, Conn.
American Peace Society, Boston, Mass.
American Philological Society, New York.
American Philosophical Society, Philadelphia.
American Public Health Association, Washington.
American Society of Civil Engineers and Architects, New York.
American Society for Prevention of Cruelty to Animals, New York.
Anthropological Society, Washington.
Board of Trustees of Peabody Academies and Model Schools, New Orleans.
Buffalo Historical Society, Buffalo, N. Y.
Chicago Historical Society, Chicago.
Connecticut Historical Society, Hartford, Conn.
Cooper Union for the Advancement of Science and Art, New York.
Essex Institute, Salem, Mass.
Franklin Institute, Philadelphia, Pa.
Georgia Historical Society, Savannah, Ga.
Iowa Historical Society, Iowa City, Iowa.
Lowell Institute, Boston, Mass.
Maine Historical Society, Brunswick, Me.
Maryland Historical Society, Baltimore, Md.
Massachusetts Historical Society, Boston, Mass.
Metropolitan Museum of Art, New York.
Minnesota Historical Society, St. Paul, Minn.
National Academy of Design, New York.
National Academy of Sciences, Washington.
New England Historic-Geneological Society, Boston, Mass.
New Hampshire Historical Society, Concord, N. H.
New Jersey Historical Society, Newark, N. J.
New York Academy of Sciences, New York.
New York Historical Society, New York.
Ohio Philosophical and Historical Society, Cincinnati.
Philadelphia Academy of Natural Sciences, Philadelphia.
Peabody Academy of Sciences, Salem, Mass.
Peabody Institute, Baltimore, Md.
Pennsylvania Historical Society, Philadelphia.

Rhode Island Historical Society, Providence, R. I.
Smithsonian Institute, Washington,
South Carolina Historical Society, Charleston, S. C.
Southern Historical Society, Richmond, Va.
Virginia Historical and Philosophical Society, Richmond, Va.
Vermont Historical Society, Montpelier, Vt.
Washington Philosophical Society, Washington.
Western Reserve Historical Society, Cleveland, Ohio.
Wisconsin Academy of Sciences, Madison, Wis.
Wisconsin Historical Society, Madison, Wis.

WILLIAM EWART GLADSTONE.

CHICAGO, Ill.

Please give a short biography of William E. Gladstone.

C. B.

Answer.—The Hon. William Ewart Gladstone was born of Scottish parents in Liverpool, Dec. 29, 1809. He received a thorough education at Eton and Oxford, graduating from both with the highest honors. In 1832 he entered politics, being returned for Newark. He early joined himself with the Conservative party, under the leadership of Robert Peel, in which his abilities were soon recognized by that distinguished statesman, who gave him the position of Junior Lord of the Treasury in 1834, and in the following year made him Under Secretary of State; but with Peel's retirement he relinquished that office, in 1841, when Peel again became Premier, Gladstone served under him as Vice President, and afterward as President of the Board of Trade, in which capacity he derived much information concerning the commerce of the nation. He left the Conservative party in his support of Peel's free-trade policy, and again retired in 1845. In 1859 he became Chancellor of the Exchequer in Lord Palmerston's administration, which office he held to his credit until 1866. Two years afterward he was elevated into the premiership; but his defeat in 1874 resulted in the elevation of his great rival, Disraeli. He then resolved to remain out of politics; but the policy of Beaconsfield in the Eastern question called forth his earnest disapprobation, and again brought him

before the people in opposition to the administration. The year 1880 signalized his triumph, a triumph which was universally acknowledged as the result of his own personal popularity and sterling qualities. Gladstone has always been recognized as a man of strong character, who has conscientiously endeavored to advance the interests of the nation and people. In oratory he possesses the wonderful faculty of making statistics eloquent. He quickly perceives a difficulty, and with wise discernment unravels it. The past three years have only added honor to his name, and it is to be hoped that so favorable a beginning may be the dawn of a fruitful administration, and that ere long the vexed Irish question or questions will be solved forever.

INTERNAL REVENUE.

MADISON Wis.

Let us know how the receipts from internal revenue in 1883 compare with those in 1882, and oblige an opponent of the proposition to take off the tax on spirits and tobacco. Add cost of collecting the same.

JAMES.

Answer.—The total receipts under the internal revenue laws for the two fiscal years ending June 30, 1882, and June, 1883, were as shown in the table below;

Objects taxed.	1882.	1883.
Distilled spirits	$69,873,408.18	$74,368,775.20
Tobacco	47,391,988.91	42,104,249.79
Fermented liquors	16,153,920.42	16,900,615.81
Banks and bankers	5,253,458.47	3,748,994.60
Adhesive stamps—		
Bank checks	2,318,455.14	1,946.272.10
Friction matches	3,262,258.00	2,920,545.20
Patent medicines, etc.	1,978,395.56	2,186,236.16
Penalties	199,830.04	305,803.57
Collections not otherwise provided for	81,559.00	71,852.43

Total	$146,523,273.72	$144,553,344.86

The increase of revenue from spirits during the last fiscal year was $4,495,367.02; from fermented liquors was $746,695.39: the decrease from tobacco, $5,287,739.12; and from banks and bankers, $1,504,463.87. The total decrease of internal revenue from all sources up to June 30, 1883, was $1,969,928.86. This decrease was due mainly to the removal of certain taxes and the reduction of others effected by the legislation of the last Congress. The cost of collecting the internal revenue in the last year above named was $5,113,734.88. Owing to the recent action of the President consolidating collection districts, which dispenses with the services of a number of collectors, and other curtailments rendered possible by the legislation of the Republican Congress of 1881-1883, the estimated cost of collecting internal revenue during the current fiscal year is $4,999,190, and from present indications the actual cost will be considerably less than this.

INTEREST PAID BY PACIFIC R. R. COMPANIES.

COLUMBUS, Neb.

What amount, if anything, have the Pacific Railroad Companies repaid on account of interest on their bonds advanced by the General Government?

ANTI-MONOPOLIST.

Answer.—We are not prepared to give the whole amounts, but during the fiscal year ending June 30, 1883, the total amount received by the Secretary of the United States Treasury toward repayment of Pacific Railroad bonds, of various names and descriptions, guaranteed by it, was $1,556,866.90, an increase of $716,312.53 over the sum received on this account during the next previous year. During the same period the sum of $1,322,103.11 was collected for the various Pacific railway sinking funds toward liquidation of their bonds. This was $525,831.69 more than during the fiscal year ending June 30, 1882.

SALT REVENUE OF NEW YORK STATE.

MUSKEGON, Mich.

Please let us know what income New York State has derived from salt since the manufacture was brought under State control, or monopoly, whichever you please to call it.

A MICHIGAN SALT.

Answer.—The following statistics on this subject, derived from official sources, have been compiled for these columns by David H. Mason, Esq., who is authority on questions of revenue obtained from industrial products, either by Federal or State authorities. It should be observed in this connection that the State of New York supplies the brine to the manufacturers at the cost here indicated. That is to say, for example, for the thirty-six years, 1846 to 1881, inclusive, it supplied the brine for all salt made, and collected in return therefor 1 cent for every bushel of salt produced within the State.

Salt expenditures and revenues of New York in undermentioned years:

	Expenditures.	Rate per bu.	Duties received.
1843	$29,816.72	6c	$187,650.00
1844	33,286.58	6c	240,213.24
1845	30,407.77	6c	225,741.48
	$93,511.07		$653,604.72
Deduct expenditures			93,511.07
Net revenue			$560,093.65

The total net revenue to the State from this industry from 1818 to 1881, inclusive, was as follows:

Net revenue—	
1818 to 1824, 7 years	$452,393.39
1825 to 1845, 21 years	2,900,916.50
1846 to 1881, 36 years	706,319.58
Sixty-four years	$4,059,629.47

The State tax of 12½c per bushel was levied previous to 1834: from that time to April 20, 1846, the tax was 6c per bushel; since then 1c.

Another statement—	
1818 to 1833, 16 years, 12c per bu.	$1,746,719.45
1834 to 1845, 12 years, 6c per bu.	1,606,590.44
1846 to 1881, 36 years, 1c per bu.	706,319.58
Net revenue in 64 years	$4,059,629.47

THE ORIGINAL MONITOR.

CHICAGO, Ill.

Is not the statement recently made that the original Monitor, which fought the rebel ram Merrimac, is still afloat a mistake? I am of the impression that she foundered at sea.

OLD CITIZEN.

Answer.—You are quite correct. According to G. V. Fox, at one time Assistant Secretary of the Navy, "At 1 o'clock a. m., Dec. 31, 1862, Cape Hatteras bearing N. N. E., distant twenty miles, this little Monitor—whose fame, 'following the sun and keeping company with the hours, had circled the earth,' found a resting place at the bottom of the ocean."

MISCELLANEOUS ANSWERS

AND

EXECUTIVE AND CONGRESSIONAL DIRECTORY.

R. D. M., Edwardsburg, Mich.—THE DAILY INTER OCEAN first took that name in March, 1872.

S. L. Moore, Prior Lake, Minn.—General Sheridan was married to Miss Irene Anna Rucker, daughter of General D. H. Rucker, U. S. A., June 3, 1875, by the Rt. Rev. Bishop Foley, of Chicago.

A School Girl, Westville, Ill.—The Russians held Alaska by the right of Behring's discovery, in 1741, and the subsequent settlement of the territory. In 1799 Paul VIII. granted this land to the Russo-American Fur Company. The charter of the corporation was renewed in 1839, but finally expired in 1863, and in 1867 Alaska was ceded to the United States for $7,200,000.

Willis Hollings, Albany, Ill.—Greenwich, situated upon the right bank of the Thames, six miles southeast of London Bridge, is a favorite suburb of Londoners, on account of its fine parks and picturesque views. Its meridian was selected as the one from which to reckon standard time because from it

navigators generally, the world over, are in the practice of reckoning time and longitude.

G. H. S., McLean, Ill.—Snow-shoes consist of a flat wooden frame, of lanceolate form, from four to seven feet long, and from eight to fourteen inches in width at the broadest part. This frame is filled with wicker-work or thongs, and furnished with straps upon the upper side, for the feet. The sole may be wholly of wood. By the extreme length and breadth the shoe is prevented from sinking in the snow.

S. S. H., Smith Center, Kan.:—"The Little Old Sod Shanty on the Claim" was composed by Mr. F. E. Jerome, and first published in the *Smith County Pioneer* in 1878, and refers to a claim one mile from Smith Center.

John Stuart, Lyneville, Wis.—The ordinary expenditures of the United States Government for the year 1881 amounted to $178,204,146.41.

Constant Reader, Chicago—The first negro slave owned in Chicago, it is believed, was Black Jim, the property of John H. Kinzie, brought here by him in 1804.

A Subscriber, Morris, Ill.—"Johnson's Universal Cyclopædia" says that Miles Standish lost his wife, Rose, during the first winter in America.

Daisy, Emporia, Kan.—The sections of one mile square are the smallest tracts, the out-boundaries of which the law requires to be actually surveyed. The minor subdivisions are defined by law, and the Surveyors General, in protracting township plats from the field notes of sections, designate them in red ink, the lines connecting being imaginary.

Mary Maxwell Call, Fulda, Minn., evidently agrees substantially with another correspondent, whose communication on this subject was published a few days ago, as to the origin of the saying "All is lovely and the goose hangs high." She writes: "It is a corruption of the sentry call, 'All is lovely and the goose honks high,'" meaning, the weather is pleasant and the high flying of the geese indicates that it will continue so. She thinks, therefore, that it is not "slang." Webster, however, does not recognize "honk" as an English word in good standing, though we are not sure but he should do so.

W. F. Smith, Manning, Iowa.—The steeple of Trinity Church, New York City, is 284 feet in height.

W. H. L., Springfield, Ill.—"Lady's Day" is the name given in England to "Annunciation Day," which always comes on the 25th of March. In France it is known as Notre Dame de Mars. This year it and Easter Sunday corresponded.

James Wilson, Pontiac, Ill.—Journeymen printers on Chicago morning dailies are paid 40 cents, on evening and weekly papers and book work 37

cents per 1,000 ems. Job printers get from $18 a week, the minimum, to $21. The expenses of living are greater in the city than in the country; this is one reason why wages should be higher in the city. Another is that most of the work on a daily paper must be done at night.

W. D. Doane, Kokomo, Col.—The government farms out the seal fur fisheries of Alaska to a commercial company for a stipulated revenue, and under strict laws regulating the business.

C. L. Gilbert, Eau Claire, Wis.—"The Fall of Jerusalem" was written by Henry Hart Milman, who lived from 1791 to 1868.

L. Brock, Oswego, Kan.—Patented articles must bear notice of some kind that they are patented, and date of patent.

S. M. Sinclair, Marshalltown, Iowa.—Homesteaders and pre-emptors must file their claims in person. They cannot legally do it by proxy of any kind.

James Allen, Chicago—The name of the village at the mouth of the Mississippi, Balize, is the Spanish for beacon. A beacon-light has shone here from early times.

George S. L., Attica, N.Y.—The deepest artesian well in the world is at Sperenburg, about twenty miles from Berlin, Prussia. It is 4,194 feet deep.

"Lunatic," Vermont, Ill.—The nineteenth century began Jan. 1, 1801, and will end with Dec. 31, 1900.

F. P., Amherst, Wis.—The Michigan Central Railroad was completed to Ypsilanti, Feb. 3, 1838; to Jackson, Dec. 30, 1841.

J. F. Clymer, Silver Lake, Ind.—The total colored population of the United States in 1880 was 6,580,793.

M. B. Hilts, Towanda, Ill.—The present capital of West Virginia is Charleston. Wheeling was the capital until recently.

Charles Shick, Imogene, Iowa.—In the contest between John C. Heenan and Tom Sayers for the championship of the prize-ring, Sayers carried off the belt.

Harry, Creston, Iowa.—Dealings in "futures" or "puts and calls" are contrary to the laws of Illinois. These laws have not been strictly put in

force. There is a disposition to do that now.

Mr. Thompson, Monona, Iowa—There are about 320 acres inclosed in the Union Stock Yards, Chicago.

G. M. Ford, Chicago.—The total imports of the United States for the fiscal year ending June 30, 1882, amounted to $767,111,964; the total exports to $799,959,736.

C. Allen, Rock Island, Ill.—The great earthquake which destroyed so many lives in the Island of Scio in 1881 occurred on the 3d of April. About 4,000 persons perished.

Subscriber, Emmetsburg, Iowa—Chore is a corruption of the old English noun char or chare, derived from the verb *to char* or *to chare*, signifying to work by the day, take one's turn at doing jobs, instead of working as a regularly hired servant.

A. Annubehale, Chicago.—None but native Americans are eligible to the office of President of the United States; but children of American citizens residing abroad are legally regarded as natives of this country so far as this and all other civil rights are concerned.

G. W. Carter, Blair, Neb.—The fastest mile recorded of a running horse was made by Ten Broeck at Louisville, Ky., May 24, 1877, in 1:39¾. The fastest mile recorded of a trotting horse was made by Maud S. at Rochester, N. Y., Aug. 17, 1881, in 2:10¼.

J. S. Ewell, Adrian, Ill.—The term "thoroughbred" means bred to a high point from stock of good pedigree. It may be applied to any species of animals, although, owing to the extensive breeding of horses for speed, there has resulted what is now a distinct class known as "thoroughbreds."

Blonde and Brunette, Chicago—The phrase "Bread is the staff of life" is attributed to Dr. Jonathan Swift. It is in his "Tale of the Tub." It is not a Bible phrase. The original of "Uncle Tom's Cabin" is still alive. He has published an autobiography. He was in Chicago not many months ago. His name is Rev. Josiah Henson.

Non-voter, Rockford, Ill.—The fact that you are not a citizen and are, therefore, a non-voter does not exempt you from payment of poll-tax in case you do not wish to work out your assessment on the highways. The public roads are enjoyed by citizens and aliens alike, and—so are the taxes for keeping them in proper order.

C. T. Smith, Braddyville, Iowa—The United States Government has erected a line of towers in Illinois on about the meridian of Urbana, and similar towers in other places, including the one near South Bend, Ind., for

the purpose of effecting a more accurate survey of the country, and for other scientific purposes.

D. W. Barlow, Nettleton, Mo.—Honey-dew is a sweet substance found on the leaves of certain trees and plants in small drops, like dew. There are two kinds of honey-dew, one which exudes from plants, and the other which is deposited on leaves by an insect called the *aphis*, or vine-fretter.

H. M. Eastman, Fourche, D. T.—The oldest form of religion now extant is the Hebrew religion. The next oldest, probably, are Parseeism, or the religion of Zoroaster, and Brahmanism. All of these have changed materially as regards ceremonial, but in doctrine they are essentially consistent with the faith of their founders.

"306," Dana, Iowa—General P. H. Sheridan was at Sedan, by courtesy of the King of Prussia, at the time of the surrender of Napoleon III. and Marshal MacMahon's army. At the opening of the battle, according to the account of the correspondent of the New York *Tribune*, written on the field, "the King, Count Bismarck, General Von Roon, the War Minister, General von Moltke, and Generals Sheridan and Forsythe stood in a group overlooking the principal field of attack."

Leonard Bauman, Clarence, Iowa—The most productive salt region of the United States is the Saginaw salt district, Michigan. The most famous and productive salt mines in the world are those of the rock salt region of Wieliczka, in Gallicia, a province of Polish Austria. Great chambers have

been excavated in the solid salt, some of them fully 150 feet in height, and of immense length and breadth. One of these is fitted up as a chapel dedicated to St. Anthony.

An Engineer, Des Moines, Iowa—The assertion that State prisons are filled with criminals of good education is a gross exaggeration. Unhappily, the laws of all the different States do not provide for full and carefully kept statistics, but in all cases where such statistics are kept they go to show that, as a rule, ignorance is the accompaniment, if not the foster parent, of crime. For the most reliable report on this subject write to the Commissioner of Education, Washington, D. C., asking for copy of the paper of Dr. Wickersham, read at a recent session of the National Teachers' Association.

P. L. Stevens, Montfort, Wis.—Coal oil is much better as a preservative of fence posts than kerosene oil, which is more expensive and is not so effective.

Peter Sanborn, Chicago.—Every soldier who, prior to June 22, 1874, had made a homestead entry of less than 160 acres, may enter so much more as, when added to the quantity previously entered, shall not exceed 160 acres.

S. G. Salisbury, Independence, Kan.—You are right in the opinion that the President may call the militia from one State to another.

Subscriber, Chicago.—The great single span of the Brooklyn bridge is 1,595½ feet, or about one-half longer than the great span in the Cincinnati suspension bridge, which is 1057 feet.

F. V. Noggle, Galien, Mich.—Probably the deepest mine in the world in actual working is a shaft in the Rosebridge colliery, near Wigan, Eng., which is 2,445 feet deep.

C., Muscatine, Iowa—According to the laws of Iowa, one-third of the estate, real and personal, of a wife who dies without issue and intestate goes to her husband as dower, and the rest goes to her parents or heirs on the parents' side.

A Subscriber, Pittsburg, Ind.—1. The total number of troops called for by the President during the late civil war was 2,763,670 men, and there were 2,772,408 men furnished, besides 86,724 paid commutations, making an aggregate of 2,859,132 men.

A. O. A., Cambridge, Wis.—The total tobacco crop of the United States in 1880, as given by the statisticians of the Bureau of Agriculture, was 446,296,889 pounds, valued at $36,414,615. The crop of 1881 was 449,880,014 pounds, valued at $43,372,336.

A Farmer, Cresco, Iowa.—Trichinæ may sometimes be seen with the naked eye, appearing as minute specks. They average in size one-seventy-eighth of an inch in length and one-thirtieth in breadth, and it does not require a very powerful microscope to disclose them.

R. A. Santer, Hitesville, Iowa.—To kill white willow, cut it close to the ground in February or March to encourage the wood growth, and then cut again about the middle of the following August. If any of them sprout after that, keep them cut back and the roots must perish.

Minnie Brumfield, Perry, Iowa.—"Sheridan's Ride" was written by Thomas Buchanan Read, one of the most delightful of American poets.

John Nail, Xenia, Ill.—Your question has been answered very recently. A husband and wife cannot, both, make pre-emption or homestead entries. A married woman can do so only where she is held to be the virtual head of the family, as in case of the insanity or imprisonment of her husband, or abandonment.

A Subscriber, Hobart, Ind.—The proportion of butter in milk varies with the breed of cattle and their food. The average is about 5 per cent in good milk. It is nearer 6 per cent in the milk of Jersey cows on good feed. The proportion of butter in cream also varies considerably. It will average about 5½ pounds of butter to ten of cream.

C. S. Hasbrouck, Mendon, Mich.—The ancient language of the Irish was of Celtic origin, and specimens of it are still extant in old legal documents. As a living written language it no longer exists, but a corruption of it is still spoken among the natives of the mountain districts.

S. M., Moline, Ill.—Northwestern Arkansas has been partially described in another part of "Our Curiosity Shop" to-day. The more common trees are the poplar, oak, pine, sycamore, ash, elm, and hickory. This part of the State is watered by the White and Arkansas rivers, and their tributaries. The principal railroads are the St. Louis and the Little Rock and Fort Smith. Upon the former the important towns are: Van Buren, population, 1,029; Fayetteville, population, 1,788, and Bentonville, population, 784; on the latter, Ozark, population, 824, and Clarksville, population, 656.

A. B., Chicago—At the census of 1880 the "West Side" division of this city had the largest population. The Fourteenth Ward contained the most inhabitants, 56,464; the First Ward, the business center, the fewest, 14,770.

E. H. Topper, Greensburg, Pa.—Historians disagree as to the number in Xerxes' army when he invaded Greece, but no one of them was ever so insane as to assert that he had 35,000,000 men. According to Herodotus, the whole number of fighting men in the military and naval force was nearly 2,500,000. He supposes, and it was evidently a wild guess, that with the raw recruits picked up in passing through the territories of Thrace, Macedonia, Magnesia, and other half-savage districts, who hoped to share in the spoils of Greece, and the servants and camp followers, there was a total multitude of about 6,000,000 persons. Other Grecian writers regard this as a gross exaggeration.

James Dunnoon, Davenport, Iowa—The extent of the Victoria Nyanza, or great fresh water lake at the head of the Nile, is a little more than that of Lake Huron and a trifle less than that of Lake Michigan. It does not vary in size 1,000 square miles from either.

De Lesseps, Peoria, Ill.—The average height of the Atlantic Ocean at the Isthmus of Darien above the Pacific is given in "Haswell's Engineer's Pocket-book" as 6.56 feet.

W. I. Pratt, Tuscola, Ill.—The nickname "gentle shepherd" belonged to the Hon. George Grenville (born in 1712), and originated thus: He was a Whig, and while urging a tax upon cider, asked his opponents where they would have it. Becoming excited, he exclaimed: "Let them tell me where; I repeat it, sir, tell me where;" when Pitt, who was one of the opposition, raised a laugh by repeating the words of an old song, "Gentle shepherd, tell me where." Your other questions we cannot answer.

N. Johnson, Peoria, Ill.—The three most level States in the Union are Delaware, Louisiana, and Illinois; the latter being more broken than either of the others.

Readers, Chicago—John Wilkes Booth was shot in a barn near Bowling Green, Va., April 26, 1865 twelve days after the assassination—while resisting arrest—by Boston Corbett.

L. D. Nickerson, Appleton, Wis.—The name of the author of “Ecce Homo” and “Ecce Deus” is John Robert Seeley.

A Reader, Freeport, Ill.—The essential difference between a galvanic and a Faraday battery is that the former uses a connecting fluid between zinc and copper, and the latter uses the magnetic coil.

“Anxious Mother”—Kansas has established a reform school for boys at North Topeka. The Nebraska Legislature has voted $10,000 to open an industrial reform school at Kearney.

F. G. Day, Strahn, Iowa—Cole Younger is working out a life sentence in the Stillwater State Penitentiary, Minn.

An Inquirer, Joliet, Ill.—Prince Gortschakoff skillfully retreated with his garrison from Sebastopol when beleaguered by the allied armies.

Frank C. Mercer, Kansas City, Mo.—1. A troy ounce weighs 480 grains; an avoirdupois ounce, 437½ grains. 2. Aaron Burr was the third Vice President of the United States, having been elected with Thomas Jefferson in 1800.

Samuel Burt, Girard, Kan.—The distillery having the largest capacity in the United States is located at Peoria, Ill. If the great distillery at Des Moines, Iowa, were fully equipped, as originally intended, it would be the largest in the world.

L. D. Crotchett, Edwardsville, Kan.—1. The salary of United States Senators and Representatives is $5,000 each. 2. The Vice President and Speaker of the House each receive $8,000. 3. According to a decision of Attorney General Brewster, a Congressman is not a United States officer within the meaning of that term in certain statutes; but in the broader sense of the word he is an officer. See definition of officer in Webster's Dictionary.

B. Frank Hoover, Penrose, Ill.—The days you name are not made school holidays by statute, although they are legal holidays as regards commercial paper. Saturdays, New Years, Fourth of July, and Christmas are the only legal school holidays in Illinois, unless the board of directors agrees to grant other holidays, which it has power to do.

M. L. Karney, Brodhead, Wis.—The Chicago, Milwaukee and St. Paul Railroad pays Mr. Lawler twenty-five cents for every freight car, and fifty cents for every coach which he transports across the Mississippi upon his pontoon bridges at Prairie du Chien. The company has no other means of crossing at that place.

J. H. Rhodes, Big Rock, Ill.—The Erie Canal, extending from Buffalo to Albany, has at the western end an eastern flow for a short distance—from Buffalo to Seneca River, then a western flow from Lodi to the Seneca River, and finally an eastern flow from Lodi into the Hudson River near Albany. The motion of the water is greatly moderated by the numerous locks, which serve to impede the current. The expense of constructing this canal was much less per mile than the cost of the Suez Canal.

George W. Robbins, Peru, Neb.—The United States statutes are silent upon the subject of National holidays, except that they provide that as to negotiable paper, bills of exchange, promissory notes, etc., the effect of July 4, Dec. 25, and Thanksgiving Day shall be the same as that of Sunday, or the first day of the week.

C. E. Stevenson, Bryant, Ill.—Sam Patch made his last and fatal leap at Genesee Falls, New York.

P. A. Brooks, Mt. Vernon, Iowa.—The Constitution of the United States was framed by a convention of delegates from all the States except Rhode Island, held at Philadelphia in September, 1787. Tom Paine was not a delegate.

J. R. Cripper.—Adelaide Neilson was a distinguished actress. She filled several successful engagements in this city, and died in Paris in 1852.

R. S., Kill Creek, Kan.—The height of mountains is determined from the relative height of the barometer. Ascending from the sea level the air becomes lighter, and the mercury in the barometer falls. Civil engineers, knowing the height of the barometer at sea level, and also at the place whose height they desire to determine, are able to compute the elevation of the place. Other methods are sometimes used.

Harry T. Ashton, Chicago—Emile Gaboriau is a man. 2. “Ouida” is the assumed name of Miss Louisa De la Rame, an English novelist of French extraction.

V. G. Bush, Cayuga, Ill.—A young lady ceases to be a minor when she attains the age of 18. 2. Brokerage is computed on the face, or par value of stock.

H. Joint, Logan, Kan.—The statutes of California declare the marriage of white and colored persons unlawful. The Constitution of the United States does not forbid it.

Milton T. Cox, Fairmount, Ind.—The steamship Alaska, which made the quickest time on record from New York to Queenstown, viz., 6 days 18 h 37 m, sailed 2,925.7 miles. This may be considered a fair estimate of the sailing distance between the two places.

Ex-Soldier, Kellerton, Iowa—1. Alcohol thermometers are used for observing temperature below 38 degrees, though ordinarily they are not as accurate as mercurial thermometers.

John A. Hughes, Grapeland, Texas—For the election of members of the lower house of the General Assembly of Illinois the State is districted so that three members represent each district. Then every elector is permitted to cast three votes. He may give three to one candidate, one and a half to each of two, or one to each of the three.

Subscriber, Belmond, Iowa—The real name of Eli Perkins is M. D. Landon.

G. W. D., Chicago.—As nearly as one can judge from the names, about four-fifths of the Chicago saloon-keepers are foreign born. As to their politics, it is hard to tell where to place them, except in a local election, when a majority of them are sure to be in favor of low license and anti-Sunday legislation.

F. M. P., Clipper, Iowa.—It is probable Saint John died at Ephesus during the reign of the Emperor Trajan. Jerome states that he was 100 years old, Suidas 120 years. There is no reference to the age of Job, save that he lived 140 years after his trials ended. 2. Molasses is a singular noun.

R. P. Drake, Shenandoah, Iowa—The origin of the word dude, is not certainly known. It has been in English slang for a 100 years at least. It has not been widely used in this country until comparatively recently, but in Salem, Mass., and vicinity, it has held a place in local slang for many years.

Subscriber, Houghton, Mich.—St. Patrick's Day is the day set apart in the Romish calendar for special religious observances in honor of the founder of the Christian church in Ireland, canonized by the Church of Rome as St. Patrick. It is probably not the day of his birth, since it is generally conceded that it is impossible to determine that.

Mrs. J. R. Dowling, Wheatland, Iowa.—After the death of the great Roman general and statesman, Cæsar became a title of all of the Roman emperors, and from them has passed into several other European countries to designate the chief ruler. In Germany it appears as Kaiser, and in Russia as Czar. 2. We have lately answered your other questions.

E. C. W., Garden City, Kan.—The Dry Tortugas and several other islands off the Florida coast belong to the United States. The government has a military station, hospital, etc. on the Dry Tortugas, and sometimes sends convicts there.

A. V. Bacon, Lansing, Minn.—The principal reasons for outgoing trans-Atlantic steamers from the United States bearing north, are: the influence of the gulf stream running from the southern extremity of Florida up the American coast, making to northeastward between New Foundland and

Ireland; the higher latitude of the British Isles; and in certain seasons the prevailing winds. “Imaginary lines” have nothing to do with their choice of this course. If the form of the earth was the only thing to be considered, the steamers would sail on the great circle connecting the port of departure and the port of destination, both going and coming, because such a circle marks the shortest distance between the two points on the sphere. But winds and currents are more important than shortest distances.

E. D. Vorhes, Peotone, Ill.—We believe Whittier is sometimes referred to as the “bachelor poet,” but we know of no living poet of distinction referred to as “the boy poet.” Isaac Watts wrote verses at a very early age, despite of all the attempts of his father to reform him of this weakness. Our own William Cullen Bryant, who was very fond of declaiming some of Watts’ hymns at 7, 6, and even 5 years of age, began to make verses of his own at 8 years, and wrote a poem for a school examination at 10 years, which was of sufficient merit to become a stock declamation in other schools. He wrote “The Embargo” and “The Spanish Revolution” when he was but 13. Henry Kirke White wrote good poetry before he was 15, and published a volume of poems when he was not quite 17. Other “boy poets” there have been, but who is the “boy poet,” so recognized, of this prosaic age?

Fred Cooke, Butte City, M. T.—Probably New York State leads all others in the quantity and quality of marketable apples produced and in the prices realized.

Adaline, Moline, Ill.—A lady writing to a person who does not know whether she is single or married should sign Mrs. or Miss ——, as otherwise the receiver cannot tell how to address his reply.

A. P. Hargrave, Lowden, Iowa.—The rectangular system of survey was adopted by the United States Government May 20, 1785, several years before the adoption of the present constitution. It was put to practice first in Southwestern Ohio; the first principal meridian being run from the mouth of the Great Miami.

Theodore Wiltz, Dana, Ill.—Yes, "a person who has resided in the United States but one year, and has only taken out his first naturalization papers can pre-empt or make a homestead entry in Dakota." He does not need to reside in the country a year; fifteen minutes is long enough after he has formally declared his intention to become a citizen: so great-hearted and liberal is "Uncle Sam."

Charles W. Collins, Louisville, Wis.—In cases of simultaneous applications to enter under the homestead laws, the rule is as follows: Where neither party has improvements on the land, it should be sold to the one who bids highest. Where one has actual settlement and improvements and the other none, it should be awarded to the actual settler. Where both allege settlement and improvements, an investigation must be had, and the lands awarded to him who shows the prior actual settlement and substantial improvements, each as to be notice on the ground to any competitor.

Inquirer, ——, Kan.—The law making it necessary for an officer of one State to have a requisition from the Governor of the same upon the authorities of another State before he can arrest and take therefrom any person charged with crime is designed to prevent persons from being transported to other States, in some cases far from home, friends, business

interests, to be tried among strangers, without good evidence that a crime of some magnitude has been committed. Similar reasons, but of much less cogency, apply in support of laws limiting the authority of sheriffs and constables to the counties to which they belong, except when armed with special warrants.

L. J. Martin. Bowling Green, Ky.—The following States cast their electoral votes for Mr. Lincoln for his first term: California, Connecticut, Illinois, Indiana, Iowa, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Wisconsin.

J. S. White, Paw Paw, Mich.—The largest ratio of colored population in Kansas in 1880 was in Bourbon County, being as 7,314 to 8,642, or nearly 47 per cent of the total. The next was in Christian County, where it was as 14,639 to 17,043, or a little over 45 per cent. The ratio in Fayette County was almost as great, say as 12,974 to 16,049, or over 44 per cent. There were no other counties where it was nearly so great.

Subscriber, Blendon, Kan.—1. The Penitentiary at Sing Sing, N. Y., is a State institution. Prisoners convicted in Federal courts are sent there under an arrangement between State and Federal authorities. 2. Rip Van Winkle is the fictitious hero of one of Washington Irving's "Sketch Book" tales, entitled the "Legend of Sleepy Hollow." The popular play of the same name is the same story, with some alterations, as dramatized by Dion Boucicault.

B. F. McCormick, Rock Valley, Iowa.—“Sunset Cox” takes this nickname from a really vivid but rather grandiloquent description of an Ohio sunset, which was widely copied into exchanges at the time it was written, many years ago. “Extra Billy Smith,” not “of New York,” but ante bellum Representative from Virginia, and subsequently Governor of that State when in rebellion, fairly won this name from his predilection for recommending and voting extras in appropriation bills.

W. I. Pratt.—1. Thomas Green Fessenden was an early American author and journalist of wide reputation. He was born in New Hampshire in 1771; graduated at Dartmouth College in 1796; studied law, but made more reputation as a writer. His poem, “The Country Lovers,” was popular, as was also his humorous, satirical poem, “Terrible Tractoration.” He settled in Boston in 1804, where he became editor of the *New England Farmer*, He died in 1837.

A Subscriber, Walnut, Iowa.—Whether persons who have been shipwrecked shall be carried free of charge upon other vessels is optional with the captains of said vessels. If landed in a strange country, they may seek aid from the consul representing their own government. The American consul is furnished with funds to help shipwrecked seamen only, but he is under obligation to do what he can for all American citizens in distress.

Dicke, Dana, Ill.—There is no “Senator at large.” A “Representative at large” is one elected by the entire State, instead of a district, in those States failing to redistrict before the election following the reapportionment of Representatives according to the latest census. For instance, the four additional Representatives given to Kansas by the last Congressional apportionment were elected on a general State ticket and not from single

districts. In Maine, where the number of Congressmen was reduced, the Legislature having failed to redistrict the State all the Representatives were elected on a general State ticket.

David E. Gray.—1. The treaty of St. Ildefonso was an offensive and defensive alliance between the first French Republic and Spain, negotiated Aug. 19, 1796, resulting, among other things, in a war between these allied powers and England. 2. Oregon and Washington Territory fix the weight of a bushel of green apples at 45 pounds. Other States and Territories fix the legal weight of dried apples, but not of green apples, so far as we can discover.

A Reader, Crete, Neb.—The greater weight of a body at the poles, as compared with its weight at the equator, is attributed, principally, to two causes, viz., the estimated shorter distance from the pole to the center of the earth; and the centrifugal force resulting from the revolution of the earth on its axis, which is zero at the poles and at its maximum at the equator.

John Steele, Chicago—Yes, a fine watch may easily be ruined by too close approach to a powerful electrical machine. The hair-spring and balance wheel become magnetized, and it is difficult and costly to get them demagnetized.

James McNulty, Chicago—The pitch of a roof is the ratio of its height divided by its span. Consequently a half pitch roof is one whose height is half its span, a quarter pitch one whose height is one-fourth the span, and so

on. The answer you refer to was defective in omitting the word “span” after “foot.”

Charles Seymour, Chicago, Ill.—The Emperor Maximilian I., of Mexico, had two foreign legions besides his French allies, one known as the “Belgic Legion,” the other as the “Austrian Legion.”

O. Clark.—In the case of Wright vs. Wood it was decided that “four pre-emptors may combine to erect a house upon the corner common to their claims, but each pre-emptor must reside in his own part of the house.” If you will send your address and a postal-card we will answer your other question.

Taylor Lee, Sammon’s Landing, Mich.—Great Abaco is an island in the Bahama group. It is about eighty miles long and twenty wide. Little Abaco, about twenty-eight miles long, is near it. They are both specially adapted to the raising of early vegetables for the great American markets. Being at the northern end of the Bahamas, they lie directly east of the most eastern projection of Florida. They belong to Great Britain.

L. J. Worden, Bowling Green, Ky.—The first railroad on which a locomotive was operated was the Merthyr-Tydvil Railway, England. This was in 1804. But the first railway built for general traffic was constructed by Pease and Stephenson in 1825. It was the Stockton and Darlington Railroad in England. For further particulars see Curiosity Shop of last year, in book form, page 101.

E. Judkins, Alpowa, W. T.—1. The author of “The Beautiful Snow” is James W. Watson.

C. L. N., Cresco, Mich.—1. The talent of the Scriptures, or Hebrew talent, has been variously estimated at from $1,645 to $1,916. 2. To take care of your live oyster ask advice of the Superintendent of State Fisheries, Lansing, Mich.

D. S., Winters, Ill.—The inventor of Sharps’ rifles for military and sporting purposes was Christian Sharps, a scientific machinist, born in New Jersey in 1811, died in 1874. The manufacture of these rifles was begun at Hartford, Conn., in 1854.

W. Bird, Bolivar, Mo.—The Maas (or Meuse, as it is called in the upper part of its course) is a river of Belgium and Holland, which, after uniting with the River Rhine, discharges into the North Sea not far from Rotterdam. During the winter months the Dutch travel and amuse themselves on skates and runners on the ice of their many canals, lakes, and rivers, these being their thoroughfares in winter as well as in summer. Owing to moderate temperature and an unexpected rise in the river in the winter of 1512, the ice suddenly gave way at a point on the Maas, near Rotterdam, and a large number of people, some say about 8,000, were precipitated into the water, where the most of them perished.

Joe Davidson, White Rock, Kan.—1. The District of Columbia contains an area of sixty-four square miles. 2. The yearly salary of the President is $50,000; that of the Vice President $8,000; of each of the members of the Cabinet $8,000; of Senators, $5,000 each, 20 cents per mile mileage, stationery $125, franking privilege, and expenses when serving on special committees; Representatives the same as Senators.

Leonard Smith, Atalissa, Iowa—The fastest time on record for any locomotive in this country (and we find no faster for any other) is fourteen miles in eleven minutes, made by locomotive Hamilton Davis and 6 cars on the New York Central Railroad in 1855. This was an average of a mile in 47⅐ seconds.

Prosy, Busti, Iowa.—1. Rice was introduced into this country from Madagascar through the gift of a sack of rice by the captain of a vessel driven into Charleston, S. C., in 1694, to Thomas Smith, who planted it in his garden and distributed the seed.

M. V., Suez, Ill.—"Gulliver's Travels" were written by Jonathan Swift, who was born in Dublin, Ireland, Nov. 30, 1667; died in the same city, Oct. 19, 1745. The above named work was a series of humoristic satires on the weaknesses of human nature, the follies of society, and the foibles of certain individuals against whom Swift cherished personal antipathies.

Phillip Blunn, Seward, Kan.—Fremont in early life was a bold, original spirit, as is fully shown by his daring and at times almost reckless

adventures during the explorations by which he discovered the overland route to California and opened up the regions of the great Salt Lake and Upper California to American settlement. He chafed under the restraints of military discipline, and was charged with disobeying or exceeding his instructions, which he sometimes undoubtedly did: and in his case it nearly always turned out fortunately for the country. He was placed under military arrest and found "guilty of mutiny and insubordination" for acting as Governor of California by appointment of Commodore Stockton in 1846, contrary to orders of General Kearney. The "Old Pathfinder," as he was subsequently called, rather gained by the event.

Soper Bros. & Co., Chicago—In the destruction of the Southern Hotel, St. Louis, April 11, 1877, thirteen lives were lost and thirty-five persons seriously injured. The hotel was rebuilt, and was reopened to the public about one year ago last summer.

P. L. F., Swan Lake, Dak.—1. There are two State Normal schools in Illinois—one at Bloomington and the other at Carbondale. 2. There is no part of the earth's surface where the sun's rays, if unobstructed by some intervening object, would not shine into a north window at some time in the year.

M. L. Scott, Boulder, Col.—1. The Chief Justices of the United States since 1789 have been John Jay, John Rutledge, Oliver Ellsworth, John Marshall, Roger B. Taney, Salmon P. Chase, and the present incumbent, Morrison R. Waite. 2. The corner-stone of our first Federal Capitol was laid by George Washington Sept, 18, 1793. The corner-stone of the extension of 1851 was laid by Millard Fillmore.

A. C., Streator, Ill.—Inauguration Day, of the 4th of March, on which the term of office of the President of the United States must necessarily begin, has occurred on Sunday fourteen times this century. It occurred so the last time on the occasion of President Hayes' inauguration, and he quietly took the oath of office in the White House Sunday afternoon. The inauguration ceremonial at the Capitol took place the next day. Inauguration Day will not fall on Sunday again during this century.

James Harman, Central City, Neb.—The total receipts from saloon licenses in this city in 1880 amounted to $182,226.40. The expenses entailed through pauperage, damage to property and person, increased cost of police, jails, etc., cannot be accurately determined. It is a matter of estimate.

A Subscriber, Chicago.—In the Massachusetts gubernatorial election, Butler received 133,946 votes: Bishop, 119,997, and Almy, 2,137, making Butler's plurality 13,949, and his majority 11,812.

The ten-mile race at the State fair held at Minneapolis last fall was won by Miss Belle Cook, with five horses, in 20:02. Little Cricket won the twenty-mile race in 40:59.

John Allen, Topeka, Kan.—The real name of "Mary Blake," contributor to the *Century*, is Mrs. Blakesley.

A. B. E.—The authoress of “Curfew Must Not Ring To-night” is Rose Hartwicke Thorpe.

J. M. H., Stanberry, Mo.—The President pro tempore of the Senate draws the same salary as the Vice President when filling the same office. You are right as to the apportionment of members of Congress. The whole question is explained on page 75 of Our Curiosity Shop of 1882, in book form, costing 25 cents, postage included. It answers hundreds of such questions as you and your fellow-students are discussing. There is no instance of a State’s returning to the condition of a Territory, unless the rebel States were in that condition before they adopted their “reconstruction constitutions” just after the war, when they were under provisional governments. Your other questions have all been answered very recently.

“She-cau-oh,” Chicago, Ill.—We give your note just as it comes to us: “Man-i-*to*-ba—that is not the way it is pronounced, but Ma-nit-a-*bah*. Chicago should be She-cau-*oh* (Potawatome)—‘all gone,’ ‘far-off-place.’ Sioux, pronounce Sou. I could speak the Indian language better than the English once.—She-cau-*oh*.” It is too late in the world’s history to change the pronunciation of Chicago back to the original, and, for that matter, the pronunciation of Manitoba is hopelessly anglicized into Man-i-*tow*-ba. Still we thank you for your note, and will preserve it in our bound Curiosity Shop as another witness for the original pronunciation of all these names, and what is admitted to be one of the Indian meanings of Chicago, the others, vouched for by good authority, being “strong” and “wild onion,” the sense in each case being dependent on the connection.

Ida, Milo, Ill.—1. George III. was King of England during the whole period of the American revolution. His Prime Minister from 1770 until after the surrender of Cornwallis was Lord North, and two other of the principal members of his Cabinet were Lords Gower and Weymouth. In 1779 the latter, seeing the hopelessness of the effort to subdue the Americans, resigned, but North continued in power until after the capture of Cornwallis at Yorktown, when he resigned March 20, 1782, and was succeeded by the Marquis of Rockingham, who at once opened negotiations for peace.

Alfred Gates, Lafayette, Ind.—The dower right of a married woman in her husband's real estate has been abolished in Indiana and California. In States where married women are entitled to dower, it is the general rule that relinquishments of dower made by any such woman under 21 years of age are of no effect unless ratified by her after she has attained that age. Even in most States where women are "of age," or become mistresses of themselves at an earlier age than 21, they cannot convey real estate until they have attained the full legal majority of 21 years.

Martha J. McCoy, Mt. Pleasant, Iowa.—If the paint is scaling off your recently painted house it proves that there is not much pure white lead and good boiled linseed oil in it. Unless one employs an honest painter and contracts for these substantial ingredients he is almost certain to get white lead adulterated with earths, sulphate of baryta, or other cheap materials, mixed with worthless substitutes for linseed oil. The lowest-priced paints are usually the dearest in the long run, particularly for outside work.

Georgia L. Brown, West Salem, Wis.—1. The salary of the President was increased to $50,000 a year—making it the same as that of the Governor

General of Canada—on the last day of the first term of President Grant, who drew pay according to this law from the beginning of his second term.

S., Greenfield, Ill.—"Red Line Poets" is a trade name given to certain editions of selected poems printed on pages bordered with red lines. There are one or two English books of this description, and one or more American books. No two of them embrace the same list of authors. A Boston red-line edition contains only selections from Longfellow, Whittier, Bryant, Holmes, Lowell, and Emerson.

Amateur Antiquary, Chicago, Ill.—"Empire State of the South" is a popular appellation for Georgia in allusion to its being the leading State in wealth and enterprise. Tennessee is sometimes called the "Big-bend State," in allusion to the spoon-like bend of the Tennessee River. West Virginia is sometimes called the "Pan-handle State," because it includes that singular strip of land between the Ohio River and the boundary of Pennsylvania.

H. N. Kinney, Mantone, Ill.—The leading corn county of this State in 1881 was McLean, with a crop of 9,750,000 bushels; the next largest was Livingston, with 6,983,522 bushels. The same year Kankakee County produced 2,743,300 bushels.

R. D. Silsby, Modale, Iowa.—Your friend is right in asserting that there are yellow and brownish varieties of cotton. The valuable Orleans cotton staples are naturally white, but there is cheap yellow and brownish staple used for nankeen cloth, and one sort known as Bourbon cotton.

A Reader, Glenwood, Iowa.—1. The great Chicago fire of 1871 began Sunday evening, Oct. 8, and lasted until Tuesday morning. 2. Henry Wilson, the late Vice President, changed his name, by birth Colbath. Why, he always treated as a strictly private matter. His childhood was one of extreme poverty, and he was apprenticed when he was but ten years old.

Normal Student, Stanbury, Mass.—There is no State in the Union where a man can vote before he is 21 years of age. However, if a man's birthday is Feb. 1 he becomes of age Jan. 31, as the law takes no account of fractions of a day in a matter of this kind.

C. H. Martin, Cheboygan, Mich.—St. Patrick was sent by Pope Celestine as a missionary to Ireland, after being a monk in the celebrated monastery of Lerius, in France. His father was a deacon in the Church of Rome, and his mother was a sister of St. Martin of Tours.

A Reader, Chicago.—In Wisconsin it is not necessary to take out a marriage license.

A. G. Damson, Vienna, Ill.—W. H. Russell, war correspondent of the London *Times* during "the recent unpleasantness," is called "Bull Run Russell" because of his overdrawn description of the first battle of Bull Run, and prediction of the speedy collapse of the Union as a consequence. He is still alive.

Geo. T. L., Attica, N. Y.—The President of Mexico at this time is General Gonzales; installed Dec. 1, 1880, for four years. There is a Senate composed of the Vice President and two members of each of the twenty-seven States. The House of Representatives consists of one member for each 80,000 population, and in 1879 numbered 331. During the recess of Congress a Council of Government, composed of the Vice President and half of the Senate, sits, to advise the President.

A. C., Englewood, Ill.—The silkworm spins its cocoon and passes into the torpid state of a chrysalis or pupa. If allowed to remain in this state too long it becomes active, begins to gnaw its way through the cocoon, and finally comes forth in the butterfly state. The cocoon is then of little value. But if, just before the chrysalis begins to grow active, the cocoons are dropped into boiling water the insect is instantly killed, and the silk is easily unwound and reeled for the market.

B. B. Williams, Parsons, Kan.—The Golden Horn is the name of the inlet from the Bosphorus, which divides the city of Constantinople and constitutes its magnificent harbor.

A. M. A., Union Grove, Ill.—When Governor Ford's term as Governor expired, in 1846, he moved to Peoria and went into the practice of the law. He had been called from the office of Associate Judge of the Supreme Court to that of Governor, but although a good judge, he was not well suited for an advocate. Moreover, he had become addicted to overdrinking and during his gubernatorial term had made many violent enemies in his own party, some of whom spared no opportunity to wound him. He had retired from

the Governorship “poorer than when he was inaugurated,” and failing to secure a remunerative practice against all the discouragements above mentioned, he fell into despondency, and died at Peoria in 1850 in indigent circumstances, but not “a pauper.”

N. K. Pierce, Mentor, Kan.—The most elegant Pullman palace cars cost from $20,000 to $25,000, but such cars have been made in only a few special cases. The ordinary Pullman car costs from $11,000 to $15,000.

Inquirer, LeRoy.—1. The American Almanac for 1883 states the total number of churches in the United States at 92,477, omitting the churches of the Methodist Episcopal Church South, which numbers about 8,000. 2. The membership of all the Protestant churches is stated at 8,974,400, and the “adherents” of the Roman Catholic church at 6,370,858, according to the Catholic Directory for 1882. Protestant churches enumerate only those who become members by profession of faith or letters from other churches; Roman Catholics enumerate all who have been baptized in their faith, either in infancy or after years. 3. Church attendance can only be estimated from church sittings, which average for the United States about two and a half times the membership. 4. The total number of newspapers, magazines, and other periodicals published in the United States in the census year is given as 11,314.

Old Subscriber, Lincoln, Ill.—In most of the States the marriage of a female partner in any business firm dissolves the partnership.

J. L. Orr, Glen Haven, Wis.—Evidently the north window of a house situated on the north pole would be a sky light. All side wall windows would look to the south.

J. J. Stark, LaCygne, Kan.—1. The most celebrated picture of "Christ and the Last Supper" was painted by Leonardo da Vinci in 1497. 2. Your second question we cannot answer.

E. Finley, Pontiac, Ill.—The total precipitation of moisture for the year 1882 observed by the officer of the Signal Service at Riley, McHenry County, Ill., was 35.36 inches, or 1.46 inches above the annual average for twenty-one years.

A. N. Smith, Davenport, Iowa—To destroy chicken lice keep the hen-house clean and well ventilated and sprinkle the dusting bins with carbolic acid.

T. L., Winona, Minn.—You are wrong. B wins the wager, because "a son born to an American minister while his parents are on official duty abroad" is in the eye of the law as much an American as if born in this country, and is eligible to the Presidency of the United States.

Mrs. S. E. E., Fredericksburg, Iowa—For some years there was no general agreement as to the time of observing "Decoration Day," but when

it became desirable to settle on a specific day to be kept every year, May 30 having been fixed upon by one or more Legislatures, it was adopted generally.

Charles Hallas, Adrian, Minn.—1. Congress raised the salary of the President, by act of March 3, 1873, to $50,000 per annum, at the same time cutting off certain allowances made to former Presidents, aggregating several thousands a year. Before that act the salary of Congressmen of both houses had been $5,000 and mileage, but by this act they were raised to $7,500. By act of Jan. 20, 1874, the salaries of Congressmen were reduced to the old amount.

C. J., Topeka, Kan.—It certainly is customary when ladies or gentlemen write to any one for information for them to inclose a postal stamp or postal card for the reply. It is quite as much as one should ask of a business man that he take time to give desired information. To request this much and expect him to pay postage on the reply is what is termed in the emphatic vocabulary of the slang-slinger, “cheeky.” The very fact that postage is such a trifle makes the omission to inclose it all the more inexcusable. But while postage is a mere trifle on the single letter, to a person in a public position, called on to answer thousands of questions in a year, the aggregate postage would be a serious matter were it not for the above rule.

E. J. Bristo.—The whites of Virginia number 880,858; the colored population is 631,616. That State has one of the most healthful climates in the world. The water is excellent except in the swamp regions in the eastern part, and the soil of about two-thirds of the State is fertile except where worn out by long tobacco culture without proper use of fertilizers and

alternation of crops. Virginia can produce anything that grows in the temperate zone.

Wm. G. Miller, Arkansas City, Kan.; No method of manufacturing merchantable diamonds has ever been discovered. A French chemist claims to have made very minute crystals of diamond by an extremely expensive process, simply to prove that the thing is possible, but the crystals, whether diamonds or not, were of no value as gems or for any other commercial or mechanical purpose. For anything more on this subject see Our Curiosity Shop for 1882, page 147. Price per mail, 25 cents in paper covers and 50 cents in cloth.

George H. Gifford, West Point. Neb.—1. The total net ordinary expenditures of the United States Government in 1880 amounted to $171,885,382.67. Figure out for yourself “the cost per minute.” It will be a delightful pastime for idle moments; editors have none.

Jacob Vanaernam, Mount Morris, Wis.—In Illinois the State is districted for State representatives, so that three representatives are chosen from one district. Every voter may either give each of the three candidates one vote, or one of them all three of his votes, or he may give one and a half votes to each of two of them. This explains why you saw “half votes” in Illinois election returns. This system of voting is designed to place it in the power of a minority party to secure at least one out of three representatives, where by the old method all three representatives might be elected by the majority party.

A. Tyler, DeWitt, Ill.—The Declaration of Independence was not adopted by Congress until the 4th of July, 1776, about 2 o'clock p. m., as fully explained in Our Curiosity Shop some weeks ago. It was not adopted on July 2. A resolution was adopted on that day asserting that "these United Colonies are, and of right ought to be, free and independent States," but the Congress sat the rest of that day, all the next, and a part of the Fourth, discussing the Declaration before It was adopted. Some of the delegates to that Congress never signed it; others not until some time after July 4.

W. L. Murphy, Tuscola, Ill.—1. The distance from St. Paul to Portland via the Northern Pacific Railroad is 1,911 miles; from Chicago to St. Paul is 409 miles, making the total distance to Portland 2,320 miles.

M. R. Huntington, Chicago—The five longest rivers in the world are the following, named in the order of length from greater to less: The Missouri, measured from its source to the Gulf of Mexico; the Amazon; the Nile; the Yang-tse-kiang, China, and the Murray, Australia.

A. C. Hess, Central P. O., Pa.—Ginseng is exported to China in large quantities, where it is in high repute as a medicine. It is used in pharmacy to some degree in this country and Europe. In 1880 our export of ginseng amounted to 391,083 pounds, valued at $533,042.

C. F. S., Denmark, Iowa—The autographic process of telegraphing, which transmits a facsimile of the original dispatch, was first brought forward in 1848 by F. C. Bakewell, of London, England. It was improved

by Abbe Casselli, of Florence; Lenoir and Meyer, of France, and Professor Sawyer, of Washington, D. C. It is not so economical, so expeditions, or so well adapted in some other respects to ordinary telegraphic purposes as the Morse system with modern improvements.

A. J., Dern, Ind.—1. The eclectic school of medicine lays great stress on the avoidance of depletion, either by blood-letting or severe purging, and the use of agents calculated to build up the system. Vegetable remedies largely predominate in its medical agents.

M. K. C., Park, Col.—The air-tube of an argand-burner lamp should always be open, as its use is to supply air to the inside of the wick while other air is being furnished upon the outside. If the wick be turned too high the oil will rise in it by the principle of capillary attraction (not siphon) too rapidly to be properly consumed. Some of this oil passes off as unconsumed carbon, and some may drip, in its original form. 2. The amount of carbon in the atmosphere varies with local circumstances, such as population, rainfall, sewerage, etc., from 2 to 10 in 10,000 volumes of air. The oxygen and nitrogen of the atmosphere are invariable in their proportional parts: twenty-three parts (by weight) of oxygen and seventy-seven of nitrogen.

Lile E. Argile, Kilbourne City, Wis.—The final cause of the war of 1812 was the search of American vessels by the English, and the impressment of United States sailors into the service of Great Britain. All of this trouble, however, probably grew out of the ill-feeling that had existed between the two nations since the Revolutionary war. The cause of the Mexican war was the annexation of Texas to the United States.

R. L. Stevensun, Quincy, Minn.—Half-morocco binding consists of a fine quality of cloth covers with morocco corners and morocco spring back. Library binding is all leather.

P. S. Williams, Fort Lyon, Mo.—The largest ship in the world is the Great Eastern, described on page 63 of Our Curiosity Shop for 1880. Length, 680 feet; breadth, 118 feet; height to top of bulwarks, 70 feet.

E. E., Stralm, Iowa.—The first watch was made by Peter Hele, a clockmaker of Nuremberg, Germany, in the year 1477.

George Searle, Langworthy, Iowa.—After the war Horace Greeley advocated a general amnesty and a policy of conciliation. As a step in this direction he advised the release of Jefferson Davis on bail, and when this course was determined upon he became one of the bondsmen.

E. H. T., Greensburg, Pa.—1. The Dead Sea is 1,312 feet below the Mediterranean, and the Caspian Sea is 84 feet below the Black Sea. 2. The two rivers which unite to form the Upper Amazon are the Marancon (or Tunguraguas, as it is called by some writers) and the Ucayale (or Apurimac).

M. B. J., Union Hill, Ill.—1. The direct cable from Ireland to Rye Beach, N. H., is 3,060 miles in length. 2. The length of the Union and Central

Pacific Railroad, extending from Omaha to San Francisco, is 1,916 miles.

R. Hancock, Columbus, Wis.—Andrew Johnson was impeached, but not convicted. See definition of impeach in Webster's unabridged dictionary.

Samuel Adams, Chicago—Francis Hanford was killed by Alexander Sullivan in this city, Aug. 7, 1876, about 7 o'clock in the evening.

U. W. G., Union, Iowa—At the Battle of Cold Harbor, General Meade ordered some of the troops to advance; but they by common consent refused to obey.

S. B., Oconee, Ill.—Illinois has had three State constitutions, including the one now in force. The first went into force in 1818: the second in 1848, and the third in 1870.

W. H., Brockport, N. Y.—A painting may be copyrighted by sending to the Librarian of Congress a full description of the work, together with $1, the price of recording the application and issuing the certificate.

Subscriber, Verdon, Neb.—By a Joint resolution of Congress, adopted Dec. 29, 1845, Texas was declared to be admitted to the Union.

Edith Allen, Milwaukee, Wis.—The highest mountain in the Philippine Islands is 4,531 feet higher than Mount Washington, N. H. It is a volcano, named Alpi, and has been ascended recently and found to be 10,824 feet high.

S. N. W.. Deep River, Iowa—Read verse 49 of the thirty-first chapter of Genesis and the marginal note, and you and she will understand the beautiful appropriateness of Mizpah on an engagement ring.

Lizzie J. Clark, Lawrenceburg, Tenn.—The nightingale proper is a migratory bird, common to Northern Africa, Western Asia, and the greater part of Europe. The European nightingale spends the winter in Northern Africa. It may be said to be a native of all the regions above named, although its hatching places are in Europe. Your other question will be answered elsewhere.

George E. White, Englewood—There is more silver in a trade dollar than in the standard United States silver dollar, but it is at a discount in business dealings because it is not a legal tender for debt. Congress has the constitutional authority to declare what coins are a legal tender and what are not. In this case it has outlawed the trade dollar; whether wisely and justly or not is a matter in dispute.

Lillie G. Hendee, Sandwich, Ill.—1. There is a snake with a straight horn on the end of its tail, which, when in rapid motion, looks like a revolving hoop. It is found in Southern Illinois and Missouri, and the country east and south of the same. It is popularly known as the hoop snake. 2. Naturalists are generally agreed that the worms seen after showers do not fall from the clouds; they are not fully agreed as to the proper explanation of their sudden appearance at such times. For further particulars address Professor Forbes, curator of the Laboratory of Natural History, Normal, Ill.

M. S. H., Chicago.—Pierre, the present Western terminus of the Chicago and Northwestern Railroad is the railway station nearest to Deadwood, from which it is about 190 miles distant. The Northwestern Express Stage and Transportation Company runs a line of Concord stages between these points.

C. H. F., Weldon, Ill.—The term creole as used in our Gulf States applies to descendants of French and Spanish settlers, in distinction from French and Spanish immigrants, and mulattoes or half-breeds: also to natives of the West Indies of European descent. But in the West Indies the word is applied to natives, whether of white, black, or mixed races.

George Fair, Fairmont, Neb.—1. The velocity of light, as determined by the latest experiments, is 186,300 miles per second. 2. The velocity of electricity traveling on metal wires was calculated by Wheatstone at 194,000 miles per second. But It travels at different rates on different wires, and as a consequence the reports of different observers do not agree. 3. We can only furnish the Curiosity Shop volumes of 1880, 1881, and 1882.

J. M. Simpson, Cherokee City, Ark.—The present form of government in France is republican. The constitution bears date Feb. 25, 1875. It vests the legislative power in an assembly of two houses, the Chamber of Deputies and the Senate, and the executive power in a President, who is elected by a majority of votes of the Senate and Chamber of Deputies united in National Assembly. The President at this time is Francois J. P. Jules Grevy.

S. A. Maxwell, Morrison, Ill.—The term "O grab me act" was applied to the embargo act of Dec. 27, 1807. This embargo, laid by our government on all its own ports and vessels in retaliation for certain decrees of France and England sorely restricting the rights of neutral vessels, bore particularly hard on New England, which had been increasing its shipping very rapidly. Inverting the word "embargo," the malcontents called it the "O grab me act," referring to the fact that it operated to the advantage of one part of the country at the expense of the shipping interest in another. These murmurings grew until the act was repealed in February, 1809. When Congressmen voted themselves an increase of back salary a few years ago there was an attempt to transfer the name of O grab me act to this law.

UNITED STATES GOVERNMENT.

The Executive.

Chester A. Arthur, of New York, President of the United States; salary, $50,000.

G.F. Edmunds, of Vermont, President pro tem. of Senate, and Acting Vice President: salary, $8,000.

The Cabinet.

Frederick T. Frelinghuysen, Secretary of State; salary, $8,000.

Charles J. Folger. Secretary of the Treasury; salary, $8,000.

Robert T. Lincoln, Secretary of War; salary, $8,000.

William E. Chandler, Secretary of the Navy; salary, $8,000.

Henry M. Teller, Secretary of the Interior; salary, $8,000.

Walter Q. Gresham, Postmaster General; salary, $8,000.

Benjamin Harris Brewster, Attorney General; salary, $8,000.

FORTY-EIGHTH CONGRESS.

March 4, 1883, to March 3, 1885.

THE SENATE.

Republicans (in Roman), 38; Democrats (in *italics*), 36; Readjuster (in SMALL CAPS), 2. Total, 76.

Term ex.	Home Postoffice.
Alabama—	
1889 *John T. Morgan*	Selma.
1885 *James L. Pugh*	Eufaula.
Arkansas—	
1889 *Augustus H. Garland*	Little Rock.
1885 *James D. Walker*	Fayetteville.
California—	
1885 *James T. Farley*	Jackson.
1887 John F. Miller	San Francisco.
Colorado—	
1889 Thomas M. Bowen	Rio Grande.
1885 Nathaniel P. Hill	Denver.
Connecticut—	
1885 Orville H. Platt	Meriden.
1887 Joseph R. Hawley	Hartford.
Delaware—	
1889 *Eli Saulsbury*	Dover.
1887 *Thomas Francis Bayard*	Wilmington.
Florida—	
1885 *Wilkinson Call*	Jacksonville.
1887 *Charles W. Jones*	Pensacola.
Georgia—	

1889 *A. H. Colquitt*	Atlanta.
1885 *Joseph E. Brown*	Atlanta.
Illinois—	
1889 Shelby M. Cullom	Springfield.
1885 John A. Logan	Chicago.
Indiana—	
1885 *Daniel W. Voorhees*	Terre Haute.
1887 Benjamin Harrison	Indianapolis.
Iowa—	
1889 J. F. Wilson	Fairfield.
1885 William B. Allison	Dubuque.
Kansas—	
1889 Preston B. Plumb	Emporia.
1885 John J. Ingalls	Atchison.
Kentucky—	
1889 *James B. Beck*	Lexington.
1885 *John S. Williams*	Mt. Sterling.
Louisiana—	
1889 *Randall L. Gibson*	New Orleans.
1885 *Benjamin F. Jonas*	New Orleans.
Maine—	
1889 William P. Frye	Lewiston.
1887 Eugene Hale	Ellsworth.
Maryland—	
1885 *James B. Groome*	Elkton.
1887 *Arthur P. Gorman*	Laurel.
Massachusetts—	
1889 George F. Hoar	Worcester.
1887 Henry L. Dawes	Pittsfield.
Michigan—	
1889 T. W. Palmer	Detroit.
1887 Omar D. Conger	Port Huron.
Minnesota—	
1889 D. M. Sabin	Stillwater.

1887	Samuel J. R. McMillan	St. Paul.
	Mississippi—	
1885	*Lucius Q. C. Lamar*	Oxford.
1887	*James Z. George*	Jackson.
	Missouri—	
1885	*George G. Vest*	Kansas City.
1887	*Francis M. Cockrell*	Warrensburg.
	Nebraska—	
1889	Charles F. Manderson	Omaha.
1887	Charles H. Van Wyck	Nebraska City.
	Nevada—	
1885	John P. Jones	Gold Hill.
1887	*James G. Fair*	Virginia City.
	New Hampshire—	
1889	Austin F. Pike	Franklin.
1887	Henry W. Blair	Plymouth.
	New Jersey—	
1889	*John R. McPherson*	Jersey City.
1887	William J. Sewell	Camden.
	New York—	
1885	Elbridge G. Lapham	Canandaigua.
1887	Warner Miller	Herkimer.
	North Carolina—	
1889	*Matt W. Ransom*	Weldon.
1885	*Zebulon B. Vance*	Charlotte.
	Ohio—	
1887	John Sherman	Mansfield.
1885	*George H. Pendleton*	Cincinnati.
	Oregon—	
1889	Joseph N. Dolph	Portland.
1885	*James H. Slater*	Le Grande.
	Pennsylvania—	
1885	J. Donald Cameron	Harrisburg.
1887	John I. Mitchell	Wellsboro.

Rhode Island—	
1889 Henry B. Anthony	Providence.
1887 Nelson W. Aldrich	Providence.
South Carolina—	
1889 *Matthew C. Butler*	Edgefield.
1885 *Wade Hampton*	Columbia.
Tennessee—	
1889 *Isham G. Harris*	Memphis.
1887 *Howell E. Jackson*	Jackson.
Texas—	
1889 *Richard Coke*	Waco.
1887 *Sam Bell Maxey*	Paris.
Vermont—	
1885 Justin S. Morrill	Strafford.
1887 George F. Edmunds	Burlington.
Virginia—	
1889 HARRISON H. RIDDLEBERGER	Richmond.
1887 WILLIAM MAHONE	Petersburg.
West Virginia—	
1889 *John E. Kenna*	Kanawha.
1887 *Johnson N. Camden*	Parkersburg.
Wisconsin—	
1885 Angus Cameron	LaCrosse.
1887 Philetus Sawyer	Oshkosh.

HOUSE OF REPRESENTATIVES.

Republicans (in Roman), 117; regular Democrats, (in *italics*), 196; Readjusters (in SMALL CAPS), 5; Greenback-labor (in SMALL CAPS), 1; Independent (in SMALL CAPS), 3; vacancies, 3: Total, 325; majority, 163. Representatives in the Forty-seventh Congress marked with a [18]; those in a preceding Congress with a [19].

Alabama—

1 *James T. Jones.*[18]
2 *Hilary A. Herbert.*[18]
3 *Wm. C. Oates.*[18]
4 *Charles M. Shelley.*[18]
5 *Thomas Williams.*[18]
6 *Goldsmith W. Hewitt.*[18]
7 *Wm. H. Forney.*[18]
8 *Luke Pryor.*[15]

Arkansas—

1 *Poindexter Dunn.*[18]
2 *James K. Jones.*[18]
3 *John H. Rogers.*
4 *Samuel W. Peel.*

At Large—C. R. Breckinridge.

California—

1 *Wm. S. Rosecrans.*[18]
2 *James H. Budd.*
3 *Barclay Henley.*
4 *Patrick B. Tulley.*

At Large—Chas. A. Sumner, *John. R. Glascock*.

Colorado—

James B. Bedford.[18]

Connecticut—

1 *Wm. W. Eaton.*[15]
2 *Charles L. Mitchell.*
3 John T. Wait[18]
4 *Edw. W. Seymour.*

Delaware—

Charles B. Lore.

Florida—

1 *Robert H. H. Davidson.*[18]
2 Horatio Bisbee, Jr.

Georgia—

1 *John C. Nicholls.*[19]
2 *Henry G. Turner.*[18]
3 *Charles F. Crisp.*
4 *Hugh Buchanan.*[18]
5 *Nathaniel J. Hammond.*[18]
6 *James H. Blount.*[18]
7 *Judson C. Clements.*[18]
8 *Seaborn Reese.*[18]
9 *Allen C. Candler.*

At Large—Thomas Hardeman.[19]

Illinois—

1 Ransom W. Dunham.
2 JOHN F. FINERTY, Ind.
3 George R. Davis.[18]
4 George E. Adams.
5 Reuben Ellwood.
6 Robert R Hitt.[18]
7 Thomas J. Henderson.[18]
8 William Cullen.[18]
9 Lewis E. Payson.[18]
10 *Nicholas E. Worthington.*
11 *William H. Neece.*
12 *James M. Riggs.*
13 *William M. Springer.*[18]
14 Jonathan H. Rowell.
15 Joseph G. Cannon.[18]
16 *Aaron Shaw.*
17 *Samuel W. Moulton.*[18]
18 *William R. Morrison.*[18]
19 *Richard W. Townshend.*[18]
20 John R. Thomas.[18]

Indiana—

1 *John J. Kleiner.*
2 *Thomas R. Cobb.*[18]
3 *S. M. Stockslager.*[18]
4 *William S. Holman.*[18]
5 *Courtland C. Matson.*[18]
6 Thomas M. Browne.[18]
7 Stanton J. Peelle.[18]
8 *John E. Lamb.*
9 *Thomas B. Ward.*
10 *Thomas J. Wood.*
11 George W. Steele.[18]
12 *Robert Lowry.*
13 William H. Calkins.[18]

Iowa—

1 Moses A. McCoid.[18]
2 *Jermiah H. Murphy.*
3 David B. Henderson.
4 L. H. Weller, *Gbk.*
5 James Wilson.[19]
6 John C. Cook.[16]
7 John A. Kasson.[18]
8 William P. Hepburn.
9 *Wm. H. M. Pusey.*
10 Adoniram J. Holmes.
11 Isaac S. Struble.

Kansas—

1 John A. Anderson.[18]
2 Vacancy.
3 Thomas Ryan.[18]

At Large—Edmund N. Morrill, Lewis Hanback, Samuel R. Peters, Bishop W. Perkins.

Kentucky—
1 *Oscar Turner.*[18]
2 *James F. Clay.*
3 *John E. Halsell.*
4 *Thomas A. Robertson.*
5 *Albert S. Willis.*[18]
6 *John G. Carlisle.*
7 *Joseph C. S. Blackburn.*[18]
8 *Philip B. Thompson, Jr.*[18]
9 William W. Culbertson.
10 John D. White.[18]
11 *Frank L. Wolford.*
Louisiana—
1 *Carleton Hunt.*
2 *E. John Ellis.*[18]
3 William P. Kellogg.[15]
4 *Newton C. Blanchard.*[18]
5 *J. Floyd King.*[18]
6 *Edward T. Lewis.*
Maine—
At Large—Thos. B. Reed.[18]
Nelson Dingley, Jr.[18]
Chas. A. Boutelle.
Seth L. Milliken.
Maryland—
1 *George W. Covington.*[18]
2 *J. Frederick C. Talbott.*[18]
3 *Fetter S. Hoblitzell.*[18]
4 *John V. L. Findlay.*
5 Hart B. Holton.
6 Louis E. McComas.
Massachusetts—
1 Robert T. Davis

2 John D. Long.
3 Ambrose A. Ranney.[18]
4 *Patrick A. Collins.*
5 *Leopold Morse.*[18]
6 *Henry B. Lovering.*[16]
7 Eben F. Stone.[18]
8 William A. Russell.
9 THEODORE LYMAN.[17]
10 William W. Rice.[18]
11 William Whiting.
12 Vacancy.

Michigan—

1 *William C. Maybury.*
2 *Nathan B. Eldredge.*
3 Edward S. Lacey.[18]
4 *George L. Yaple.*
5 *Julius Houseman.*
6 *Edwin B. Winans.*
7 *Ezra C. Carleton.*
8 Roswell G. Horr.[18]
9 Byron M. Cutcheon.
10 Herschel H. Hatch.
11 Edward Breitung.

Minnesota—

1 Milo White.
2 James B. Wakefield.
3 Horace B. Strait.[18]
4 William D. Washburn.[18]
5 Knute Nelson.

Mississippi—

1 *Henry L. Muldrow.*[18]
2 J. R. CHALMERS,[18] *Ind.*
3 E. S. Jeffords.

4 *Hernando D. Money.*[18]
5 *Otho R. Singleton.*[18]
6 *Henry S. Van Eaton.*
7 *Ethelbert Barksdale.*

Missouri—

1 *William H. Hatch.*[18]
2 *A. M. Alexander.*
3 *Alexander M. Dockery.*
4 *James N. Burnes.*
5 *Alexander Graves.*
6 *John Cosgrove.*
7 *Aylett H. Buckner.*[18]
8 *John J. O'Neill.*
9 *James O. Broadhead.*
10 *Martin L. Clardy.*[18]
11 *Richard P. Bland.*[18]
12 *Charles H. Morgan.*[19]
13 *Robert W. Ryan.*
14 *Lowndes H. Davis.*[18]

Nebraska—

1 Archibald J. Weaver.
2 James Laird.
3 Edward K. Valentine.[18]

Nevada—

George W. Cassidy.[18]

New Hampshire—

1 Martin A. Haynes.
2 Ossian Ray.[18]

New Jersey—

1 *Thomas W. Ferrell.*
2 J. Hart Brewer.[18]
3 John Kean. Jr.
4 Benjamin F. Howey.

5 William Walter Phelps.[19]
6 *William H. F. Fiedler.*
7 *William McAdoo.*

New York—

1 *Perry Belmont.*[18]
2 *William E. Robinson.*[18]
3 Darwin R. James.
4 *Felix Campbell.*
5 *Nicholas Muller.*[19]
6 *Samuel S. Cox.*
7 *William Dorsheimer.*
8 *John J. Adams.*
9 *John Hardy.*[18]
10 *Abram S. Hewitt.*[18]
11 *Orlando B. Potter.*
12 *Waldo Hutchins.*[18]
13 John H. Ketcham.[18]
14 *Lewis Beach.*[18]
15 *John J. Bagley, Jr.*[19]
16 *Thomas J. Van Alstyne.*
17 Henry G. Burleigh.
18 Frederick A. Johnson.
19 Abraham X. Parker.[18]
20 *Edward Wemple.*
21 George W. Ray.
22 Charles R. Skinner.[18]
23 *J. Thomas Spriggs.*
24 Newton W. Nutting.
25 Frank Hiscock.[18]
26 Sereno E. Payne.
27 James W. Wadsworth.[18]
28 Stephen C. Millard.
29 *John Arnot.*

30 *Halbert S. Greenleaf.*
31 *Robert S. Stevens.*
32 *William F. Rogers.*
33 Francis B. Brewer.

At Large—Henry W. Slocum.[19]

North Carolina—

1 *Thomas G. Skinner.*
2 James E. O'Hara.
3 *Wharton J. Green.*
4 *William R. Cox.*[18]
5 *Alfred M. Scales.*[18]
6 *Clement Dowd.*[18]
7 Tyre York, *Ind.*
8 *Robert B. Vance.*[18]

At Large—R. I. Bennett.

Ohio—

1 *John F. Follett.*
2 *Isaac M. Jordan.*
3 *Robert M. Murray.*
4 *Benjamin Le Fevre.*[18]
5 *George E. Seney.*
6 *William D. Hill.*[19]
7 Henry L. Morey.[18]
8 J. Warren Keifer.[18]
9 James S. Robinson.[18]
10 *Frank H. Hurd.*[19]
11 John W. McCormick.
12 Alphonso Hart.
13 *George L. Converse.*[18]
14 *George W. Geddes.*[18]
15 *Adoniram J. Warner.*[19]
16 *Beriah Wilkins.*
17 Joseph D. Taylor.

18 William McKinley, Jr.[18]
19 Ezra B. Taylor.[18]
20 *David R. Paige.*
21 *Martin A. Foran.*

Oregon—

Melvin C. George.[18]

Pennsylvania—

1 Henry H. Bingham.
2 Charles O'Neill.[18]
3 *Samuel J. Randall.*[18]
4 William D. Kelley.[18]
5 Alfred C. Harmer.[18]
6 James B. Everhart.
7 I. Newton Evans.[19]
8 *Daniel Ermentrout.*[18]
9 A. Herr Smith.[18]
10 *William Mutchler.*[18]
11 *John B. Storm.*[19]
12 *Daniel W. Connolly.*
13 Chas. N. Brumm,[18] *Gbk.*
14 Samuel F. Barr.[18]
15 *George A. Post.*
16 William W. Brown.
17 Jacob M. Campbell.[18]
18 Louis E. Atkinson.
19 *William A. Duncan.*
20 *Andrew G. Curtin.*[18]
21 *Charles E. Boyle.*
22 *James H. Hopkins.*[19]
23 Thomas M. Bayne.[18]
24 George V. Lawrence.[19]
25 *John D. Patton.*

26 Samuel H. Miller[18]
27 Samuel M. Brainard.

At Large—Mortimer F. Elliott.

Rhode Island—

1 Henry J. Spooner.[18]
2 Jonathan Chace.[18]

South Carolina—

1 *Samuel Dibble.*[18]
2 *George D. Tillman.*[18]
3 *D. Wyatt Aiken.*[18]
4 *John H. Evins.*[18]
5 *John J. Hemphill.*
6 *Geo. W. Dargan.*
7 Edmund W. M. Mackey.[18]

Tennessee—

1 Augustus H. Pettibone.
2 Leonidas C. Houk.[18]
3 *Geo. G. Dibrell.*[18]
4 *Benton McMillin.*[18]
5 *Richard Warner.*[18]
6 *Andrew J. Caldwell.*
7 *John G. Ballentyne.*
8 *John M. Taylor.*
9 *Rice A. Pearce.*
10 *Casey Young.*[19]

Texas—

1 *Charles Stewart.*
2 *John H. Reagan.*[18]
3 *James H. Jones.*
4 *David B. Culberson.*[18]
5 *Jas. W. Throckmorton.*[19]
6 *Olin Wellborn.*[18]

7 T. P. Ochiltree, *Ind.*
8 *James F. Miller.*
9 *Roger Q. Mills.*[18]
10 *John Hancock.*[19]
11 *Samuel W. T. Lanham.*

Vermont—

1 John W. Stewart.
2 Luke P. Poland.[19]

Virginia—

1 Robert M. Mayo, *Re.*
2 Harry Libbey, *Re.*
3 *George D. Wise.*[18]
4 Benj. S. Hooper, *Re.*
5 *George C. Cabell.*[18]
6 *John Randolph Tucker.*[18]
7 Vacancy.
8 *John S. Barbour.*[18]
9 Henry S. Bowen, *Re.*

At Large—John S. Wise, *Re.*

West Virginia—

1 Nathan Goff, Jr.
2 *William L. Wilson.*
3 *Charles P. Snyder.*
4 *Eustace Gibson.*

Wisconsin—

1 *John Winans.*
2 *Daniel H. Sumner.*
3 *Burr W. Jones.*
4 *Peter F. Deuster.*[18]
5 *Joseph Rankin.*
6 Richard Guenther.[18]
7 *Guibert M. Woodward.*
8 William T. Price.

9 Isaac Stephenson.

FOOTNOTES:

[15] Formerly United States Senator.

[16] And Greenback.

[17] Civil Service Reform and Democrat.

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Transcriber's Notes

- pg 7 Changed: But two thinge have not been explained
  to: But two things have not been explained
- pg 8 Changed: appeared in The Semi-Weelky Inter Ocean
  to: appeared in The Semi-Weekly Inter Ocean
- pg 8 Changed: Moralism and and Christianity
  to: Moralism and Christianity
- pg 11 Changed: During the war he wss not
  to: During the war he was not
- pg 15 Changed: the field should be one-third the lenghth
  to: the field should be one-third the length
- pg 16 Changed: he became President of Washington ann Lee College
  to: he became President of Washington and Lee College
- pg 22 Changed: Railroad consists of a single row of colums
  to: Railroad consists of a single row of columns
- pg 24 Changed: all kinds of animals by securing the passsage
  to: all kinds of animals by securing the passage
- pg 27 Changed: An improvment which, it is claimed
  to: An improvement which, it is claimed
- pg 30 Changed: Representations of the zodacal signs
  to: Representations of the zodiacal signs
- pg 30 Changed: divided into twelve equal parts, coresponding
  to: divided into twelve equal parts, corresponding
- pg 33 Changed: there are indications that the Territary
  to: there are indications that the Territory
- pg 35 Changed: educational remedies for these appaling evils
  to: educational remedies for these appalling evils
- pg 40 Changed: BRIDGES AND RYTHMIC VIBRATION
  to: BRIDGES AND RHYTHMIC VIBRATION
- pg 40 Changed: music when crossing a supension
  to: music when crossing a suspension
- pg 40 Changed: and William of Innspruck
  to: and William of Innsbruck
- pg 40 Changed: each having an exterior collonade
  to: each having an exterior colonnade
- pg 44 Changed: Please give the the origin
  to: Please give the origin
- pg 45 Changed: a royal actavo of 1,442 pages
  to: a royal octavo of 1,442 pages
- pg 46 Changed: and to prevent a repitition
  to: and to prevent a repetition
- pg 50 Changed: from north to south, containtng
  to: from north to south, containing
- pg 51 Changed: In the event of crimes committted
  to: In the event of crimes committed

- pg 53 Changed: the House went into commitee
  to: the House went into committee
- pg 60 Changed: subjects in the popular enclyclopedias
  to: subjects in the popular encyclopedias
- pg 63 Changed: two eminent astronomers and mathemeticians
  to: two eminent astronomers and mathematicians
- pg 63 Changed: Where opportunities for profitable investiment
  to: Where opportunities for profitable investment
- pg 64 Changed: to persuade them them to submit
  to: to persuade them to submit
- pg 66 Changed: such as sulphur, phosporus, etc
  to: such as sulphur, phosphorus, etc
- pg 68 Changed: assisted in the expulsion of Lydamis
  to: assisted in the expulsion of Lygdamis
- pg 69 Changed: passeth publicly for the periphasis
  to: passeth publicly for the periphrasis
- pg 72 Changed: Her eigth is Leopold
  to: Her eighth is Leopold
- pg 75 Changed: Observer in the Cambridge Univergity
  to: Observer in the Cambridge University
- pg 76 Changed: dissatisfied with with some of their doctrines
  to: dissatisfied with some of their doctrines
- pg 77 Changed: A sketch of Socrates has rately been given
  to: A sketch of Socrates has rarely been given
- pg 78 Changed: What length of time will if require
  to: What length of time will it require
- pg 79 Changed: repayment for this purpose of the public deposites
  to: repayment for this purpose of the public deposits
- pg 80 Changed: bills of credit, not exeeding
  to: bills of credit, not exceeding
- pg 80 Changed: increased to $3,000,000, and approtioned
  to: increased to $3,000,000, and apportioned
- pg 81 Changed: and a residental qualification
  to: and a residential qualification
- pg 82 Changed: and France, satisfed that the United States
  to: and France, satisfied that the United States
- pg 84 Changed: What is abestos
  to: What is asbestos
- pg 87 Changed: Which is best adapted to Northeners
  to: Which is best adapted to Northerners
- pg 90 Changed: being retained upon the statue book
  to: being retained upon the statute book
- pg 99 Changed: safe from Indian depredatious
  to: safe from Indian depredations
- pg 99 Changed: except in districts where artifical irrigation
  to: except in districts where artificial irrigation
- pg 100 Changed: At this period he satarized
  to: At this period he satirized
- pg 100 Changed: attacking the inconcistencies and political
  to: attacking the inconsistencies and political

- pg 108 Changed: and the equinoctiol points
  to: and the equinoctial points
- pg 111 Changed: Quartenary to Quaternary (2 places)
- pg 112 Changed: the houses of Augustus and Macænas
  to: the houses of Augustus and Maecenas
- pg 112 Changed: HOMEOPATHATY IN THE UNITED STATES.
  to: HOMEOPATHY IN THE UNITED STATES.
- pg 112 Changed: voted for this apprrpriation
  to: voted for this appropriation
- pg 113 Changed: too modererate tariff
  to: too moderate tariff
- pg 115 Changed: The latest edition of “Lippincott’s Gazeteer
  to: The latest edition of “Lippincott’s Gazetteer
- pg 120 Changed: The real cause was the faulty construcion
  to: The real cause was the faulty construction
- pg 121 Changed: three small rooms in the Ousi Saint Michel
  to: three small rooms in the Quai Saint Michel
- pg 125 Changed: and that the latter ammounted to 65
  to: and that the latter amounted to 65
- pg 131 Changed: 8. To harrass loyal men
  to: 8. To harass loyal men
- pg 133 Changed: such States as had cumpulsory attendance laws
  to: such States as had compulsory attendance laws
- pg 134 Changed: would never stop, when when suddenly
  to: would never stop, when suddenly
- pg 137 Changed: Southern Pecific Railroad
  to: Southern Pacific Railroad
- pg 141 Changed: the sales are never consumated
  to: the sales are never consummated
- pg 153 Changed: and in this country by John W. Fawken
  to: and in this country by Joseph W. Fawkes
- pg 153 Changed: indurated clays, sands, marls, and occassional
  to: indurated clays, sands, marls, and occasional
- pg 161 Changed: for a series of reminisences
  to: for a series of reminiscences
- pg 178 Changed: as others wise the receiver cannot tell
  to: as otherwise the receiver cannot tell
- pg 180 Changed: has occured on Sunday fourteen times
  to: has occurred on Sunday fourteen times
- Punctuation normalized throughout book.
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*** END OF THE PROJECT GUTENBERG EBOOK THE INTER OCEAN CURIOSITY SHOP FOR THE YEAR 1883 ***

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