

SCIENTIFIC SCRAPS.

Gold is nineteen, mercury thirteen, and lead eleven times heavier than water.

Plaster made with river water sets sooner than that made with spring water.

Gypsum, called by chemists sulphate of lime, is composed of sulphuric acid, lime and water.

Carbonic acid is extensively employed in the manufacture of white lead and effervescent drinks.

The strength of 120 pounds is required to tear asunder an iron wire one-twenty-fifth of an inch in diameter.

Grape sugar, used for giving more "body" to wines, etc., is made of potato starch, sulphuric acid, chalk and water.

Burnt bones are employed by potters as an ingredient of soft porcelain, to an amount sometimes of nearly half the entire mass.

From an elevation of 25,000 feet, the greatest height yet reached by man, the semi diameter of the circle of vision amounts to 198 miles.

Dr. K. Von Fritsch, of Halle, says that the cause of earthquakes does not exist further down from the surface of the earth than ten or fourteen miles.

Pure silver weighs 2 237 ounces to each cubic inch. Should its density be less, the silver may be supposed to contain copper; if greater, lead may be present.

The quantity of water in wheat and flour is greater in cold countries than in warm. In England it is from fourteen to seventeen per cent., in the United States from twelve to fourteen, in Africa from nine to eleven.

Electricity is now employed in the rectification of inferior alcohol. The electricity generated by a voltaic battery and a dynamo-electric machine is passed through the alcohol so as to disengage the superfluous hydrogen. By this means beer root alcohol, which is usually very poor, can be made to yield eighty per cent. of spirits, equal to that obtained from the best malt.

Cannibal Feasts in Fiji.

But prior to the great change in Fiji caused by Christianity, a feast would have been held of small account which was not graced by abundant human flesh; and if perchance there was no war on hand to provide this delicacy, there was rarely much difficulty in finding victims; a defenseless troop of women from some neighboring village, a canoe driven ashore by stress of weather, or, failing these, a few insignificant serfs or wives who had lost favor with their lords, supplied the place of home-farm produce. Several peculiarities were observed concerning the *bokala*, or human flesh. It was considered indigestible unless eaten with certain herbs which were purposely grown in every village. Moreover, it was the only meat which was preferred rather high, and which must not be handled, from a belief that it would produce skin disease. Therefore it was invariably eaten with a peculiar round wooden fork with four long prongs. Some of the most noted cannibals, who gloried in the multitude of men whom they had eaten, actually kept a record of their number by erecting lines of stones. One of these registers numbers 872! and the Christian son of this ogre declares that his father ate them all himself, allowing no one to share with him. Another member of the same family had registered forty-eight, when his becoming a Christian had put a stop to the amusement, and compelled him to be satisfied with commonplace beef. In fact, one of the excuses urged by Thakombau for so long adhering to cannibalism was that he and his people had no other substitute for English bullamaco. It is, however, twenty years since he abjured the vile custom and accepted Christianity; but many of the islanders kept it up till quite recently.—Good Words.

Curious.

Set down, first, the number of men who went to seek Elijah when he was carried up into heaven. Multiply this by the days during which Job's friends sat by him without speaking, when they came to comfort him. Multiply again by the days in which Jericho was compassed by the Israelites. Subtract the number of men whom Samson killed with the jaw-bone. Divide by the number of stones which David carried with him when he went to kill Goliath. Subtract the years of the Babylonish captivity. Add the number of furlongs between Bethany and Jerusalem. Add the age that the Psalmist said is generally the limit of the life of man in this world. Multiply the number of Jacob's sons by the years in which Solomon was building the temple, and subtract from the above product. Add the years in which the Israelites were, for their sins, obliged to wander in the wilderness. Subtract one from this, and we have the number of chapters in the New Testament.—Sunday-School Journal.

CLIPPINGS FOR THE CURIOUS.

Phosphorus was discovered in 1669. Nero had his portrait painted on a canvas 120 feet high.

Sawmills were first used in Europe in the fifteenth century.

It is said that white cats with blue eyes are always deaf.

The Chinese written language consists of 100,000 characters.

Libraries existed in Egypt contemporaneously with the Trojan war.

Stamps for taxation were invented in Holland in the seventeenth century.

At Pompeii combs have been found exactly like the modern fine-tooth kind.

Chaucer received a pitcher of wine every day from the cellar of Edward III.

Archimedes invented a screw for facilitating irrigation in Egypt, B. C. 250.

The first altar mentioned in Scripture was erected by Noah, after the flood.

In the seventeenth century, on the continent, boots were never worn without spurs.

Queen Elizabeth wore her prayer-book hanging from her girdle by a golden chain.

One man gathered 100,000 pounds of dried clover blossoms out West for some famous "remedy."

Tooth pulling is expensive in Persia. The Shah recently paid 100 ducats for the extraction of one of his teeth.

Dew is more abundant on cloudy nights, since the heat which is radiated by the earth does not return to it.

An Englishman wrote to the emperor of Japan for his autograph, and as it was the first request of the kind, got it.

This year there have been many reports of deaths which resulted from the administration of morphine for quinine.

The emblems of supreme authority among British kings used to be bracelets of gold about the neck, arms and knees.

The guanaco of Patagonia is described as having the head of a camel, the body of a deer, wool of a sheep and neigh of a horse.

Silver was first coined in Rome in the year of the city 484, five years before the first Punic war. Gold coin was first struck in 546.

The boots worn by a vain beau at Dentonville, Iowa, have cork lifts two inches thick inside, under his heels, in order to increase his stature.

The barbab tree of South Africa may be barked or burned out without injury to the tree, and it continues to live and grow for some time after it is cut down.

The fashion of carrying fans was brought from Italy in the time of Henry VIII., and young men used them in the sixteenth and seventeenth centuries.

Flattering a Queen.

Queen Elizabeth loved flattery, and on one occasion her passion was fully gratified, as the following anecdote testifies:

When the Duke de Villa Medina was at the English court he was present and took part at a tournament given by Elizabeth, where his gallantry and manly beauty made him the observed of all observers. At the close of the sports, as the duke came near to the queen, she said to him, pleasantly, that she would like to know who was the chosen lady of so gallant a knight; whereupon he shook his head and would not further answer.

"But," persisted Elizabeth, "there must be, somewhere, a lady whose beauty and perfection of character gives to her a deeper place in your heart than is yielded to another."

"Ah! yes, gracious madam; there is one such."

"And may I not know who she is?" The duke reflected a moment, and then answered that he would inform her on the morrow.

And on the morrow he sent to the queen, inclosed in a box of sandal-wood and mother-of-pearl, a small mirror.

Those who know Elizabeth's character can imagine how deeply this bit of flattery must have touched her.

Playing Barn-Yard.

One day Billy and Sammy were playing in a mud hole and Bill said: "Now, Sammy, let your pig was a barn-yard. You bethepig and lie down and waller, and I'll be a bull and beller like everything."

So they got down on their hands and knees, and Sammy and he went into the mud and wallowed, while Billy bellowed like distant thunder. By-and-bye Sammy came up muddy—you never saw such a muddy little fellow—and he said: "Now, you'll be the pig and let me beller."

But Billy said: "I ain't a very good pig, except for dinner, and it'll be time nuff for you to beller when yer mother sees yer close."

Of the population of Ireland 76.6 per cent. are Catholics.

PEARLS OF THOUGHT.

Virtue is the safest helmet—the most secure defense.

No bank can shield us from the impartiality of death.

Vice stings us even in our pleasure, but virtue consoles us even in our pains.

Riches are often thorns that pierce the head with cares in getting them, and the heart with grief in parting with them.

The science of life may be thus epitomized—to know well the price of time, the value of things, and the worth of people.

If it is your purpose in life to make your face your fortune, you must look well to it or it will turn out to be your misfortune.

The talent of success is nothing more than doing what you can well; and doing well whatever you do, without a thought of fame.

The desire to be loved is ever restless and unsatisfied; but the love that flows out upon others is a perpetual well-spring from on high.

It is with diseases of the mind as with diseases of the body; we are half-dead before we understand our disorder, and half-cured when we do.

Poverty is hard, but debt is horrible. A man might as well have a smoky house and a scolding wife, which are said to be the two worst evils of our life.

All the knowledge we mortals can acquire is not knowledge positive, but knowledge comparative, and subject to the errors and passions of humanity.

The Editor and the Shoemaker.

One day an editor, hard at work trying to devise a plan to make delinquent subscribers pay their dues, was called upon by a shoemaker who dropped in to give the editor some valuable hints on running a newspaper. The editor, overjoyed at the opportunity, gave the man his best cane bottom chair, handed him a fresh cigar and listened attentively. Quoth the shoemaker, as he lit the weed: "Your paper needs a hundred improved features. You don't grasp the topics of the day by the right handle; you don't set the locals in the right kind of type; your telegraph news is too thin, even the paper itself is poorly manufactured, not thick enough and of too chalky a white; you don't run enough matter, and what you do run ain't of the right sort; your ideas about protective tariff are infernally foolish, and your stand on the Conkling matter was bad, bad. I tell you these things because I want to see you succeed. I tell you as a friend. I don't take your paper myself, but I see it once in a while, and as a paper is a public affair I suppose I have as good a right to criticize as anybody. If a man wants to give me advice I let him; I'm glad to have him, in fact."

"That's exactly it," said the editor, kindly; "I always had a dim idea of my shortcomings, but never had them so clearly and convincingly set forth as by you. It is impossible to express my gratitude for the trouble you have taken, not only to find out these facts, but to point them out also. Some people knowing all these things perhaps nearly as well as you are mean enough to keep them to themselves. Your suggestions come in a most appropriate time; I have wanted somebody to lean on, as it were, for some weeks. Keep your eye on the paper, and when you see a weak spot come up."

The shoemaker left, happy to know that his suggestions had been received with such a Christian spirit. Next day, just as he was finishing a boot, the editor came in, and, picking up the mate, remarked:

"I want to tell you how that boot strikes me. In the first place the leather is poor; the stitches in the sole are too wide apart, and in the uppers too near the edge. Those uppers will go to pieces in two weeks. It's all wrong, my friend, putting poor leather in the heels and smoothing it over with grease and lamp-black. Everybody complains of your boots; they don't last; the legs are too short, the toes too narrow and the instep too high. How you can have the gall to charge twelve dollars for such boots beats me. Now, I tell you this as a friend, because I like to see you succeed. Of course I don't know any more about shoemaking than you do about a newspaper, but still I take an interest in you because you are so well disposed to me. In fact—"

Here the exasperated cobbler grabbed a lapstone, and the editor gained the street, followed by old knives, pincers, hammers and awls, sent after him by the wrathful cobbler, who, on regaining his seat, swore by the nine gods that no impertinent, lop-eared idiot should ever come round trying to teach him his trade.—Carson (New.) Appeal.

Among the curiosities at Bunnell's museum is a two-headed girl that attracts great attention from members of the press; they are always attracted by a double-headed article.—Wid and Wifedom.

TOPICS OF THE DAY.

Although America possesses an Edison, and is chief among nations as the utilizer of electricity, we are away behindhand in the use of the electric light. They have for years had portions of London illuminated by the light, and it is now in successful operation in the street cars.

The annual average of corn produced in the United States in the past ten years is 1,184,486,954 bushels; number of acres planted, 43,741,331; value, \$504,571,048; average yield per acre, twenty-seven bushels; average price, 43.9 cents; average value per acre, \$11.77.

Governor Roberts, of Texas, exercises a personal supervision of the prisoners in the State penitentiary. Most of them, he says, are young men from the Northwest, East and North, who, having strayed from restraints, have fallen into bad company and got into trouble. He tells them that good conduct will shorten their terms, and, if they behave themselves, pardon them out.

No fewer than five "enterprising showmen" have visited Cleveland in the hope of purchasing the funeral car which conveyed the remains of President Garfield, and have offered very large prices for it—\$50,000, it is said, in one case. The persons in authority have refused even to listen to such offers. The car is to be inclosed in a handsome case constructed in large part of plate glass and preserved in the cemetery.

A Michigan paper gives an approximation of the losses by the recent farm and forest fires in Ottawa, Allegan, Manistee, Huron and Sanilac counties, Mich. The total is \$2,345,413. There were 1,147 dwellings burned, twenty-eight school-houses, eight churches, twelve hotels, 130 stores, thirty-four mills and twenty docks. The insurance on all this was only \$628,632 so that an absolute deficiency of \$1,722,781 remains to be met.

The State of New York has had only three Presidents, General Arthur being the third. Each of these (it is a curious coincidence) first served as Vice-President. Martin Van Buren held that office just before he was elected President. Millard Fillmore was Vice-President for more than a year before General Taylor's death promoted him to the presidency. Like his three immediate predecessors in the presidency, General Arthur has an only daughter.

The United States Trust company of New York has had registered at the treasury department \$275,000 in four per cent. bonds in the name of the company as "trustees for Mrs. Lucretia R. Garfield and the surviving children of James A. Garfield, deceased," being the amount purchased with the proceeds of subscriptions to the Garfield fund. These bonds will yield an annual income of \$11,000, and cannot be paid off by the government until the year 1907.

While the Chinese government is believed to be slowly taking steps against the trade in opium, recent consular reports indicate an alarming increase of the trade for the past year. For 1879 the importation was larger than ever before, being 82,927 piculs—a picul being equal to 133 and one-third pounds—which is in excess of the year 1878 by 11,435 piculs. Almost all the opium comes from Indian soil, but it is noted at the same time that the import of Persian opium, within six years, has increased ten fold. For 1878 the Persian importation represents 558 piculs; for 1879 it was 5,300. The Persian article is not used alone. It is mixed with other and better grades.

It is an encouraging feature of the progress of the South that its cotton manufacturing interests are steadily increasing. In 1875 and 1876 only 145,000 bales were manufactured in Southern cotton mills, while during the past year 205,000 bales were manufactured, a gain of 60,000 bales, or over forty per cent. From the capital that is being invested in cotton mills now throughout the South a much larger increase may be expected within the next five years. The international cotton exposition, at Atlanta, will do much toward awakening an interest in the manufacture of this staple where it is grown, and we may look to see within a short time cotton mills dotted over the entire South.

A Western detective kept for many years a scrap book, in which he pasted accounts of crimes in which rewards were offered for the arrest of the criminals. Turning over the leaves of this volume a short time ago, he checked off all the cases in which the fugitives had been caught, and found that a surprising number were still at large. Then he reasoned that Leadville was a likely place for such wanderers to drift into, and resolved to go there. He frequented the public resorts of that city for weeks, looking for men answer-

ing to the book's numerous descriptions. One night he observed that a roisterer in a barroom had a peculiarly flattened finger. That was a mark of John Ott, who committed a murder in Tazewell, Ill., in 1869, and for whose arrest an offer of \$1,000 still held good. Ott's identity was fully established, and the detective was paid the money.

A new borrower is soon to enter the European money market in the shape of the emperor of Japan. On two former occasions loans have been made on his account, but the volume of these has been small, for in the aggregate they amounted to only \$17,000,000. This money was borrowed by the government for the purpose of building two short lines of railway, one of which connects the capital, Tokio, with its seaport, Yokohama. The interest (seven per cent. per annum) on these loans has been promptly paid, and the Japanese bonds sell in the London market at a premium of about twelve per cent. It is in consequence of her high reputation—as an Asiatic power—for commercial honor, that the government of Japan is tempted to once more make an attempt at borrowing. If reports are to be trusted, the demand on this occasion will be on a much more liberal scale.

Battles of the Revolution.

While this country has celebrated the centennial of the battle of Yorktown and the surrender of Cornwallis, it is well to bear in mind other battles by which we gained our independence. They began April 19, 1775; they closed October 19, 1781—six years and six months. The British sent 134,000 soldiers and sailors to this war. The colonists met them with 230,000 Continentals and 50,000 militia. The leading battles of the war are Concord and Lexington, Bunker Hill, Long Island, White Plains, Trenton, Princeton, Bennington, Saratoga, Monmouth, Kings Mountain, Cowpens, Eutaw Springs, Yorktown. Many of the others are especially local. The following is a full list of revolutionary battles:

- Lexington, first skirmish—April 29, 1775.
Ticonderoga—May 19, 1775.
Bunker Hill—June 17, 1775.
Montreal, Ethan Allen taken—September 25, 1775.
St. Johns besieged and captured—November 3, 1775.
Great Bridge, Virginia—December 9, 1775.
Quebec, Montgomery killed—December 31, 1775.
Moore's Creek Bridge—February 27, 1776.
Boston, British fled—March 17, 1776.
Port Sullivan, Charleston—June 28, 1776.
Long Island—August 27, 1776.
White Plains—October 28, 1776.
Fort Mifflin—November 16, 1776.
Trenton—December 27, 1776.
Harlem Plains—September 17, 1777.
Princeton—January 3, 1777.
Hubbardton—July 7, 1777.
Bennington—August 16, 1777.
Brandywine—September 11, 1777.
First battle of Bemis Heights, Saratoga—September 17, 1777.
Paoli—September 29, 1777.
Georgetown—October 4, 1777.
Forts Clinton and Montgomery taken—October 6, 1777.
Second battle of Bemis Heights, Saratoga—October 7, 1777.
Surrender of Burgoyne—October 13, 1777.
Fort Mercer—October 22, 1777.
Fort Mifflin—November, 1777.
Monmouth—June 28, 1778.
Wyomung—July 4, 1778.
Quaker Hill, Rhode Island—August 29, 1778.
Savannah—December 29, 1778.
Kettle Creek, Georgia—February 14, 1779.
Brier Creek—March 3, 1779.
Stony Point—July 16, 1779.
Haul's Hook—August 13, 1779.
Chemung, Indians—August 29, 1779.
Savannah—August 9, 1779.
Charleston surrendered to British—May 12, 1779.
Springfield—June 28, 1780.
Rocky Mount—June 29, 1780.
Hanging Rock—August 6, 1780.
Sanders' Creek, near Camden—August 16, 1780.
King's Mountain—October 7, 1780.
Fish Dam Ford, Broad river—November 18, 1780.
Blackstocks—November 20, 1780.
Cowpens—January 17, 1781.
Gulburg—March 15, 1781.
Habikra's Hill—April 23, 1781.
Ninety-six besieged—May and June, 1781.
Augusta besieged—May and June, 1781.
Jamestown—July 9, 1781.
Eutaw Springs—September 8, 1781.
Yorktown—October 19, 1781.

A French Hair Market.

A letter to the New Orleans Picayune describes a French hair market: It was attended by a great many women from sweet sixteen to venerable sixty. There were four hair buyers. Each had his booth, whose front was filled with cheap, gaudy calico cloths, worth at the very outside twenty cents a yard. In the booth were two men, one with a pair of scissors, the other with a yardstick. The former would ask in an arrogant way, as if he did not want hair and was doing a great favor if he condescended to touch peasant's hair: "What do you want in exchange for that?" "Fifteen yards." "Fifteen? If I give you four, six, eight, thirteen (this figure was rarely exceeded), you may think yourself lucky!" The offer accepted, he cuts the hair, and the other man measures the agreed number of yards. Sometimes the "merchandise" is refused as being worthless, the head is too old. It takes about five years for a decent fleece of hair to grow.

MORAL AND RELIGIOUS.

Dean Stanley's Benediction. No one who heard it will ever forget the benediction which Dean Stanley uttered at the close of the service at which he preached in Trinity church in Boston on the 22d of September, 1878. He had been but a few days in America. It was the first time he had looked an American congregation in the face. The church was crowded with men and women, of whom he only knew that to him they represented the new world. He was for the moment the representative of English Christianity. And as he spoke the solemn words, it was not a clergyman dismissing a congregation; it was the old world blessing the new; it was England blessing America. The voice trembled, while it grew rich and deep, and took every man's heart into the great conception of the act that filled itself. The next morning he met a gathering of clergymen at breakfast, and as they separated, the room for an instant growing quiet and sacred, he said:

"I will bid you farewell with the benediction I pronounced yesterday at Trinity church, and which it is my habit to pronounce on all the more important occasions in the Abbey." And then again came the same words, with the same calm solemnity. When he stood where now he himself lies buried, and had watched the dear remains of his wife—to lose whom from his sight was agony to him—committed to the ground, he lifted up himself at the close of the service, and with a clear voice uttered this same benediction. And once again, for the last time, when he lay waiting for the end in the Deanery, Canon Farrar tells us how, after he had received the communion, the voice of the dying dean was heard feebly blessing his friends, and blessing the world that he was leaving, with the same benediction, which meant so much to him. Wherever he went, whatever he did, he carried a benediction with him.—Atlantic Monthly.

Religious News and Notes. A Methodist lay college has been opened at Boston to prepare young persons for religious work.

The Swedish Lutherans in the United States are said to number 300 congregations, 150 pastors and 70,000 attendants at different churches.

The 382,920 Congregationalists in the United States gave last year for their religious work \$3,602,912 34—an average of nearly \$10 per member.

The Lakeside Baptist association and the Chicago association have formed a union. The new association thus formed embraces forty-three active churches.

The king of Sweden last spring ordered the churches in that country to take up a collection to aid the only Swedish church in Philadelphia to pay off its debt of \$10,000. As a result 6,000 crowns, about \$1,500, have been received.

The religious and secular papers of San Francisco agree that the recent religious work of Messrs. Moody and Sankey in that city produced religious convictions more sincere, widespread and lasting than the Pacific coast has ever before known.

Some of the ministers of the Lutheran Ministerium of Pennsylvania are undeniably working men. Two serve eight congregations each, three pastors, seven congregations, five pastors six congregations, twelve pastors five congregations, and fifteen pastors four congregations each.

A Joke on a Washington Correspondent.

Probably no jollier lot of fellows are alive than the Washington correspondents of the American press. They find plenty of time, even when up to their ears in work during the busy session, to poke fun at each other. One of them who furnishes special dispatches to a leading journal, could tell a joke upon himself if he were so inclined. When he first entered Washington he was exceedingly green, but, like most novices, imagined that newspapering was a trade which could be learned without a long apprenticeship. As he was leaving the capitol on a certain afternoon in the midst of a "short session," he was accosted by some brother scribes, one of whom, with a perfectly serious face, asked him if he had heard the result of the last night's caucus. "I didn't know there was one," he answered. "Oh, yes," said the first speaker, "there was a joint caucus of both parties, and after a great deal of wrangling they voted to adjourn Congress on the 4th of March." "You don't say so!" exclaimed the victim, hurrying off to the telegraph office. A few minutes later this bit of news was on the wires; stranger yet, the editor into whose hands the dispatch passed at its destination printed it just as it was sent, without pausing to reflect that a caucus is invariably a meeting of one party only, and that the short session of Congress ends, by legal limitation, on the 4th of March, regardless of caucuses, resolutions, votes or any other consideration.—Harford (Conn.) Times.