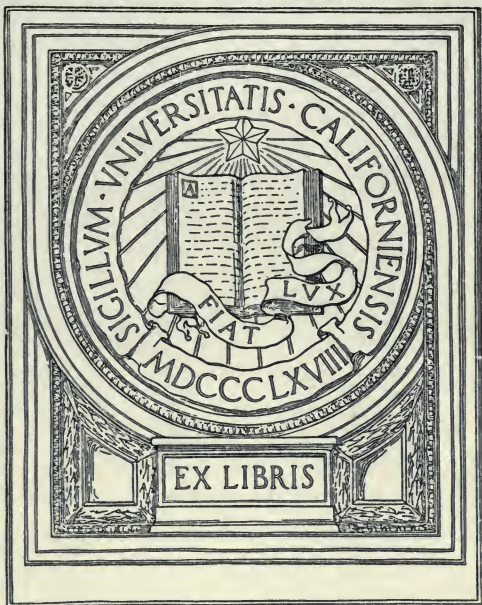


CURIOUS FACTS

*Relating to Almost Every-
thing under the Sun*

GIFT OF
A. F. Morrison



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A Book of Curious Facts

Of General Interest Relat-
ing to Almost Everything
Under the Sun ♪ ♪ ♪

Compiled and Edited by
HENRY WILLIAMS



NEW YORK

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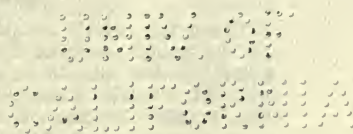
A Book of
Curious Facts

By
The
New Amsterdam Book Company

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CURIOUS FACTS

Greasing Soldiers' Feet.

The experiment, begun some time ago in the German infantry, of doing away with socks and keeping the foot soldier's feet well greased, has proved thoroughly successful. To say nothing of the economy of the plan, the men march easier, and, generally speaking, show few blisters. So, too, lifting the foot high—the regulation step now—is said to make the most awkward Pomeranian or Hanoverian peasant fairly sure footed, while before its adoption twenty-five per cent. of such men would stumble in a charge over rough ground, and about ten per cent. fall.

When to Pare the Finger Nails.

The old formula, from early Saxon times, reads as follows:

Cut them on Monday, cut them for health.
Cut them on Tuesday, cut them for wealth.
Cut them on Wednesday, cut for a letter.
Cut them on Thursday, for something better.
Cut them on Friday, you cut for a wife.
Cut them on Saturday, cut for long life.
Cut them on Sunday, you cut them for evil.
For all of that week you'll be ruled by the devil.

Another version changes the last two lines to the beginning:

A man had better ne'er been born,
Than have his nails on Sunday shorn.

Miniature.

The origin of the word "miniature" is as follows: In the golden days of Roman literature, to be a successful author was to be as great as a king, for kings looked to their poets for immortality, as Augustus Cæsar did to Horace. Hence it was to be expected that authors would feel their importance and display more or less vanity. One of their weaknesses was to see their portraits painted in artistic fashion in their parchment books. This work was intrusted to artists called "miniatores," that is, artists whose work was largely done in vermilion, a color extracted from cinnabar, and called by the Romans "minimum." Those "miniatores" chose the oval form for their beautifully brilliant portraits on the parchment books, and hence the origin of the term "miniature," a small hand-painted oval or round portrait.

Punctuation.

It is strange that the use of points for purposes of punctuation should be such a comparatively modern invention. Of the four generally-used points only the period (.) dates earlier than the fifteenth century. The colon (:) is said to have been first introduced about 1485, the comma (,) some thirty-five years later, and the semicolon (;) about 1570. It is difficult to understand how the literary world dispensed for so many centuries with the useful points, and their lack must have added to the toil of the decipherer of written documents. When we remember what curious inversions of meaning may be caused by the misplacing of a comma, we marvel how early authors contrived to escape strange misreadings of their works, in which no points guided the students.

"Rats."

No, not the slang phrase, but the bothersome little rodent. Rats are natives of Asia, and their raids westward belong to comparatively modern times. The little animal was unknown in ancient Europe. The black rat first came to Europe from Asia in the sixteenth century, and about the beginning of the seventeenth or the

ending of the sixteenth century he arrived in America. This black rat was the common house rat until the brown or grey rat made his appearance in 1775. The grey rat came to Europe from India by way of Russia, and is now known as the Norway rat from a mistaken tradition that it came from Norway to England, and from the latter country to America.

About Finger Nails.

A white mark on the nail bespeaks misfortune.

Pale or lead colored nails indicate melancholy people.

People with narrow nails are ambitious and quarrelsome.

Broad nails indicate a gentle, timid, and bashful nature.

Lovers of knowledge and liberal sentiment have round nails.

Small nails indicate littleness of mind, obstinacy, and conceit.

Choleric, martial men, delighting in war, have red and spotted nails.

Nails growing into the flesh at the points or sides indicate luxurious tastes.

People with very pale nails are subject to much infirmity of the flesh, and persecution by neighbors and friends.

Where Colors Come From.

The cochineal insects furnish a great many of the very fine colors. Among them are the gorgeous carmine, the crimson, scarlet, carmine, and purple lakes.

The cuttlefish gives the sepia. It is the inky fluid which the fish discharges in order to render the water opaque when attacked.

Indian yellow comes from the camel.

Ivory chips produce the ivory black and bone black.

The exquisite Prussian blue is made by fusing horses' hoofs and other refuse animal matter with impure potassium carbonate. This color was discovered accidentally.

Various lakes are derived from roots, barks and gums.

Blue black comes from the charcoal of the vine stalk. Lamp black is soot from certain resinous substances.

Turkey red is made from the madder plant, which grows in Hindostan.

The yellow sap of a tree in Siam produces gamboge; the natives catch the sap in cocoanut shells. Raw sienna is the natural earth from the neighborhood of Sienna, Italy. Raw umber is also an earth found near Umbria and burned.

India ink is made from burned camphor. The Chinese are the only manufacturers of this ink and they will not reveal the secret of its manufacture.

Mastic is made from the gum of the mastic tree which grows in the Grecian archipelago.

Bistre is the soot of wood ashes.

Very little real ultramarine is found in the market. It is obtained from the precious lapis-lazuli, and commands a fabulous price.

Chinese white is zinc, scarlet is iodide of mercury, and native vermilion is from the quicksilver ore called cinnabar.—*American Druggist*.

A Lesson in Spelling.

Pay great attention! What does this spell—Ghough-phtheightteau? Well, according to the following rule it spells—it spells—Do you give it up? It spells potato, viz.—gh stands for p, as you will find from the last letters in hiccough; ough for o, as in dough; phth stands for t, as in phthisis; eigh stands for a, as in neighbor; tte stands for t, as in gazette, and eau stands for o, as in beau. Thus you have p-o-t-a-t-o. Who will give another?

Perfume Does Not Diminish Weight.

A grain of musk has been kept freely exposed to the air of a room, of which the door and window were constantly open for ten years, during all which time the air, though constantly changed, was completely impregnated with the odor of musk, and yet at the end of that time the particle was found not to have sensibly diminished in weight.

Height of Sea Waves.

Careful experiments made by an experienced English navigator at Santander, on the north coast of Spain, showed that the crest of sea waves in a long and heavy gale were forty-two feet high, and allowing the same for the depth between the waves would make a height of eighty-four feet from crest to base.

First Cotton in England.

In 1600 cotton was first brought to England from Cyprus and Smyrna, and made into fustians, dimities, etc. In 1697 2,000,000 pounds were imported for weft, to work with linen warp as a domestic manufacture, the carding and spinning being performed by children and women for rural weavers.

"Blue Stockings."

The term "Blue Stocking," applied to literary ladies, was conferred on a society which was called the Blue Stocking Club, in which females were admitted, and so called owing to a Mr. Benjamin Stillingfleet, one of its active members, wearing blue stockings.

Grouping of Animals.

The generally accepted terms of the various groups of animals and birds are as follows:—A herd of swine, a skulk of foxes, a pack of wolves, a drove of oxen or cattle, a sounder of hogs, a troop of monkeys, a pride of lions, a sleuth of bears, a band of horses, a herd of ponies, a covey of partridges, a hide of pheasants, a wisp of snipe, a school of whales, a shoal of herrings, a run of fish, a flight of doves, a muster of peacocks, a siege of herons, a building of rooks, a brood of grouse, a swarm of bees, gnats, flies, etc., a stand of plovers, a watch of nightingales, a cast of hawks, a flock of geese, sheep, goats, etc., a bevy of girls, a galaxy of stars, and a crowd of men or boys.

Executions Everywhere.

The modes of executions in the different countries, according to "X," in "American Notes and Queries,"

are: In Austria, gallows, public; Bavaria, guillotine, private; Belgium, guillotine, public; Brunswick, axe, private; China, sword or cord, public; Denmark, guillotine, public; Ecuador, musket, public; France, guillotine, public; Great Britain, gallows, private; Hanover, guillotine, public; (Italy, capital punishment abolished); Oldenburg, musket, public; Portugal, gallows, public; Prussia, sword, private; Russia, musket, gallows, or sword, public; Saxony, guillotine, private; Spain, garrote, public; Switzerland, fifteen cantons, sword, public; two cantons, guillotine, public; two, guillotine, private; United States other than New York, gallows, mostly private.

Your Billions of Ancestors.

Did you ever think how many male and female ancestors were required to bring you into the world? First, it was necessary that you should have a father and mother. That makes two human beings. Each of them must have had a father and mother. That makes four more human beings. Again, each of them must have had a father and mother, making eight more human beings. So on we go back to the time of Jesus Christ, fifty-six generations. The calculation thus resulting shows that 139,235,017,489,534,976 births must have taken place to bring you into this world—you who read these lines! All this since the birth of Christ—not since the beginning of time. According to Proctor, if from a single pair, for 5,000 years, each husband and wife had married at 21 years of age and there had been no deaths, the population of the earth would be 2,199,915 followed by 144 ciphers. It would require to hold this population a number of worlds the size of this, equal to 3,166,526 followed by 125 ciphers. The human mind shrinks in contemplating such immense numbers.

Engineering Feats.

It is a remarkable fact that nothing surpasses in modern engineering the pyramids of Ghizeh, built more than 5,000 years ago. It is universally acknowledged by the highest professional authorities in architecture

and building that the masonry of the pyramids could not be surpassed in these days, and, moreover, is perfect for the purpose for which they were intended—above all, to endure. After the building of pyramids was once commenced, it was the fashion for about ten centuries to erect huge, meaningless, pointed piles of masonry. Of the hundreds erected about seventy have resisted the ravages of ages, and may still be seen. Many of those remaining contain enormous blocks of granite from thirty to fifty feet long, weighing from 300 to 500 tons, and display the most consummate ingenuity in their construction.

A more difficult operation than the mere transportation of immense stones—that of erecting obelisks weighing 400 tons—was performed with precision by the Egyptians 300 years before the time of Christ. Of the ancient method of raising immense stones nothing is now known—it is one of the many lost arts. The Peruvians had a method of transporting immense blocks of stone that would be a fortune to the modern engineer did he possess it. The Romans were also eminent engineers, and by some authorities are set down as even exceeding the Egyptians in that direction. Immense stones were used in constructing the temple of Baalbec; one lies ready quarried which is seventy feet long and fourteen feet square, and weighs 1,135 tons!

Curious Foundry Work.

A curious and noteworthy instance of foundry work is reported. It consisted of three plates of cast iron about one-fourth of an inch, and seven by five inches in surface, covered with writing indented in the iron. The impression on the iron is made by writing on thin paper, pinning the paper in a mold and then pouring on the iron. The writing thus transferred to the plates when the iron is cooled is wonderfully clear and distinct, and is so deeply imprinted as to defy any attempt at erasure.

How to See the Wind.

Take a polished metallic surface of two feet or more, with a straight edge; a large handsaw will answer

the purpose. Select a windy day, weather hot or cold, clear or cloudy, only let it not rain or the air be murky—in other words, let the air be dry. Hold this metallic surface at right angles to the wind—*i. e.*, if the wind is north, hold your surface east and west—and incline it at an angle of forty-five degs., so that the wind, striking, glances and flows over the edge. Now sight carefully over the edge at some small but clearly defined object, and you will see the air flow over as water flows over a dam.

Bible Statistics—Interesting Facts Gleaned from the Old and New Testaments.

After the bishops' translation of 1568-1589, nothing further in that line was accomplished until 1609-1610, when the Roman Catholics brought out the Douay Bible, so called because it was printed at a city of that name. A year later, in 1611, the English press issued the King James revision.

The translation of 1611 has remained the standard even to this day, notwithstanding the recent revision, the merit of which rests almost wholly on the fact that "hell" was changed to "hades."

The Bible of to-day (Old Testament) contains 39 books, 929 chapters, 23,214 verses, 592,439 words, and 2,738,100 letters.

The New Testament has 27 books, 270 chapters, 7,967 verses, 132,253 words, and 933,380 letters.

In speaking of the Bible it is generally understood that we mean the two books, the Old and the New Testament, which, taken collectively, have 66 books, 1,199 chapters, 31,181 verses, 724,692 words, and 3,671,480 letters.

The word Lord, or its equivalent, Jehovah, occurs 7,698 times in the Old Testament; or, to be more exact, the word Lord occurs 1,853 times, and the word Jehovah 5,845 times.

The Apocrypha (rejected by the Council of Nice as uninspired, but sometimes bound with the inspired portions) contains 14 books, 183 chapters, 15,081 verses, and 153,185 words.

The shortest chapter in the Bible, and which is also

the middle chapter, is Psalm cxvii. The middle verse is Psalm xviii. 8.

The shortest verse in the Old Testament is 1 Chronicles i. 25; shortest in New Testament is John xi. 35.

The ninth verse of the eighth chapter of Esther is the longest verse in the entire work.

The word "and" occurs 35,543 times in the Old Testament, and the word "reverend" but once.

Most commentators, in fact all that the writer has ever consulted, say that the word "girl" is to be found but once between the first chapter of Genesis and the last chapter of Malachi—in the third verse of the third chapter of Joel. This, however, is a mistake, which can be proven by turning to the fifth verse of the eighth chapter of Zachariah.

Four verses of the 107th Psalm—the 8th, 15th, 21st, and 31st—are exactly alike, and the 36th chapter of Isaiah and the 19th chapter of 2 Kings are alike.

The above curious facts in regard to the number of chapters, verses, words, and letters in the Holy Book were ascertained by the Prince of Granada, heir to the Spanish throne, who was for thirty-three years a prisoner in the Palace of Skulls, Madrid, with no companion except his Bible, which he faithfully perused and dissected for the benefit of more fortunate humanity.

There are nine books and one psalm mentioned in the Bible which are now lost to the world.

The book of Jasher, mentioned in Joshua x. 13, and 2 Samuel i. 18.

The book of Iddo, the Seer, to which reference is made twice in 2 Chronicles—in ix. 29, and xii. 15.

The prophesies of Ahijah. See 2 Chronicles x. 29.

The book of Nathan, the Prophet. See as above.

Book of Shemaiah, mentioned in 2 Chronicles xii. 15.

Book of Jehu. See 2 Chronicles xx. 34.

Solomon's five books on natural history. See 2 Kings iv. 31-35.

The prophecy of Enoch. See Jude, 14.

The book of the wars of the Lord. See Numbers xxi. 14. The psalm mentioned in several places but not found in the Bible is the 151st.

There are many other curious facts in regard to the Bible that would interest the reader, but space forbids further reference to them here. Enough has been said to convince any one of an inquiring turn of mind that the old Bible is not the dryest book in the world after all—JOHN W. WRIGHT.

The Flapping of a Fly's Wing.

The slow flapping of a butterfly's wing produces no sound, but when the movements are rapid a noise is produced, which increases in shrillness with the number of vibrations. Thus the house fly, which produces the sound F, vibrates its wings 21,120 times a minute, or 335 times in a second; and the bee, which makes a sound of A, as many as 26,400 times, or 440 times in a second. On the contrary, a tired bee hums on E, and therefore, according to theory, vibrates its wings only 330 times in a second. Marcy, the naturalist, after many attempts, has succeeded by a delicate mechanism in confirming these numbers graphically. He fixed a fly so that the tip of the wing just touched a cylinder, which was moved by clockwork. Each stroke of the wing caused a mark, of course very slight, but still quite perceptible, and thus showed that there were actually 330 strokes in a second, agreeing almost exactly with the number of vibrations inferred from the note produced.—SIR JOHN LUBBOCK.

Odd Marriage Records.

This collection of marriage announcements has been copied from old newspapers published within the last hundred years, of which the compiler has examined between 200 and 300 volumes, selecting such as he thought worth repeating to the present generation. The old wits were famous for punning upon names which they could utilize for such purpose, and many of these announcements will provoke laughter in spite of one's self. . . . Many such marriage notices as the compiler has found have been rejected as too flat for insertion, and, on the other hand, he found some that

were rather too sharp for our modern civilization. We give the following extracts:—

In Concord, N. H., Feb. 3, Mr. Isaac Hill, one of the editors of *The Patriot*, to Miss Susan Ayer, daughter of Capt. Richard Ayer.

As I walked out the other day,
Through Concord Street I took my way;
I saw a sight I thought quite rare—
A Hill walked out to take the Ayer.
And now, since earth and air have met together,
I think there'll be a change of weather.

In Haverhill, Mass., August 1829, Cotton K. Simpson, of Pembroke, N. H., to Miss Sarah R. Marble.

An old calculation of gain and loss
Proves "a stone that is rolling will gather no moss."
A happy expedient has lately been thought on,
By which Marble may gather and cultivate Cotton.

Married at Washington, Ky., March 1814, Mr. Samuel January to Miss Pamela January,

"A cold match."

At Black Lake, L. I., February 1828, James Anderson, to Miss Ann Bread.

While toasts the lovely graces spread,
And fops around them flutter,
I'll be contented with Ann Bread
And won't have any but her.

In Bozrah, Conn., August 1819, Mr. John Bate, of Williamstown, Mass., to Miss Mary Ann Bass, of the former place, after a courtship of one hour.

Is this not angling well, I ask,
Such tender bait to take?
He caught in one short hour a Bass;
The Bass, though, caught the Bate.

Married.—At Williamsburg, on Friday, April 15, 1853, by Rev. Mr. Malone, at St. Peter's Church, Mr. W. Moon, to Miss Ann Cooke.

He is not mad, though lunar light
 His broth did overlook,
 For he has gained, to his delight,
 A wife that is a Cooke.
 "His goose is cooked," and other maids
 May envy her the boon,
 Whose tall ambition wished and got
 The bright man in the Moon.

In New York, March 1832, Mr. Thomas A. Secord to Miss Cordelia Ketcham.

"Ketcham, Cordelia, if you can!"
 "I have," says she,— "Secord's the man."

Married, at Bridgewater, Dec. 16, 1788, Capt. Thomas Baxter, of Quincy, aged 66, to Miss Whitman, of the former place, aged 57, after a long and tedious courtship of forty-eight years, which they both sustained with uncommon fortitude.

In Concord, February 1825, by Rev. Dr. McFarland, Solomon Payne, Esq., of Canterbury, Conn., to Miss Ruth Barker, daughter of Lemuel Barker, of this town.

Some females fall in love with wealth,
 Some with a lovely swain;
 But Sarah, in the bloom of health,
 Takes to her bosom Payne.

In Concord, October 1809, Jeremiah P. Raymond, of Weare, to Miss Susan Gale.

A constant Gale forever prove,
 To fan the flame of virtuous love.

In Boston, April 1821, by Rev. William Sabine, Joseph Willicutt to Miss Susan Whitmarsh, after a tedious courtship of thirteen days, and but thirty-five days after the death of his former wife.

The best way, it seems, a deep sorrow to smother
For the loss of a wife is—to marry another.

In West Springfield, Mass., December 1826, Stephen Bumprey, aged 76, a Revolutionary pensioner, to Miss Sarah Dewey, aged 38.

In '76 he fought and bled;
In 76 he woo'd and wed.

In Washington, May 17, 1834, Joshua Peck, to Miss Amelia Bushel.

Alzookers, bobs and wedding cakes—
What changes of measure marriage makes;
Quick as a thought, at Hymen's beck,
A Bushel's changed into a Peck.
—*Curiosities of Matrimony.*

The Casket Copy of the Iliad.

While Alexander the Great was on his Persian expedition and after he had conquered Gaza, Syria, "a casket being one day brought to him, which appeared one of the most curious and valuable things among the treasures and the whole equipage of Darius (the Persian king), he asked his friends what they thought most worthy to be put into it. Different things were to be proposed, but he said: 'The Iliad most deserved such a case.' The Iliad, he thought, as well as called, a portable treasure of military knowledge; and he had a copy corrected by Aristotle, which is called the casket copy. 'Darius,' said Alexander, 'used to keep his ointments in this casket; but I, who have no time to anoint myself, will convert it to a nobler use.' Onesicritus informs us that he used to lay it under his pillow with his sword."—*Plutarch.*

Origin of Visiting Cards.

As is the case in many other instances we owe the invention of cards to the Chinese. So long ago as the period of the Tong dynasty (618-907), visiting cards were known to be in common use in China, and that

is also the date of the introduction of the "red silken cords" which figure so conspicuously on the engagement cards of that country. From very ancient times to the present day the Chinese have observed the strictest ceremony with regard to the paying of visits. The cards which they use for this purpose are very large, and usually of a bright red color. When a Chinaman desires to marry, his parents intimate that fact to the professional "match maker," who thereupon runs through the list of her visiting acquaintances, and selects one whom she considers a fitting bride for the young man; and then she calls upon the young woman's parents, armed with the bridegroom's card, on which are inscribed his ancestral name and the eight symbols which denote the date of his birth. If the answer is an acceptance of his suit, the bride's card is sent in return; and should the oracles prophesy good concerning the union, the particulars of the engagements are written on two large cards, and these are tied together with the red cords

The Buried Forests of New Jersey.

An industry, the like of which does not exist anywhere else in the world, furnishes scores of people in Cape May county, New Jersey, with remunerative employment, and has made comfortable fortunes for many citizens. It is the novel business of mining cedar trees—digging from far beneath the surface immense logs of sound and aromatic cedar. The fallen and submerged cedar forests of southern New Jersey were discovered first beneath the Dennisville swamps seventy-five years ago, and have been a source of constant interest to geologists and scientists generally ever since. There are standing at the present day no such enormous specimens of the cedar anywhere on the face of the globe as are found embedded in the deep muck of the Dennisville swamps, says *Scientific American*.

Ancient Advertising.

It is affirmed that the first newspaper advertisement appeared in 1642, during the civil war in Great Britain,

In Greece it was the public crier who announced sales or bid the people come to the theatre or visit the public baths.

In mediæval times it was the public crier who went abroad enumerating the goods that a certain merchant had for sale.

In England the first printed advertisement was got up by Caxton, the celebrated printer, who announced the completion of "The Pyes of Salisbury," a book containing a collection of rules for the guidance of priests in the celebration of Easter.

The advertising card is of entirely modern origin, although the Egyptians, Greeks and Romans knew something about advertising. They accomplished the desired results through the medium of posters, as several bills, painted in black and red, were discovered on the walls of the Pompeiian dwellings.

The first authentic advertisement was published in *The Mercurius Politicus*, of 1652. In the year 1657, a weekly newspaper, devoted to the interests of advertisers, made its appearance in London. It was not until the eighteenth century that newspaper advertising became the recognized medium between the manufacturer and the buyer.

Tarring and Feathering.

Philologists have long observed that many words popularly known as "Americanisms" are really good old English terms brought over by the Pilgrim Fathers, the early settlers on the James, etc., and retained here when forgotten in the country of their birth. Similarly, not a few Dutch words—boss, boodle, etc.—brought over by the early settlers of New Amsterdam, have spread from their original American habitat, till they have become part of our speech. It is not less interesting to note that certain customs, forgotten in their home land, but retained here, and, therefore, characterized as "American," are really importations from Europe.

Not one of these customs has been regarded as more distinctively "Yankee" than the venerable one of "tarring and feathering," and yet we learn from the "*Annales Rerum Anglicarum*" of the venerable English

historian Hoveden (living in the thirteenth century, and court chaplain to Henry III.) that the custom is at least as old as the time of Richard the Lion Hearted. He tells that Richard, on setting out on the third crusade, made sundry enactments for the regulation of his fleet, one of which was that "A robber who shall be convicted of theft shall have his head cropped after the fashion of a champion, and boiling pitch shall be poured thereon, and the feathers of a cushion shall be shaken out on him, so that he may be known, and at the first land at which the ship shall touch he shall be set on shore." Whether the custom was earlier than this we have no means of determining. It is at least close on to 700 years old.—*American Notes and Queries.*

Things that Never will be Settled.

"Engineer" says that among things that never will be settled are the following:

Whether a long screw driver is better than a short one of the same family.

Whether water wheels run faster at night than they do in the daytime.

The best way to harden steel.

Which side of the belt should run next the pulley.

The proper speed of line shafts.

The right way to lace belts.

Whether compression is economical or the reverse.

The principle of the steam injector.

Chinese Marriage Superstitions.

Domestic troubles are sure to come upon one who married within a hundred days after a funeral.

If a young mother goes to see a bride the visitor is looked upon as the cause of any calamity that may follow.

A bride may be brought home while a coffin is in her husband's house, but not within 100 days after a coffin is carried out.

If a bride breaks the heel of her shoe in going from her father's to her husband's house, it is ominous of unhappiness in her new relations.

A piece of bacon and a parcel of sugar are hung on

the back of a bride's sedan chair as a sop to the demons who might molest her while on her journey.

A bride, while putting on her wedding garments, stands in a round, shallow basket. This conduces to her leading a placid, well rounded life in her future home.

A bride must not, for four months after her marriage, enter any house in which there has recently been a death or a birth, for if she does so there will surely be a quarrel between her and the groom.

A girl who is partaking of the last meal she is to eat in her father's house previous to her marriage sits at the table with her parents and brothers; but she must eat no more than half the bowl of rice set before her, else her departure will be followed by continual scarcity in the domicile she is leaving.

Queer Sign Posts for Streets.

Formerly all the streets in Merida were distinguished in a manner peculiar to Yucatan, by images of birds or beasts set up at the corners, and many still retain the ancient sign, for example, the street upon which we are living is called La Calle del Flamingo, because of a huge red flamingo painted on the corner house. Another is known as the street of the Elephant, and the representation of it is an exaggerated animal, with curved trunk, and a body as big as a barrel. There is the street of the Old Woman, and on its corner is the caricature of an aged female, with huge spectacles astride her nose. The street of the Two Faces has a double faced human head, and there are others equally striking. The reason for this kindergarten sort of nomenclature was because when the streets were named the great mass of inhabitants were Indians who could not read, and therefore printed signs would have been no use to them, but the picture of a bull, a flamingo, or an elephant they could not mistake.

A Moonless Month.

The month of February 1866, was in one respect the most remarkable in the world's history. It had no full moon. January had two full moons and so had March,

but February had none. Do you realize what a rare thing in nature that was? It had not occurred since the creation of the world. And it will not occur again, according to the computation of astronomers, for—how long do you think?—2,500,000 years. Was not that truly a wonderful month?—*Golden Days*.

The Length of the Day.

At London, England, and Bremen, Prussia, the longest day has sixteen and one-half hours. At Stockholm, Sweden, it is eighteen and one-half hours in length. At Hamburg in Germany and Dantzic in Prussia the longest day has seventeen hours. At St. Petersburg, Russia, and Tobolsk, Siberia, the longest is nineteen hours and the shortest five hours. At Tornea, Finland, June 21 brings a day nearly twenty-two hours long, and Christmas one less than three hours in length. At Wardbury, Norway, the longest day lasts from May 21 to July 22 without interruption, and in Spitzbergen the longest day is three and one-half months.

At St. Louis the longest day is somewhat less than fifteen hours, and at Montreal, Canada, it is sixteen.

A Child's Vocabulary.

Recently I became interested in the vocabulary of my boy, 30 months old, and for one day noted all words used by him, except proper names. No effort was made to exhaust the child's stock of words by questioning. He used 352 words, of which fifty-four per cent. were nouns, eighteen per cent. verbs, and eleven adjectives. It is probable that the child's entire vocabulary of dictionary words includes 400 or more.—*Exchange*.

"Higher than Gilderoy's Kite."

To be "hung higher than Gilderoy's kite" means to be punished more severely than the very worst of criminals. "The greater the crime the higher the gallows" was at one time a practical legal axiom. Haman, it will be remembered, was hanged on a very high gallows. The gallows of Montrose was thirty feet high. The ballad says:

Of Gilderoy sae fraid they ware
 They bound him mickle strong,
 Tull Edinbурrow they led him thair,
 And on a gallows hong;
 They hong him high abone the rest,
 He was so trim a boy.

They "hong him high abone the rest" because his crimes were deemed to be more heinous. So high he hung, he looked like "a kite in the air."—*Notes and Queries.*

Animal Peculiarities.

Tortoises and turtles have no teeth.

All animals which chew the cud have cloven feet.

Both mandibles of the parrot's beak are movable, but most birds are able to move only one.

The horse has no eyebrows. The appearance of much white in the eye of a horse indicates a vicious nature.

The stork is partial to kittens as an article of food, and finds them an easy and wholesome prey; and the cats reciprocate by a love for young storks.

The frog, owing to its peculiar structure, cannot breathe with the mouth open, and if it were forcibly kept open the animal would die of suffocation.

Whalebone is found in the mouth of the whalebone whale, where it forms the substitute for the teeth, of which otherwise the animal is destitute.

Pigs are poor swimmers, their forelegs being set closely under them, and when they fall into the water they sometimes cut their throats with the sharp points of their cloven feet.

The eyes of hares are never closed, as they are unprovided with eyelids. Instead thereof they have a thin membrane, which covers the eye when asleep, and probably also when at rest.

The deer is furnished with supplementary breathing places in addition to the nostrils, and this would appear to be an extraordinary provision of nature giving the beast of the chase a freer respiration.

Fishes swallow their food hastily and without mastication, because they are obliged unceasingly to open

and close the jaws for the purpose of respiration, and cannot long retain food in the mouth when quite shut.

The faculty the chameleon has of changing its color has been attributed to the protective instinct of the animal, by which it seeks to render itself less observable by enemies by assuming the color of the bed on which it lies.

The hump on the back of the dromedary is an accumulation of a peculiar species of fat, which is a store of nourishment beneficently provided against the day of want, to which the animal is often exposed. The dromedary or camel can exist for a long period upon this lump without any other food.

The owl has no motion in the eye, the globe of which is immovably fixed in its socket by a strong, elastic, hard, cartilaginous case, in the form of a truncated cone; but in order to compensate for this absence of motion in the eye, it is able to turn its head round in almost a complete circle without moving its body.

Sheep have no teeth in the upper jaw. In some parts of the world there are sheep that have most of their fat in their tails. These tails weigh so much that they have to be tied on small carts, which the sheep draw after them when they walk. The carts are made of flat boards on two wheels. The fat of the tail is very soft, and is used as butter.

The crocodile devours all kinds of birds it can get but one, the zic-zac. It is said that when the crocodile comes on shore he opens his jaws, and this bird enters and swallows the leeches which are found about the animal's jaws and teeth, and which have collected there owing to the creature being for so long a time in the water. The relief afforded by having the leeches withdrawn induces the crocodile to tolerate the presence of the bird.—*The Zoologist*.

Early Rising Birds.

The thrush is audible about half-past four in the morning.

The quail's whistling is heard in the woods about three o'clock.

The blackcap turns up at half-past two on a summer morning.

By four, the blackbird makes the woods resound with his melody. The house sparrow and tomtit come last in the list as early rising birds.

At short intervals after half-past four the voices of the robin and wren are heard in the land.

The greenfinch is the first to rise, and sings as early as half-past one on a summer morning.

The lark does not rise until after the chaffinch, linnet, and a number of other hedgerow folk have been merrily piping for a good while.—*Montreal Star*.

Experiments in Tasting.

From some experiments made at the University of Kansas, it appears that the average person can taste the bitter of quinine when one part is dissolved in 152,000 parts of water. Salt was detected in water when one part to 640 of the liquid was used. Sugar could be tasted in 228 parts of water, and common soda in 48. In nearly all cases women could detect a smaller quantity than men.

Origin of Slang Terms.

"Pow-wow" comes from the North American Indians.

To "nigg at whist" means to renig, that is Saxon for deny.

The word boss comes from the low Dutch, and means master.

Kidnap comes from the napping or stealing of a kid, gypsy for child.

Calaboose, a prison; picaroon, a pirate; palaver, to talk, are all Spanish.

"A rum chap" is simply a gypsy lad; it has no relation to the product of the still.

"Dude," meaning a dandy, has no appreciable derivation. Like Topsy, it grewed.

Pal is a brother, and "conk," for nose, comes from the spouting fountain, the concha of the Romans.

Demijohn comes from the Arabic damaghan, itself

taken from the Persian glass-making town of Demaghan.

The common slang word "mash" is from a beautiful gypsy word, "mafada," which means "to charm by the eyes."

Why should a man be called a spoon? Why spoony when he is making love? Simply because he is a "loeffel," which also means spoon.

The good dictionary word "vamp" was at first a slang word, being rubbing up of old hats and shoes. Now, from being a cobbler's word, it has become a classic, and we talk of revamping the language.

A tinker's dam has nothing to do with swearing. It is merely the dam or stoppage, made of flour and water, with which the tinker stops the gap he is mending until the tin or the pewter he is using has cooled.

Many people sought lately for the familiar "Praise from Sir Hubert," and could not find it. The true phrase is "Approbation from Sir Hubert Stanley is praise indeed," the line coming from "A Cure for the Heartache," the well known old play.

Gen. Butler is to be accredited with the discovery that "contraband of war" applied to a runaway nigger; therefore he gave a new word to the language. The necessity of the occasion produced the word, and a contraband is a synonym for a colored man at Washington to this day.

The Progress of Languages.

The progress of languages spoken by different nations is said to be as follows: English, which at the commencement of the century was only spoken by 22,000,000 of people, is now spoken by 100,000,000. Russian is now spoken by 68,000,000, against 30,000,000 at the beginning of the century. In 1800 German was only spoken by 35,000,000 of people; to-day over 70,000,000 talk in the same language that William II. does. Spanish is now used by 44,000,000 of people, against 30,000,000 in 1800; Italian by 32,000,000 instead of 18,000,000; Portuguese by 13,000,000 instead of 8,000,000.

This is for English an increase of 312 per cent.; for Russian, 120 per cent.; for German, 70 per cent.; for

Spanish, 36 per cent., &c. In the case of French the increase has been from 34,000,000 to 46,000,000, or 36 per cent.—*Boston Herald*.

Steal My Thunder.

For the origin of the phrase, "steal my thunder," we quote from Disraeli's "Calamities of Authors:" "The actors refused to perform one of John Dennis' tragedies to empty houses, but they retained some excellent thunder which Dennis had invented; it rolled one night when Dennis was in the pit, and it was applauded. Suddenly starting up, he cried to the audience, 'By —, they won't act my tragedy, but they steal my thunder.'"

The Vo's and the Mo's.

Every reader of a newspaper which notices new books frequently meets the terms quarto, octavo, duodecimo, etc., or their abbreviations, 4to, 8vo, 12mo, etc. This is the mode by which the size of a book is designated in print. These mo's and vo's indicate the number of leaves in a sheet, and correspond to the leaves, not the pages which a sheet contains. Take a sheet of a given size, say a medium, and give it one fold, like a common newspaper, and you have a folio, with two leaves; give it another, and you have a quarto (4to), with four leaves; give it another fold, and you have an octavo (8vo), or eight leaves, and so on. By another mode of folding you obtain a 12mo, 16mo, etc., and by another again 18mo, etc. These figures and letters, though abbreviations of Latin words, are ordinarily, in these days, turned into rather barbarous English by printers and publishers for the sake of brevity. Thus they say a 12mo, a 24mo, a 48mo, instead of a duodecimo, etc.

Phenomenal Hand at Whist.

The phenomenon of thirteen trumps in a hand at whist occurred in the United Service Club at Calcutta, on January 9, 1888. A judge and three physicians were the players, and they and the witnesses made due record of it. The pack was perfectly shuffled and cut, and the dealer held the hand, turning up the knave of

clubs. Pole has calculated that the chance of this event occurring is one in 158,750,000,000.—*New York Sun*.

Language of the Parasol.

According to an English authority the language of the parasol is: Indifference, handle resting on the shoulder; "I dare every danger," high above the head; "I would lean on your arm," dropping it to the right; "I brave everything for you," shut; "I love you," carried in the arms; "I could beat you," held by the point; "I despise you," held like a cane; "I hate you," beating the toes.—*New York Sun*.

What's a Flame?

Combustion is in some way produced by the union of carbon and hydrogen with oxygen. When the combustible materials are consumed, or the supply of oxygen is insufficient to continue the flame, the "fire goes out." The best philosopher can tell little more.

Similarity of Proverbs.

Examples of ideas which seem to be indigenous to all countries occur to the mind in bewildering redundancy. "One swallow does not make a spring" we find alike in English, German, and Russian. In the sunny south it takes the form, "One flower does not make a garland." In Italy we find "He who grasps all, less gets," in France, "He who embraces too much binds badly," and in our own country, "Grasp all, lose all." Our "Birds of a feather flock together" is represented by the Italian, "Every like covers its like;" the Greek, "A comrade loves a comrade;" the French, "Qui se rassemble, s'assemble." Plato declared more than 2000 years ago that "A beginning is half of all," and he has found an echo in our "What's begun is half done," and in the Italian, "Who commences well is at the half of the task."

There is true Oriental ring about such proverbs as "Among the sandal trees are deadly serpents," "Rivers have lotuses, but also alligators." It is needless to suggest the western correlatives. "By a number of straws twisted together elephants can be bound," is again

only the Indian form of the Scotch, "Many a little makes a mickle."

The Greeks, wishing to cast doubts upon a man's probity, declared him to be "A sheep with a fox's tail," which answers to our "Wolf in sheep's clothing," and the French, "Il fait is bon apotre." The familiar "Finis coronet opus" has passed by literal translation into French and Russian. "All's well that ends well," bears a strong likeness to the German "Ende gut Alles gut." There is a lengthy Oriental proverb, "Let a cur's tail be warmed, pressed out straight, and swathed with bandages; if released after twelve years it will nevertheless return to its natural shape." It is easy to trace the similarity of our idea "You cannot make a silk purse out of a sow's ear." "Man proposes, God disposes," appears in the German, while in Russian it takes the form, "God makes the crooked arrow straight." "Charity begins at home" in Russian assumes the more graphic and suggestive form, "One's own shirt is nearest to one's body."

We discourage carrying "coals to Newcastle," the French deprecate taking "water to the river." We "drink as we brew," or would if we could; the French "sleep on the bed as they have made it." The old Athenian was as much concerned to see a bull in the city as we are when that quadruped appears in a china shop. With us "still waters run deep"; in Russia they "swarm with devils," a much more vigorous figure.—*The Examiner.*

Mechanism of the Heart.

In the human subject the average rapidity of the cardiac pulsation of an adult male is about seventy beats per minute. These beats are more frequent as a rule in young children and in women, and there are variations, within certain limits, in particular persons owing to peculiarities of organization. It would not necessarily be an abnormal sign to find in some particular individuals the habitual frequency of the heart's action from sixty to sixty-five or from seventy-five to eighty per minute. As a rule, the heart's action is slower and more powerful in fully developed and mus-

cular organizations, and more rapid and feebler in those of slighter form.

In animals the range is from twenty-five to forty-five in the cold blooded, and fifty upward in the warm blooded, except in the case of a horse, which has a very slow heart beat, only forty strokes a minute. The pulsations of men and all animals differ with the sea level also. The work of a healthy human heart has been shown to be equal to the feat of raising five tons four hundredweight one foot per hour, or 125 tons in twenty-four hours.

A curious calculation has been made by Dr. Richardson, giving the work of the heart in mileage. Presuming that the blood was thrown out of the heart at each pulsation in the proportion of sixty-nine strokes per minute, and at the assumed force of nine feet, the mileage of the blood through the body might be taken as 207 yards per minute, 7 miles per hour, 168 miles per day, 61,320 miles per year, or 5,150,880 miles in a lifetime, 84 years. The number of beats of the heart in the same long life would reach the grand total of 2,869,776,000.—*Medical World*.

A Watch Without Hands.

The watch without hands, which has recently been brought before the public, is simply a watch with ordinary wheelwork, in which the intermediate teeth are wanting, and which gear every minute and hour only. The contrivance, though admitted to possess some inconveniences, is, on the other hand, claimed to present some genuine preferences over the ordinary make. Thus, the construction not only allows the reading to be accurate, but also permits of estimating the time that separates each passing minute. There is not only an optical signal given, but also an acoustic one, since at every change of figure the ear perceives a slight sound, and consequently it becomes useless for one to examine his watch in order to measure a given interval of time—a feature of special value to engineers, physicians, officers, travellers, and observers. The experimenter knows exactly when a minute begins and ends.

To be Avoided.

- Don't use obsolete words.
- Don't use technical terms.
- Don't use slang expressions.
- Don't write a feeble sentence.
- Don't write a clumsy sentence.
- Don't say commence for begin.
- Don't write an obscure sentence.
- Don't say vituperation for abuse.
- Don't say initiate for commence.
- Don't use foreign words or phrases.
- Don't take an impracticable position.
- Don't say "Bard of Florence" for Dante.
- Don't tempt one to question your veracity.

A Glance at the Camel.

A camel's hind legs will reach anywhere—over his head, round his chest, and on to his hump; even when lying down an evil disposed animal will shoot out his legs and bring you to a sitting posture. His neck is of the same pliancy. He will chew the root of his tail, nip you in the calf, or lay the top of his head on his hump. He also bellows and roars at you, whatever you are doing—saddling him, feeding him, mounting him, unsaddling him. To the uninitiated a camel going for one with his mouth open and gurgling horribly is a terrifying spectacle; but do not mind him, it is only his way. I heard of one or two men having a leg broken from a kick at various times, but it was the exception and not the rule, for a camel is really a very docile animal, and learns to behave himself in most trying positions with equanimity, though I fear it is only the result of want of brains.—COUNT GLEICHEN.

Domestic Animals of Ancient Peruvians.

Herr Nehring, speaking of the domestic animals of the ancient Peruvians, observed that the subject was scientifically important, because all the other peoples of ancient America were very poor in this kind of property as compared with the Peruvians and Bolivians and some of the Central American peoples; and, sec-

only, because the influence of domestication on the formation of races could be better followed on these animals than on those of the Old World. We are concerned in Peru especially with the dog, llama, alpaca, and guinea pig. The speaker had examined eighteen dog mummies from ancient Peruvian graves, and had determined that they belonged to three different races—a shepherd's dog, a dachshund, and a bull dog or pug. He believed that the "Inca dog" was derived, not from South American Canidæ, but from the Mexican wolf (*Lupus occidentalis*), perhaps through the feebler Texan variety; and that several races had been formed from it in Peru through domestication.

Hog Breeding.

Some rather startling computations have been made on the subject of hog breeding. It has been found that, if permitted, hogs will live from fifteen to twenty years of age, that they commence breeding when they are from nine to twelve months old, and that from one pair only, in ten years, allowing only six to a litter, male and female, upwards of 6,434,838 pigs would be obtained; that is to say that, if, instead of three acres and a cow, a countryman started with some acres and a pair of pigs, he might in the course of ten years count their progeny by millions. This is not reckoning on any out-of-the-way basis, for it has been shown that one sow actually produced 355 pigs in twenty litters; while at an exhibition of the Agricultural Society a boar was shown which, although only twenty months old, was already the father of 1466 hogs. Here, then, is wealth for the million.

Antiquity of Gold.

Gold is first mentioned in the eleventh verse of the second chapter of Genesis, 4004 years before Christ. It is mentioned as one of the elements of Abram's riches in Genesis, thirteenth chapter, second verse, 1918 years before Christ. The Egyptians used gold as money at a very early but unknown period, but first in the form of rings, which opened and could be strung together. It is probable that gold was used as money at the time

Abraham bought the field of Machpelah, though he paid for that in silver "current with the merchant." That was 1875 years before Christ. This probably is increased by the fact above stated that gold was reckoned as a part of the riches of Abram. According to Herodotus, the invention of the coinage of gold belongs to Lydia, about 750 years before Christ. High authority says that gold was first coined in the Island of Ægina, and other authorities say the Persians first coined gold. And very high authority says the first coinage of gold was at Miletus. But the fact of the first coinage of gold has never been and probably never will be certainly ascertained.

Wonders of the Sea.

Oceans occupy three-fourths of the earth's surface. At the depth of 3500 feet waves are not felt. The temperature is the same, varying only a trifle, from the poles to the burning sun of the equator.

A mile down the water has a pressure of a ton on every square inch. If a box six feet deep were filled with sea water and allowed to evaporate, there would be two inches of salt left on the bottom of the box. Taking the average depth of the oceans of the world to be three miles, there would be a layer of salt 230 feet thick over the entire bed should the water evaporate. The water of the ocean is colder at the bottom than at the surface. In many places, especially in the bays on the coast of Norway, the water freezes at the bottom before it does above.

Waves are very deceptive. To look at them in a storm one would think the whole water travelled. The water stays in the same place, but the motion goes on. Sometimes in storms these waves are forty feet high, and travel fifty miles per hour—nearly twice as fast as the fleetest steamship. The base of a wave—the distance from valley to valley on either side at the bottom—is generally reckoned at being fifteen times the height, therefore an average wave, say one twenty-five feet high, has a base extending over 375 feet. The force of waves breaking on the shore is said to be seventeen tons to the square yard.

What Invention has Done.

In making bread boxes three workers can do the work of thirteen box makers by old methods.

In cutting out clothing and cloth caps with dies one worker does the work of three by old methods.

In leather manufacture modern methods have reduced the necessary number of workers from 5 to 50 per cent.

A carpet measuring and brushing machine with one operator will do the work of fifteen men by the old methods.

In the manufacture of flour modern improvements save 75 per cent. of the manual labor that once was necessary.

In making tin cans one man and a boy, with modern appliances, can do the work of ten workers by the old process.

By the use of coal mining machines 160 miners can mine as much coal in the same time as 500 miners by the old methods.

One boy, by machinery, in turning wood work and materials for musical instruments, performs the work of twenty-five men by the old methods.

In the manufacture of boots and shoes the work of 50 operatives is now done by 100, a displacement of wage earners of 80 per cent. by aid of machinery.

In nailing on shoe heels one worker and a boy, with machinery, can heel 300 pairs of shoes per day. It would require five workers to do the same by hand.

In stave dressing twelve colaborers, with a machine, can dress 12,000 staves in the same time that the same number of workers by hand could dress 2500 staves.

In the cotton mills in the United States the manual labor has been reduced about 50 per cent. Now one weaver manages from two to ten looms, where one loom was formerly tended by one worker.

In the manufacture of brick improved devices save one-tenth of the labor, and in the manufacturing of fire brick 40 per cent. of the manual labor is displaced.

In the manufacture of carriages it used to take one man thirty-five days to make a carriage. It is now made by the aid of machinery with the work of one man in twelve days.

In the manufacture of agricultural implements 600 operatives, with machinery, including eighteen classes of wage earners, do the work of 2145 wage earners without machinery, displacing 1545 workers.

The introduction of machinery in the manufacture of children's shoes during the last thirty years has displaced six times the manual labor now required, and the product of manufacture has been reduced fifty per cent. to the consumer.

In the manufacture of wall paper one worker, by the aid of machinery, does the work of 100 workers by manual labor, and in cutting and drying paper by machinery four men and six girls do the work of 100 operators by old methods.

In manufacturing gun stocks one man by manual labor was able to turn and fit one gun stock in one day of ten hours, while three men now, by a division of labor and the use of machinery, can turn and fit 125 to 150 gun stocks in ten hours. This displaces the work of forty-four to forty-nine wage workers.

Who Invented Spectacles?

To this question an answer has been given by the Italians in favor of one of themselves. In Florence, in a little street, a memorial tablet has been inserted in the façade of one of the houses, and bears the following inscription: "To honor the memory of Salvino degli Armati, inventor of spectacles in the thirteenth century. The Guild of Artisans, on the spot once occupied by the houses of the Armati, placed this tablet, on the 5th day of July 1885."

Invention of Omnibuses.

The invention of omnibuses is due to the philosopher Pascal, who, in February 1667, obtained a "privilege" or a patent for public carriages to travel through certain streets of Paris. They held eight passengers, who paid six sous each, and were very successful, although an act of parliament of Paris forbade them being used by lackeys, soldiers, and other humble folks. Pascal died in 1667, and his useful invention did not long survive

him. The omnibus reappeared in London about the beginning of the century, and was adopted in several French provincial towns before Paris accepted it again.

Invention of Felt.

According to Professor Beekman felt was invented before weaving. The middle and northern regions of Asia are occupied by Tartars and other populous nations, whose manners and customs appear to have continued unchanged from the most remote antiquity, and to whose simple and uniform mode of existence this article seems to be as necessary as food. Felt is the principal substance both of their clothing and of their habitations.

Inventors who have made Money.

The business of inventor pays a smaller average profit than any other business in the United States, because there are so many failures to one success. But the inventor of the Hoe printing press made \$300,000. Thomas Silverman, a poor mechanic, made \$70,000 from copper toed shoes for children. The horseshoer, Henry Burton, made \$900,000 from his manufactured horse shoes. The inventor of the stylographic pen has made \$1,000,000. Edison has made \$5,000,000, and his inventions have benefited the world ten times as much.

Thomas Jefferson was the father of the American patent system; he drew up the earliest patent laws, and while he was Secretary of State under Washington, he gave his personal consideration to every application that was made for a patent.

Doctors' Bills in China.

We Occidentals only pay our doctors when we are sick, and sometimes not even then. The Celestial method, as shown by the example of the Emperor of China, is to pay the doctor only when one is well.

As soon as the Emperor is sick it is a notification to his physicians that their salary is cut off till he is perfectly well again. The passionate zeal with which the regulars go to work to get his majesty back where

their salaries will begin again is said to be something astounding. The result is that the Emperor is about the healthiest man standing on this planet, and his physicians seldom lose a day's salary.

The Chinese have no Nerves.

The Chinaman can write all day, he can work all day, he can stand for a whole day in one position, weaving, hammering gold, or cutting ivory, without once being attacked by nervousness. This peculiarity makes itself apparent in early youth. The Chinaman can bear any kind of bodily exercise. Sport and play are to him unnecessary labor. He can sleep anywhere and in any position—amid thundering machines, deafening noises, the cry of children, or the wrangle of grown people; on the ground, in bed, or on a chair. In his own innocent way the Chinaman is almost a Sybarite.

Secret of Health in China.

The Chinese live in houses where the supply of air is so limited that no European could endure the vitiated atmosphere; yet they are a very healthy nation. This is due probably to the fact that their food is invariably simple and clean and thoroughly well cooked. Meat, potatoes, and rice are all boiled together. When cooked the mixture is put into small bowls, and as it is eaten with tiny chopsticks, it is impossible to try the mouth or stomach by scalding them with a quantity of very hot food. Moreover, they rarely drink water if they can get tea, either hot or cold.

Plain Words about Peking.

Some of the daily sights of the pedestrian in Peking could not hardly be more than hinted at by one man to another in the smoking room. There is no sewer or cesspool, public or private, but the street; the dog, the pig, and the fowl are the scavengers; every now and then you pass a man who goes along, tossing the most loathsome of the refuse into an open work basket on his back; the smells are simply awful; the city is one colossal and uncleansed cloaca.—*Pall Mall Gazette*.

The Woman does the Courting.

In the Ukraine, Russia, the maiden is the one that does all the courting. When she falls in love with a man she goes to his house and tells him the state of her feelings. If he reciprocates all is well, and a formal marriage is duly arranged. If, however, he is unwilling, she remains there, hoping to coax him into a better mind. The poor fellow cannot treat her with the least discourtesy or turn her out, for her friends would be sure to avenge the insult. His best chance, therefore, if he is really determined that he won't, is to leave his home and stay away as long as she is in it. This is certainly a peculiar way of turning a man out of house and home. On the Isthmus of Darien either sex can do the courting, with the natural result that almost everybody gets married. There is not quite the same chance where the girl has to bide the notions of a hesitating or bashful swain.—*Exchange.*

Wonderful Echoes.

Every one is familiar with the phenomenon of echoes. In a cave in the Pantheon, the guide, by striking the flap of his coat, makes a noise equal to a twelve-pound cannon's report. The singularity is noticed, in a lesser degree, in the Mammoth Cave in Kentucky. In the cave of Smellin, near Viborg, in Finland, a cat or a dog thrown in will make a screaming echo, lasting some minutes. Pliny tells of a cave in Dalmatia where a stone tossed in would raise a perfect storm. Fingal's Cave, on the Isle of Staffa, has an abnormally developed echo.

A Chinese Millionaire.

The honesty of the Chinese in their business dealings is shown in the actions of Hou Qua, the Canton millionaire, who died a few years ago, leaving at least \$50,000,000. One of the Chinese firms of Canton had failed, owing a great sum to foreigners. Hou Qua got up a subscription and paid the whole indebtedness. He headed the list of subscribers with \$1,000,000 out of his own pocket, saying that "Chinese credit must remain untarnished." This is the same man who, when the

English were about to bombard Canton unless their demand of \$6,000,000 was paid within forty-eight hours, headed the subscription list with the sum of \$1,100,000. "I give," said he, "\$800,000 as a thank offering for the business prosperity I have had. I give \$100,000 as a testimony of the fidelity of my son, and \$200,000 as a mark of the affection which I bear my wife." This man, Hou Qua, though dead, is still greatly honored in Canton. His gardens there are among the sights of the city, and his name is synonymous with business honor.—FRANK G. CARPENTER.

Farm Life in China.

A farmer may be hired by the year for from \$5.00 to \$10.00 with food, clothing, head shaving, and tobacco. Those who work by the day receive from 8 to 10 cents, with a noonday meal. At the planting and harvesting of rice, wages are from 10 to 20 cents a day, with five meals; or 30 cents a day without food. Few land owners hire hands, except for a few days during the planting and harvesting of rice. Those who have more land than they and their sons can till, lease it to their neighbors.

Much land is held on leases given by ancient proprietors to clansmen whose descendants now till it, paying from \$5 to \$10 worth of rice annually for its use.

Food averages little more than \$1.00 a month for each member of a farmer's family. One who buys, cooks and eats his meals alone, spends from \$1.50 to \$2.00 a month upon the raw material and fuel. Two pounds of rice, costing 3½ cents, with relishes of salt fish, pickled cabbage, cheap vegetables, and fruits, costing 1½ cents, is the ordinary allowance to each laborer for each day. Abernethy's advice to a luxurious patient, "Live on sixpence a day and earn it," is followed by nearly every Chinaman. One or two dependent relatives frequently share with him the 12 cents.—ADELE M. FIELD.

Chinese Beggars.

Large donations are given to the beggars of China by the people, but these are in the nature of an in-

urance. In the cities the beggars are organized into very powerful guilds, more powerful by far than any organization with which they can have to contend, for the beggars have nothing to lose and nothing to fear, in which respects they stand alone. The shopkeeper who should refuse a donation to a stalwart beggar, after the latter had waited for a reasonable time and has besought with what the lawyers call "due diligence," would be liable to invasion from a horde of famished wretches, who would render the existence even of a stolid Chinese a burden, and who would utterly prevent the transaction of any business until their continually rising demands should be met. Both the shopkeepers and the beggars understand this perfectly well, and it is for this reason that the gifts flow in a steady, if tiny, rill.

Watch and Clock Dials.

It is a tradition among watchmakers that the first clock that in any way resembled those now in use was made by Henry Vick, in 1370. He made it for Charles V. of France, who has been called "The Wise."

Now Charles was wise in a good many ways. He was wise enough to recover from England most of the land which Edward III. had conquered, and he did a good many other things which benefited France. But his early education had been somewhat neglected, and he probably would have had trouble in passing a civil service examination in these enlightened ages. Still he had a reputation for wisdom, and thought that it was necessary, in order to keep it up, that he should also be supposed to possess book learning. The latter was a subject he was extremely touchy about.

So the story runs in this fashion, although I will not vouch for the language, but put it in that of the present day:

"Yes, the clock works well," said Charles, "but," being anxious to find some fault with a thing he did not understand, "you have got the figures on the dial wrong."

"Wherein, your majesty?" asked Vick.

"That four should be four ones," said the king.

"You are wrong, your majesty," said Vick.

"I am never wrong," thundered the king. "Take it away and correct the mistake!" and corrected it was, and from that day to this 4 o'clock on a watch or clock dial has been IIII. instead of IV. The tradition has been faithfully followed.

Girls Kept in Cages in New Britain.

The inhabitants, it is said by Wallace, have a peculiar custom of confining their girls in cages until they are old enough to be married. This custom is said to be peculiar to the people of New Britain. The cages are made of the palm tree, and the girls are put into them when two or three years of age. These cages are built inside of the houses, and the girls are never allowed to leave the house under any circumstances. The houses are closely fenced in with a sort of wicker work made of reeds. Ventilation under the circumstances is rendered difficult. The girls are said to grow up strong and healthful in spite of these disadvantages.

The Juggler and the Scotchman.

One of his most surprising feats was performed on one of our party, a Scotchman named M'Farlane. Placing in M'Farlane's hands three pice—small copper coins equal to one farthing ($\frac{1}{2}$ cent) in value—he requested the Scotchman to hold them as tightly as possible and not to permit them to escape him. M'Farlane had a great deal of confidence in himself and very little in jugglers, and would have wagered a round sum that he could hold three pice for the balance of the day. But in a few moments the pice began to swell, and M'Farlane declared he could feel them squirming. At last he dropped them, and behold the coins had changed to young cobra-di-capellos, each about six inches long, and these disappeared from our sight as mysteriously as they had appeared.—CHARLES E. ROMAIN.

The "Holy Lands" of All Religions.

Christians call Palestine the Holy Land because it was the birthplace of our religion as well as that of

Jesus Christ, our Savior, whose birth, ministry, and death occurred in the vicinity of Jerusalem. To the Mohammedans, Mecca, in Arabia, is the Holy Land, it being the nativity of Mohammed, the savior of those who believe in his doctrine. India is the Holy Land of the Chinese and other oriental Buddhists, it being the native land of Sakya-Muni, the supreme Buddha. Elis, one of the several divisions of the ancient Peloponnesus, was the Mecca and the Jerusalem of the ancient Greeks. The temple of Olympus Zeus was situated at Elis, and the sacred festivals were held there each year. With Achaia, it is at present a part of Greece. The believers in the Sinto religion make annual pilgrimages to Sitsa-Kara, the immense stone pillar where their supreme ruler last stood while talking to men.

The Most Expensive Leather.

The most costly leather in the world is known to the trade as piano leather. The secret of tanning piano leather is known only to a family of tanners in Thuringia, Germany. This leather has but one use, the covering of piano keys. A peculiar thing about it is that the skins from which it is tanned are procured almost entirely in America. It is a peculiar kind of buckskin. The skin of the common red or Virginia deer will not make the leather; a species of the animal known as the grey deer, and found only in the vicinity of the great northern lakes, alone furnishing the material. The German tanners have an agency in Detroit which collects the skins of this deer from the Indian and half-breed hunters, who supply the market.

The World's Coal Consumption.

The total coal consumption of the world is said to amount to upward of 50,000 tons per hour. Of this quantity about 12,000 tons are required per hour in order to heat the boilers of stationary and marine engines, locomotives, etc. The production of pig iron absorbs 5,000 tons, and that of other metals 4,000 tons per hour. The average hourly consumption of household coal is reckoned at 10,000 tons, but the total production is

estimated at 1,500,000 tons to 1,650,000 tons per diem, so there is a considerable margin.

A Swiss Custom.

The Swiss Good Night refers to the custom of the Swiss mountaineers of calling through their speaking trumpets at dusk, "Praise the Lord God." One herdsman starts the call, and his neighbors from every peak echo it. The sounds are prolonged by reverberation from one mountain to another. After a short period, which is supposed to have been devoted to prayer, a herdsman calls "Good night." This, too, is repeated, and as darkness falls, each retires to his hut. These calls may be heard for miles, and are re-echoed from the rocks for some minutes after the original call has died away.

The Power of Kindness.

"There is no power of love so hard to get and keep as a kind voice. A kind hand is deaf and dumb. It may be rough in flesh and blood, yet do the work of a soft touch. But there is no one thing that love so much needs as a sweet voice to tell what it means and feels; and it is hard to get and keep it in the right tone. One must start in youth and be on the watch night and day, at work and play, to get and keep a voice that shall speak at all times the thoughts of a kind heart. It is often in youth that one gets a voice or a tone that is sharp, and it sticks to him through life, and stirs up ill will and grief, and falls like a drop of gall on the sweet joys of home. Watch it day by day as a pearl of great price, for it will be worth more to you in days to come than the best pearl hid in the sea. A kind voice is to the heart what light is to the eye. It is a light that sings as well as shines."—**ELIHU BURRITT.**

Evolution of the Piano.

The piano, as we see it to-day, is the growth of centuries of invention. In its infancy it was a harp with two or three strings. From time to time more strings were added, and after a while the cithara was born.

The cithara was in the shape of the letter P and had ten strings. It took many centuries for musicians to get the idea of stretching the strings across an open box, but somewhere about the year 1200 this was thought of and the dulcimer made its appearance, the strings being struck with hammers. For another hundred years these hammers were held in the hands of the player, and then a genius invented a keyboard, which, being struck by the fingers, moved the hammers. This instrument was called a clavicytherium, or keyed cithara. This underwent some modifications and improvements from time to time.

In Queen Elizabeth's time it was called a virginal. Then it was called a spine, because the hammers were covered with spines of quills, which struck or caught the strings of wires and produced the sound. From 1700 to 1800 it was much enlarged and improved, and called a harpsichord. In 1710, Bartholomeo Cristofoli, an Italian, invented a key or keyboard such as we have now substantially, which caused hammers to strike the wires from above, and thus developed the piano. In the past 150 years there is no musical instrument which has so completely absorbed the inventive faculty of man as the piano.

Venus of Milo.

The Venus of Milo, or Melos, is in the gallery of the Louvre, at Paris. This statue is thought to be the work of Alexandros, the son of Menides of Antiocheia, or one of those sculptors who are called Asiatic Greeks. It is said that the base of this statue, with the name of the artist upon it, was destroyed for the purpose of deceiving the king of France into the belief that it is more ancient than it really is. It was discovered in 1820 by a peasant in the town of Milo, on the island of the same name. It was in a niche of a wall which had long been buried. The Marquis of Rivere, who was French Ambassador at Constantinople, purchased it and presented it to King Louis XVIII., who placed it in the Louvre. It is made from two blocks of marble, joined above the drapery which envelops the legs. As it now stands it has the tip of the nose and the foot, which projects beyond the drapery, as they have been

restored by modern artists. It represents a goddess rather than a beautiful woman.

What are "Morganatic" Marriages?

The term "morganatic," applied to marriages, had its origin in an ancient custom by which the bridegroom on the day after the wedding gave his bride a morning gift—morganabe. In the case of a nobleman wedded to a wife of low estate this morning gift constituted the wife's portion, or endowment, and from this gift such marriages took the name morganatica. The German law, continuing this tradition, allows the members of the reigning house and certain noble families to contract marriages in all respects legal and valid, except that it gives to the partner of lower birth and to the children no share in the rank, titles, and distinctions of the privileged house. Such marriages have often been eminently happy ones.

Colored Snow Storms.

Colored snow storms were recorded as long ago as the sixth century, and a shower of red hail is said by Humboldt to have once occurred in Palermo. In Tuscany, on March 14, 1813, there fell hail of an orange color. In 1808 red snow fell to a depth of over five feet in Carniola, Germany. The storm of colored snow was followed by one of the regulation color, and the effect produced by the separate layers of red and white, which were perfectly distinct, was very peculiar. A portion of the scarlet snow was melted in a vessel and the water evaporated, when a fine, rose-colored, earthy sediment was found at the bottom. Snow of a brick red hue fell in Italy in 1816, and in the Tyrol in 1847. In the first volume of Kane's "Arctic Exploration" it is stated that when the ship passed the "Crimson Cliffs of Sir John Ross" the patches of red snow from which they derive their name could be seen at a distance of fully ten miles.

A Name for a Big Yarn.

A "roorback" is a term applied to a fictitious story, particularly to a campaign lie. The term is taken from

the name of Baron Roorback, who published tales of adventure early in this century. The baron's name has thus become a synonym for any large story.

A Nice Distinction.

In regard to the question of preference as between bachelor and benedicts, it is always pleasant to revert to the delicate distinction set forth by General Lafayette in a conversation during his second visit to America. He shook hands with 8000 men in one day, says the legend, and used but seven words in all. He asked each one: "Are you married?" If the answer was yes, he exclaimed: "Fortunate fellow!" If no, "Lucky dog!" After a long levee, a friend asked how the general could reconcile his congratulations to wedded and single men alike. The Frenchman laughed, and answered: "Why, my dear boy, can you not perceive the vast difference between a lucky dog and a fortunate fellow?"

How to Reckon Tonnage.

The method of reckoning a vessel's tonnage, carpenter's measurement, is as follows: For a single deck vessel, multiply the length of keel, the breadth of beam, and depth of hold together, and divide by ninety-five. For a double deck vessel, multiply as before, taking half the breadth of beam for the depth of the hold, and divide by ninety-five.

Muscles of an Elephant's Trunk.

The elephant has more muscles in its trunk than any other creature possesses in its entire body, their number being, according to Cuvier, no less than 40,000; while the whole of a man's muscles only number 527. The proboscis or trunk of the elephant which contains this vast quantity of small muscles, variously interlaced, is extremely flexible, endowed with the most exquisite sensibility, and the utmost diversity of motion.

Character the Key to Success.

Two fundamental psychological elements to be always studied among any people are character and intelligence.

Character is infinitely more important to the success of an individual or a race than intelligence. Rome, in her decline, certainly possessed more superior minds than the Rome of the earlier ages of the republic. Brilliant artists, eloquent rhetoricians, and graceful writers appeared then by the hundred. But she was lacking in men of manly and energetic character, who may perhaps have been careless of the refinements of art, but were very careful of the power of the city whose grandeur they had founded. When it had lost all of these, Rome had to give way to peoples much less intelligent, but more energetic. The conquest of the ancient, refined, and lettered Græco-Latin world by tribes of semi-barbarous Arabs constitutes another example of the same kind. History is full of such.—G. LE BON.

The Growth of Trees.

In the parish of Winfarthing, England, are two magnificent oak trees, one of which is known as the "Winfarthing oak;" the other is little inferior to it in magnitude, but appears to have been generally passed over in favor of the more celebrated tree first mentioned. These trees were inspected by Robert Marsham, F.R.S., the friend and correspondent of Gilbert White, and a great agriculturist, in the year 1744; and he has left in his diary accurate measurements of both.

The larger tree measured at that time 38 feet 7 inches in circumference, and the smaller just 30 feet. In the year 1874, when these trees were measured according to Marsham's method, the larger tree was just 40 feet in circumference, and the smaller 30 feet. It will thus be seen that one tree had increased 17 inches in 130 years, whereas the other had remained *in statu quo*.—*London Standard*.

Nevada's Deep Mines.

In Nevada electricity runs the very deep mines. The men who work 3100 feet deep live about two years, notwithstanding the fact that they work only two hours per day. They get more pay than eight hour men. They work fifteen minutes, and rest forty-five.

Commercial Proverbs.

Men who have company must have money.

Some men carry too much sail; some too little.

Great men, when analyzed, usually prove to be very small men.

Men trade on borrowed reputation as they trade on borrowed capital.

Good intentions will not help a man on his way if he takes the wrong road.

The history of trade shows that failure is the rule and winning the exception.

Money moves the crops that make the great west the granary of the world.

One man is over-nice and becomes fussy; another is careless and loses his trade.

The same great lesson of failure is taught in the professions that is taught in trade.

One man ruins his business because he is a sloven; another ruins it because he is a fop.

Men neither win nor lose in the same way. One fails and is smart; another wins and is dull.

The merchants of old Tyre were "princes, and their traffickers were the honorable of the earth."

Integrity, honor, and piety do not save a man from disaster if he fails to observe the law of success.

Talent and temper often go together. It is rare to find a sharp, bright man that is a courteous man.

The law of success is as certain as the law of the tides. All must obey these laws if they would prosper.

A diamond with a flaw is better than a pebble without. But the flaw adds nothing to the value of the diamond.—*Exchange.*

Some Historical Noses.

Lycurgus and Solon had noses six inches in length.

The immortal Ovid, surnamed Naso, had a bottle nose.

Scipio Nasica derived his name from his very prominent nose.

Alexander the Great had a large nose, so had Riche-lieu and Cardinal Wolsey.

In the medals of Cyrus and Artaxerxes the tips of their noses come clear out to the rim of the coin.

Antiochus VIII. was called "Grypus," because his nose was as big and hooked as a vulture's beak.

Washington's nose was the true aquiline, indicative of great firmness, patience, and heroism.

Mohammed's nose was so curved that the point seemed to be endeavoring to insert itself between his lips.

Julius Cæsar's nose was also of the aquiline type, characteristic of patient courage and heroic firmness.

Numa's nose was six inches in length, whence he obtained his surname of Pompilus, as being the owner of a superlative nose.

The noses of Shakespeare, Bacon, Franklin, and Dr. Johnson had wide nostrils, betokening strength of thought and love for serious meditation.

Napoleon I.'s nose was exquisitely chiselled, sculpturesque in mold, form, and expression. He was wont to say: "Give me a man with plenty of nose."

Great Frederick's nose was so prominent that Lavater offered to wager his reputation that blindfolded he could tell it out of 10,000 other noses by simply taking it between his thumb and forefinger.

The Boomerang's Curious Flight.

Some German scientists, seeking to discover the secret of the boomerang's curious flight, caused a party of Australian natives to give an exhibition of boomerang throwing at Munster. The instruments used were of two sizes, the larger being a slender crescent about two feet long, two and a quarter inches wide, and a quarter of an inch thick, made of an extraordinary heavy Australian iron work. This boomerang was jerked up into the air about 100 yards, when it flew straight away, then turned to the left and returned in a curved line back to the thrower, whirling around constantly and whizzing unpleasantly. One badly directed projectile fell through a spectator's hat with a cut as clean as that of a razor. A manufacturer, who has made some 11,000 toy boomerangs, believes that the mystery of shape lies in the sharper curvature in the middle, with

unequal length of the two arms, which must be made of equal weight by unequal thickness. The peculiarity of motion is due to the difference in the length of the arms, which diverges the curve of rotation from the circular.—*New Orleans Pieuyune.*

Rocks of the Earth.

Granite is the lowest rock in the earth's crust. It is the bed rock of the world. It shows no evidence of animal or vegetable life. It is from two to ten times as thick as the united thicknesses of all the other rocks. It is the parent rock from which all the other rocks have been either directly or indirectly derived.

It is true that it does not contain lime, while limestones do contain that substance, but it furnishes the foundation for vegetable growth. Vegetable growth furnishes the foundation for animal growth, and animal growth brings lime into existence. It is claimed by scientists that all the lime in the world has, at some time, been a portion of some animal. The same atom of lime has some time, no doubt, been a portion of many different animals, and possibly of human beings also.

The First Profile.

The first profile taken was that of Antigonus, in 330 B. C., who, having but one eye, his likeness was so taken to conceal the deformity.

Ancient Alphabets.

The ancient Arabic alphabet consisted of twenty-four letters, to which four more have since been added. The Turkish consists of thirty-three, the Russian of thirty-nine, the Spanish of twenty-seven, the Italian of twenty, the Latin of twenty-two, and the French of twenty-three letters.

The Meanings of Hebrew Names.

A mode of bringing to notice the barbarian stage of the Israelites at the time of consideration is to translate into English familiar personal names from the Old Testament, such as the Dog, the Dove, the Hyena, the

Lion's Whelp, the Strong Ass, the Adder, and the Running Hind. This brings into immediate connection the English translation of Indian names, such as Big Bear, White Buffalo, Wolf, Red Cloud, Black Hawk, Fox, Crow, and Turtle. Such Israelitish names were probably of Gentile origin, that is, from the clan or gens, for the Israelites were surely Gentiles in the true sense, although later they abjured the charge. But individuals among them may also have adopted such names because they could be represented objectively. Such selection is made by some Indians apart from their totemic designation. Indians possess very few names that cannot be represented in pictographs; and the very large topic of tattooing is connected with this device antecedent to writing. The compilers of the Old Testament probably desired to break down a former practice, as is shown in Leviticus xix. 28: "Ye shall not print any marks upon you." And there are other similar indications.—GARRICK MALLERY in *Popular Science Monthly*.

Germination of Seeds.

The degree of heat necessary to the germination of seed varies in different species and depends upon various circumstances, such as their character and composition and the climate to which the plants were indigenous. In a general way it may be stated that the most favorite temperature of the soil for germination of seeds of plants in cold climates is from 50 to 55 degs.; for those of greenhouse plants, at from 60 to 65 degs.; and for those of the torrid zone, at from 70 to 80 degs. Of seeds sown by the truck gardener, those of the onion germinate at perhaps the lowest temperature, other conditions being favorable.

Plants Protected by their Juices.

When a drop of the juice of sorrel, garlic, saxifrage, or nasturtium is put upon the tegument of a snail, the animal manifests pain and exudes abundance of its mucous secretion; yet it is not thus affected by a drop of water. When snails avoid plants marked by such

juices, we have a right to regard the plants as defended by a chemical armor.

Plants containing perceptible tannin are disagreeable to nearly all animals. Only swine will eat acorns as if they regard them as food. Other animals reject them, except when they cannot get anything else. Leguminous plants containing tannin in weak proportions are eaten by horses and cattle, but snails are not fond of them. But the garden snail, which lets fresh clover alone, will eat it freely after the tannin has been extracted with alcohol.—HENRY DE VARIGNY.

Immense Gains in Force.

Compare a galley, a vessel propelled by oars, with the modern Atlantic liner, and first let us assume that prime movers are non-existent and that the vessel is to be propelled galley fashion. Take her length at some 600 feet, and assume that place be found for as many as 400 oars on each side, each oar worked by three men, or 2400 men; and allow that six men under these conditions could develop work equal to one horse power; we should have 400 horse power. Double the number of men and we should have 800 horse power, with 4800 men at work, and at least the same number in reserve, if the journey is to be carried on continuously. Contrast the puny result thus obtained with the 19,500 horse power given forth by a large prime mover of the present day, such a power requiring, on the above mode of calculation, 117,000 men at work and 117,000 men in reserve; and these to be carried in a vessel less than 600 feet in length. Even if it were possible to carry this number of men in such a vessel, by no conceivable means could their power be utilized so as to impart to it a speed of twenty knots an hour, weighing as it would some 10,500 tons gross.—SIR FRED. BRAMWELL.

Brain Impressions.

It is computed by scientists that, since one-third of a second suffices to produce an "impression," in 100 years a man must have collected in his brain 9,467,280,000 copies of impressions; or, if we take off one-

third of the time for sleep, 6,311,520,000. This would give 3,155,760,000 separate waking impressions to the man who lives to the age of 50 years. Allowing a weight of four pounds to the brain, and deducting one-fourth for blood and vessels and another fourth for external integument, it is further computed that each grain of brain substance must contain 205,542 traces or impressions.

The Cause of Yawning.

Yawning is commonly caused by temporary deficiency of the air supply in the lung. When the body is wearied and in a sleepy condition the process of respiration is sometimes involuntarily suspended for a few seconds. Nature at once, however, comes to the rescue, and by setting up a spasmodic action in the muscles of the mouth, throat, and chest, produces a deep inspiration, which compensates for the stoppage of the breathing, and is known as a yawn. There is, however, another cause which produces what may be called the yawn sympathetic—an involuntary tendency to imitation.

Prevention of Sleeplessness.

Among devices found to control insomnia, *Medical Register* mentions the following:—The sound of water dropping slowly and steadily into a pan occupies and quiets the brain. This is the principle on which we are told to count sheep going over a fence, and do any sort of automatic thinking, if such an expression be permissible. A former victim of insomnia cured himself by keeping the eyeballs looking down. Another kept rolling them in one direction with good effect, repeating, meanwhile, a certain word or number. Long inspirations by the mouth and expirations by the nostrils, conceiving the air as currents, has been found effectual. All intellectual exercise should be stopped half-an-hour before bedtime. A tumbler of milk, instead of the usual copious draughts of water, taken during sleeplessness, will often help to overcome it.

Railway Signals.

One pull of the bell cord signifies "stop."
Two pulls mean "go ahead."

Three pulls mean "back up."

One whistle signifies "down brakes."

Two whistles signify "off brakes."

Three whistles mean "back up."

Continued whistles indicate "danger."

Short rapid whistles, "a cattle alarm."

A sweeping parting of the hands on a level with the eyes means "go ahead."

A slowly sweeping meeting of the hands over the head signifies "back slowly."

A downward motion of the hands, with extended arms, signifies "stop."

A beckoning motion with one hand indicates "back."

A red flag waved up the track indicates "danger."

A red flag by the roadside means "danger ahead."

A red flag carried on a locomotive signifies "an engine following."

A red flag raised at a station means "stop."

A lantern swung at right angles across the track means "stop."

A lantern raised and lowered vertically is a signal to "start."

A lantern swung in a circle signifies "back the train."

Advice to a Young Man.

Never whip your brain. All high pressure is dangerous. Study to think as quietly and as easily as you breathe. Never force yourself to learn what you have no talent for. Knowledge without love will remain a lifeless manufacture, not a living growth. Be content to be ignorant of many things that you may know one thing well, and that the thing which God especially endowed you to know. It requires fire to fuse the materials of thinking, no less than to melt the iron in the foundry.

But remember this, however strong you may be, physically, to strike a blow, and however sharp, intellectually, to recognize a fact and discern a difference, your success in the game of life depends on the serious culture which you give to the third formative force in human character, your moral nature; and of the rightful supremacy of this element a comprehensive ex-

pression is found in the right simple word, love. On this all prophets, poets, and philosophers are agreed.—
 PROF. BLACKIE.

National Floral Emblems.

The fleur-de-lis is the emblem of happy France.
 The violet is the national emblem of Athens.
 The shamrock is emblematic of the Emerald Isle.
 The lordly sugar maple is Canada's floral emblem.
 The fragrant linden is Prussia's national emblem.
 The mignonette is emblematic of Saxony's nationality.
 England's national flower is the beautiful rose.
 The sacred lotus of the Nile is Egypt's national emblem.
 The flower of the pomegranate is Spain's national emblem.
 Balmy Italy's choice for a national emblem is the graceful lily.
 Germany has its national emblem in the shape of the cornflower.
 The leek, worn in the olden times by Welshmen, is Wales' national emblem.
 The sturdy thistle is well chosen as emblematic of Scotch nationality.

Pen Squibs.

The primitive pen was a chisel and the tablet was rock.
 Later on a pencil made of camel's hair was used in the far east and also in Egypt.
 The date of the quill pen is placed at A. D. 553, though many scholars think it was of later origin.
 The Hollanders made the best quill pens, and as much as \$10.00 in value was commonly given for a single quill.
 When parchment and papyrus came into use something more flexible was necessary, so pens were made of reeds.
 In Persia, Greece, and Syria the pen was a stylus made of metal, bone, or ivory, with one end sharpened to a point.
 At the 1890 census there were sixteen gold pen fac-

tories in the United States, and they employed 254 hands, producing \$480,000 worth of goods.

The glass pen was simply the old stylus with grooves down the sides to hold the ink, but they were clumsy, untidy, and so easily broken that they were practically worthless.

In 1803 a man named Wise made what he called a barrel pen. It was bent or grooved like the pens of the present day, and was the first pen ever made of metal in the shape suggested by the goose quill, all the others having been flat.

In 1820 Joseph Gillott, who had a factory where toys were made, fashioned a steel pen which commanded instant favor, and Mason, Mitchell, and Perry soon followed him. These were all Englishmen, and their product soon became popular, though their price was \$35.00 a gross wholesale.

Boring into the Earth.

The deepest bore hole in the world, claimed at different times for a number of places, is, according to latest accounts, at Schladebach, a small German village near Leipzig. It measures 1748.4 meters, or about 5735 feet. The time expended in boring to this depth amounted to six years, at a cost of \$50,000. A peculiar experience encountered in connection with this and other deep holes in different parts of Germany is, according to Uhland's *Wochenschrift*, that the observed temperatures, while steadily increasing with the depth, show a smaller ratio of increase in the lower strata.

Dwarf Stories.

General Joseph Totman, of Maine, is a prosperous merchant; he is 35 years old, and stands three feet four inches in height.

Eliza Nestel, called the "Fairy Queen," is the exact height of her brother, Commodore Foote. She is 42 years old.

The smallest of men dwarfs is F. Flynn, of Greene, N. Y., better known as General Mite. He stands a little over two feet in height.

Richard Gibson, miniature painter and court dwarf to Charles I. lived to be 75, and his dwarf wife, Annie Shepherd, to be 85.

The Murray triplets—John, Joseph, and James—were celebrated Lilliputian attractions. They were born in New York in 1863.

Major Stephens, an American dwarf, first appeared before the public over fifty years ago. He died at the advanced age of 60 years.

Admiral Dot, the clever little singer and dancer, is the handsomest of all dwarfs. He is a Hebrew, and was discovered by Barnum in California.

The Italian midgets—Jean Petit and Picalomi—are brothers. They first appeared in America in 1869, and made some reputation and money as clever performers.

Two of the prettiest and most exquisite little ladies who have ever been exhibited are the Adams sisters, Lucy and Sadie. Their home was Martha's Vineyard, Mass.

Thomas Bonham and his two sisters are Lilliputians of fine education, and reside in Pennsylvania. They decline to go upon exhibition, scorning to be ranked as freaks.

Mr. Nestel, publicly known as Commodore Foote, was born in Fort Wayne, Ind., 52 years ago. His weight is about fifty pounds, and he is about the size of a child four years old.

General Tom Thumb's widow was married to Count Primo Mogri, an Italian midget, in New York city, April 6, 1885. The second husband has a dwarf brother known as Baron Littlefinger.

Count Bowowlaski was known as one of the wonders of the world for his smallness of stature, combined with high intellect. He was born in 1739, and was thirty-five inches high when he died, in 1837, at the age of 98.

Luzie Zarate, a Mexican, is the smallest dwarf now before the public. She is exhibited by her father, a man of more than ordinary development. She is 31 years old, weighs $9\frac{3}{4}$ pounds, and stands about twenty-four inches in height.

Sir Geoffrey Hudson, dwarf and diplomatist to

Charles II., expired at 63, and the little gentleman's life was shortened by his incarceration on suspicion of connivance in a treasonable plot in the Gate House at Westminster, where he died.

The most famous modern dwarfs were Charles S. Stratton, better known as General Tom Thumb, who was born in 1837, and died July 15, 1883; Lavina Warren, who married Stratton; her sister, Minnie Warren, who was the wife of Major E. Newell, and George Washington Morrison Nutt, of Manchester, N. H., better known as Commodore Nutt, who was born April 1, 1845, and died in New York city, May 25, 1881.

The Walters dwarf family are residents of Virginia, Major Hiram Walters was born April 26, 1810, and was three feet six inches tall. Captain William Walters was born on April 18, 1824, and was three feet seven inches in height. Miss Roxana Walters was born Dec. 25, 1815, and was a trifle over three feet in height. Miss Kate Walters was born July 20, 1818, and was about the height of Roxana.—*St. Louis Globe-Democrat*.

The Brain Weight of Man and Woman.

On the much discussed topic of brain weight, *Medical Record* makes a number of interesting remarks, among them the following:

The average weight of the male brain is 49½ ounces; of the female, 44 ounces—a difference of over 5 ounces. Woman's brain has a higher specific gravity. The man has a larger brain in proportion to stature (Marshall), but woman's brain is larger in proportion to her weight.

The difference between the weight of brain in man and woman increases with civilization, and is most marked in the Caucasian races.

The greatest sexual difference as regards brain weight is found at birth, when the female brain weighs 347 grammes, and the male 393, or about one-sixth more, while the total weight of the male infant is about one-fifteenth more than that of the female. The female brain begins to lose weight after the age of 30, that of a man not till ten or fifteen years later. The loss in woman is very slight, however, and she keeps up

a high brain weight much later (till 70) than man, so that in old age the difference in brain weight is reduced to its minimum, or a little over 3 ounces.

When a brain falls to a weight of $37\frac{1}{2}$ ounces in man, or $32\frac{1}{2}$ ounces in a woman, it is called microcephalic, and the rule is that below these limits idiocy exists. There is just 5 ounces less amount of brain matter, however, needed to keep a woman from idiocy than is needed for a man. Hence we may reasonably suppose that this, which is nearly the average difference in brain weight of the sexes, represents, not tissue necessary for mentality, but corresponds with the smaller muscular mass and shorter stature of woman.

Statistics are Funny.

A clever hand at figures says: 12,000 vehicles, a quarter of them omnibuses, pass through the Strand, London, in the day, and the narrowness of the street causes each of their 63,000 occupants to waste on an average three minutes. The total waste of time equals 3,150 hours, the money value of which, at the very moderate rate of 25 cents an hour, is \$787.50 per day, or over \$235,000 per annum.

Roman Amphitheatres.

The Colosseum was begun by Vespasian, emperor of Rome, who died A. D. 79. It was completed by his son, Titus, who dedicated it, or inaugurated it, as we say nowadays of theatres and President, in A. D. 80, with splendid games and fights, in which it is said that 5000 animals and a large number of gladiators were killed. The Flavian amphitheatre, as it was called, is 1641 feet around; it is 615 feet long, 510 feet broad, and is in the form of an ellipse. It seated 87,000 persons. The marble with which it was originally lined has been used to build the palaces of modern Rome. More than 400 varieties of plants have been found in the ruins.

National Forms of Greeting.

"How do you do?" That's English and American.
"How do you carry yourself?" That's French. "How

do you stand?" That's Italian. "How do you find yourself?" That's German. "How do you fare?" That's Dutch. "How can you?" That's Swedish. "How do you perspire?" That's Egyptian. "How is your stomach? Have you eaten your rice?" That's Chinese. "How do you have yourself?" That's Polish. "How do you live on?" That's Russian. "May thy shadow never be less." That's Persian—and all mean much the same thing.

The Ink of Antiquity.

According to the Roman naturalist Pliny and other authors, the basis of the ink used by ancient writers was formed of lampblack or the black taken from burnt ivory and soot from furnaces and baths. Some also have supposed that the black liquor which the cuttlefish yields was frequently employed. One thing is certain, that whatever were the component ingredients, from the blackness and solidity in the most ancient manuscripts, from an inkstand found at Herculaneum, in which the ink appears as thick as oil, and from chemical analysis, the ink of antiquity was much more opaque, as well as encaustic, than that which is used in modern times. Inks of different colors were much in vogue. Red, purple, blue, and gold and silver inks were the principal varieties.

The red was made from vermilion, cinnabar, and carmine; the purple from the nurex, one kind of which, called the purple encaustic, was appropriated to the exclusive use of the emperors. Golden ink was much more popular among the Greeks than among the Romans. During the middle or dark ages the manufacture both of it and of silver ink was an extensive and lucrative branch of trade, and the illuminated manuscripts which remain are a striking proof of the high degree of perfection to which the art was carried. The making of the inks themselves was a distinct business; and another connected with it, and to which it owed its origin, was that of inscribing the titles, capitals as well as emphatic words, in colored and gold and silver inks.

The Snow Plant.

One thing that never fails to interest all who see it, when it is found on the mountain heights of the Sierras, is the snow plant, known to botanists as the *Sarcodes sanguinea*, meaning blooded flesh. No flesh or blood could be as exquisitely beautiful; imagine a rosy and snow-tinted, crowded hyacinth, from eight to twenty inches in height, every miniature bell wound about by a rosy and frosted silver ribbon, all topped by a huge head of asparagus in hoar frost and silver. The frosted papilla is very marked on every sepal and bract. Though the whole translucent spike is flushed with rose and carmine, the petals are the deepest and most brilliantly colored parts of the flower, which is five parted, and each open one showing slightly the stamens and pistils.

Concerning the Ears.

The thin angular ear is said to denote bad temper and cruelty.

Small and thin ears usually denote delicacy and refinement.

As age increases, the ear becomes more angular and marked.

People with musical tastes generally have large and prominent ears.

Abnormally large thick ears are associated with a sensual and coarse nature.

Great philosophers and statesmen have been noticed to have large and sloping ears.

The ear of the great Napoleon was rather small, well formed, and with a curved lobe.

The Marquis of Salisbury's ear is massive and well proportioned, and has a sloping position.

Mr. Gladstone's ear had a curved hanging lobe, laid close to the head, and had a sloping position—*Pall Mall Gazette*.

In what Month was she Born?

Here is an astrologer's table from which you may learn your wife's characteristics according to the month in which she was born:—

If in January, a prudent housewife, given to melancholy, but good tempered.

If in February, a humane and affectionate wife and tender mother.

If in March, a frivolous chatterbox, somewhat given to quarreling.

If in April, inconstant, not very intelligent, but likely to be good looking.

If in May, handsome, amiable and likely to be happy.

If in June, impetuous, will marry early and be frivolous.

If in July, passably handsome, but with a sulky temper.

If in August, amiable and practical and likely to marry rich.

If in September, discreet, affable and much liked.

If in October, pretty and coquettish, and likely to be unhappy.

If in November, liberal, kind, and of a mild disposition.

If in December, well proportioned, fond of novelty, and extravagant.

A Simple Remedy.

You never hear of a man dying in France while under the influence of chloroform. Several years ago a patient in a Paris hospital was undergoing an operation, when the chloroform seemed to be having too great an influence over his heart. An old nurse from the country who was present raised his feet and lowered his head. In a few seconds the pulsation became normal, and this simple remedy or precaution has been adopted in hundreds of cases since, and always with success.—*St. Louis Globe-Democrat.*

Superstitions About Gems.

Heliotrope confers the gift of prophecy and long life.

Amber wards off erysipelas and all soreness of the throat.

The Neapolitans still wear amulets of coral to avert the evil eye.

An agate is said to quench thirst and to turn away storm and lightning.

The beryl was once supposed to increase conjugal love and to cure distemper and leprosy.

According to modern etiquette, the amethyst is the only stone which may be worn during mourning.

Turquoise, according to Boethius, especially protects against falls, and heals differences between man and wife.

Sard, cornelian, and the stone bezoar, mentioned by Lord Lytton, especially staunch all flux blood and cure serpents' bites.

Topaz—the gold stone of the ancients—was much valued by them for medicinal purposes, for dispelling enchantment and for calming frenzy.

The kingly diamond, which has become the appanage of aristocracy, is the symbol of justice, innocence, constancy, and impassivity of fate.

The now humble garnet and the oblong carbuncle share the favors of their parent, the ruby, the latter of the two being famous for its light giving properties in the dark.

The sapphire, so useful once to the necromancer, or the holy stone, as it was called, was among the ancients the emblem of chastity and securing the granting of all prayers. The pagans dedicated it to Apollo.

The ruby, the live coal of the Greek, is not less emblematical and potent, and the Brahmin traditions speak wonders of the abodes of gods, lighted by enormous rubies and emeralds.

The veneration of the Peruvians for the green emerald, dedicated to Mercury by the ancients, is well known. and the worshippers of Mantu still believe that the mines whence are extracted all the daughters of the mother gem are guarded by terrible genii, dragons, and other one-eyed people.

The peerless, starry opal, that child of love, as it has been called, far from being an unlucky stone, as it is now supposed to be, was once believed by Albertus Magnus, Marbodeus, and others, to rejoice the heart of its owner by rendering him lovable and bestowing upon him the gift of invisibility.

The Koh-i-Noor was for centuries the talisman of India; and when, years ago, the governor of Borneo offered \$500,000, two equipped war brigs, and numbers of cannon for the famous stone of Matan, the rajah refused, on the plea that the fortunes of his family were connected with it, and that the water in which it was dipped cured all diseases.

Superstitions About Marriage.

Wednesday and Thursday are especially lucky in Bulgaria.

Rice is still thrown after the newly married couple in many countries.

The last day of the year is a very popular time for espousals in Scotland.

The bees are informed of a wedding in Derbyshire, England, and their hives decorated.

A rainy day is as unlucky for a wedding in India as it is in most European countries.

Whoever rises first after the benediction will, it is said, be the master of the household.

An Italian proverb says: "Friday and Tuesday, neither marry nor set out on a journey."

It would be considered extremely unlucky in England for the bride to wear green during the ceremony.

In modern Greece neither bride nor groom will enter the house until promised presents by the groom's father.

In the north of England, the wedding cake is cut into bits, passed through the ring, and thrown among the crowd.

In Russia, the bride must avoid eating the wedding cake on the eve of the ceremony, or she will lose her husband's love.

A currant bun is broken over the bride's head in Scotland, and a can of beer is poured over the bridegroom's horse in Esthonia.

Many people wed on the moon's increase, and sea-faring people choose a flowing tide. Athenians selected the time of new moon.

The German maiden floats little silver plates on which

avored names are inscribed, in a pail of water. The one that approaches her own is the destined groom.

The sneezing of a cat on the eve of a marriage was considered a good omen in the middle ages, but the howling of a dog then, as now, was especially ominous.

In Brittany, peasant girls visit certain shrines and pray to be married during the year. Some stick pins into the knees of the saintly image, to be treasured as charms.

In the Vosges mountains, the young women who dress the bride strive as to who shall stick the first pin in the bridal robe, as the successful one will be married the same year.

In Catholic countries, shrines of the Virgin or particular saints are diligently visited and certain rites performed to insure the consummation of hopes and wishes as to marriage.

The Romans deemed it an ill omen to meet certain animals on the way to the ceremony. A priest, hare, dog, cat, lizard, or serpent was unlucky, in the middle ages; a wolf, toad, or spider, lucky.

In Brittany, if the wife seeks to rule, she must take care that the ring, when placed on her finger, shall slip at once to its place on her finger, instead of allowing it to stop at the first joint.

Friday is considered an unlucky day to wed in most countries, but in Scotland it is the lucky day of the week, by far the majority of weddings being celebrated on that day—sacred to Venus and Freya.

In the north of England, the bridegroom gives a ribbon to each of the young men as he comes out from the church. These run a race to the house, and the one arriving there first may claim a kiss from the bride.

In France, during the Middle Ages, a ring of straw, or one made from a horse shoe nail, was placed on the bride's finger, and some had as many as five such rings. The couple also stood on a ring during the ceremony.

In Greece, the groom is lightly sprinkled with water on leaving the home for the ceremony. The bride must visit the oven in company with her father or a near relative, to salute it, and obtain leave to set out.

Care should be taken lest a dog run between the bride and groom during the ceremony in the Scotch Highlands, and the groom's left shoe must be left without buckle or latchet, to prevent witches from having any influence over him.

The Swedish bride tries to see the groom before he sees her, to gain the mastery. She places her foot before his during the ceremony and sits in the bridal chair first. She must stand near the groom, so that no one can come between them.

It is deemed specially ominous in Scotland for a lump of soot to fall down and spoil the breakfast on the day of the wedding, for a bird to die in its cage, or for a bird to sit on the window sill and chirp long. The bride must carefully avoid breaking a dish on that day.

There is a curious custom in modern Greece. The groom is shaved by a young man whose parents are both living, while the young girls and young men sing, "Razor, silvered and gilt, shave tenderly the young man's cheeks, don't leave a hair, lest the parents of his bride think him ugly."

A Zoological Enigma.

The axolotl, an amphibian which forms a part of the food supply of Mexico, is a very singular creature. It grows to a length of about a foot, and has four legs, a newt-like tail surmounted by lungs and gills. While it seems to be more fish than reptile, some naturalists have supposed it to be the larva or tadpole of a gigantic batrachian that has never been seen in the adult state. An English observer, who has found the animal capable of living entirely in water or entirely on land, has had a live specimen in a dry place during the autumn, and believes that it is gradually losing its gills and becoming otherwise more terrestrial in character.

Superstitions of Brittany.

A fried mouse is a specific for small-pox.

To meet a sow with a litter of pigs is very lucky.

A cinder bounding from a fire is either a purse or a coffin.

Cattle give warning of an earthquake by their uneasiness.

It is unlucky if a hare runs across the road in front of you.

A spider worn in a nutshell round the neck is a cure for fever.

Crickets bring good luck to a house; it is unlucky to kill them.

Pigs running about with straws in their mouths foretell rain.

Dogs give warning of death by scratching at the door of a house.

It forebodes evil to the child if any one rocks its cradle when empty.

To eat the food which a mouse has nibbled will give a sore throat.

If a milkmaid neglects to wash her hands after milking, her cows will go dry.

The clicking or tapping of the beetle, called the death watch, is an omen of death.

When porcupines are hunted or annoyed they shoot out their quills in anger.

If you count the number of fish you have caught you will catch no more that day.

If a crow croaks an odd number of times it means foul weather; if an even number, fine.

If a rat or a mouse, during the night, gnaw on clothes, it is indicative of some impending evil.

Three hairs taken from the "cross" on an asses back will cure the whooping cough, but the ass will die.

When cats wash their ears more than usual rain is at hand. The sneezing of a cat indicates good luck to a bride.

When ants are unusually busy, foul weather is at hand, and ants' eggs are an antidote to love (this is not a joke).

If bees swarm on a rotten tree a death in the family will occur within a twelvemonth. It is unlucky for a stray swarm of bees to alight on one's premises.

If a swallow builds on a house it brings good luck. To kill a swallow is unlucky. When swallows fly high it will be fine weather, and *vice versa*.—*Exchange*.

Queer Articles of Food.

In Arabia the horse is a favorite article of food.

In Egypt various portions of the camel are eaten with relish.

The inhabitants of Cochin China prefer rotten eggs to fresh ones.

In India the flesh of the elephant is considered particularly fine.

In South America the inhabitants eat serpents, lizards, and centipedes.

The pariahs of Hindostan contend with the dogs, vultures, and kites for putrid carrion.

The Chinese taste is for cats, dogs, rats, and serpents, while bears' paws and birds' nests are dainties.

In the West Indies a large caterpillar found on the palm tree is esteemed a luxury, while the edible nests of Java swallows are so rich a dainty that the ingredients of a dish will cost as much as \$75.00.

The women on the Magdalena river, while shaping earthen vessels on the potter's wheel, put large lumps of clay in their mouths. In the same place it is often necessary to confine the children to prevent their running out to eat earth immediately after a fall of rain.

A curious taste prevails in many parts of the world for clay. It is eaten in all the countries of the torrid zone, but the practice is also observed in the north, as hundreds of cart loads of earth containing infusoria are said to be annually consumed by the country people in the most remote parts of Sweden, and in Finland a kind of earth is occasionally mixed with bread.

Consumption of Rice.

Rice, is no doubt, the most extensively used article of food the world over. Hundreds of millions of people chiefly subsist on it, and its consumption is constantly increasing. It is the principal diet of at least one-third of the human race, forming the chief food of the native populations of India; China, Japan, Madagascar, many parts of Africa, and in fact of almost all Eastern nations. The Burmese and Siamese are the greatest consumers of it. A Malay laborer gets through fifty-

six pounds monthly; a Burmese or Siamese forty-six pounds in the same period. The Eastern nations also chiefly obtain their beverages from rice, which is the principal grain distilled in Siam, Japan, and China. Saki, or rice beer, is produced in Japan to the extent of 150,000,000 gallons annually. Although rice is such a universal article of food, it is not so nourishing as wheat or some other grains. More than nine-tenths of its substance consists of starch and water; consequently it forms more fat than muscle.

Some Authors' Handwriting.

Longfellow's handwriting was a bold, frank, back hand.

Charlotte Bronte's handwriting appeared to have been traced with a needle.

Thackeray's penmanship was marvelously neat, but so small that it could not always be read with comfort by any but microscopic eyes.

Joaquin Miller's writing is illegible in itself, and is rendered doubly difficult by the fact that the author's spelling is of the most eccentric kind.

Bryant's was aggressive and pleasing to the eye, but had no poetical characteristics; and Keats' was rather too clerical for the most dainty of modern poets.

Napoleon's handwriting was not only illegible; it is said that his letters from Germany to Josephine were at first taken for rough maps of the seat of war.

Captain Marryat's handwriting was so fine that whenever the copyist rested from his labors he was obliged to stick a pin where he left off in order to find the place again.

Carlyle reconstructed with pen and gall what his mind and eyes had seen and in the patient but crabbed and oddly emphasized handwriting much of his temperament may be read.

Among the authors of the past, Gray, Moore, Leigh Hunt, Walter Scott and Buchanan Read possessed a pleasing, running hand which failed to express any decided individuality.

Charles Dickens' writing was very minute, and his

habit of writing with blue ink upon blue paper, with frequent interlineations and cross lines, make his copy a burden alike to compositor and proof-reader.

Byron's handwriting was a mere scrawl, and his additions in the proof were generally greater than the original text. To one poem, which contained only 400 lines in the first draft, 1000 were added in proofs.

A reckless compositor one day went to Jules Janin and besought him to decipher some pages of his own manuscript. The great man replied that he would rather rewrite than attempt to read over again what he had once written.

Among living authors, Howells, Holmes, Andrew Lang, William Norris, Frederick Locker and George MacDonald, write hands that are plain and legible, and often beautiful, without any strongly distinctive characteristics.

But no penman, either American or foreign, could have been worse than Horace Greeley. "Good God," said a new compositor to whom a "take" of the editor's copy had been handed, "if Belshazzar had seen this writing on the wall he would have been more terrified than he was."

Few printers could read Balzac's copy, and those who could made an express stipulation with their employer to work at it only one hour at a time. Even after the hieroglyphics had been translated into print, the proof sheets came back more illegible than the original copy.

While having his house repaired Hon. Rufus Choate had promised to send the model for a carved mantel-piece. Failing to obtain what he wanted, he wrote to his workman to that effect. The carpenter eyed the missive from all points of view, and finally decided that it must be the promised plan; so he set to work to fashion what must have been the most original mantel-piece that ever ornamented a room.—*Lippincott's Magazine*.

All In a Half Century.

The unification of Italy.

The French revolution of 1848.

- The discovery of photography.
- The laying of the ocean cables.
- The discovery of the telephone.
- The emancipation of Russian serfs.
- The discovery of the electric telegraph.
- The establishment of ocean steam navigation.
- The overthrow of the pope's temporal power.
- The extension of Russian power into Central Asia.
- The great civil war and abolition of slavery in the United States.
- The great Franco-German war and the unification of Germany.
- The rise and fall of Napoleon III. and establishment of the French republic.
- The discovery of the sources of the Nile and Niger, and the exploration of interior Africa.
- The discovery of the Roentgen Rays.
- The Spanish-American war and the establishment of the Cuban Republic.

Carving on Peach Stones.

Properzia di Rossi, a maiden of rare beauty, great refinement, and unusual education, gave herself very early in life to the study of art. "Minute tracery" was her forte. The first work of this gifted girl was carving on a peach stone the crucifixion of our Savior—a work comprising many figures, executioners, disciples, women, and soldiers; all most remarkable for delicacy and perfection of expression, and an admirable distribution of the groups. In the cabinet of gems in the gallery of Florence is still to be seen a cherry stone on which is carved a chorus of saints, in which seventy heads may be counted.

Colors of the Roman Gods.

The gods of the Romans each had a color by which he might be designated. They were as follows:—Saturn, black or very dark blue; Jupiter is ashen grey or bright scarlet; Apollo is represented as of a deep gold color; Mars is always red, but with more of a brownish tinge than Jupiter's color; Venus' color is reddish, and Mercury is represented as a light blue.

I. H. S.

The initials I. H. S. signify, "Jesus, Men's Savior." In German these letters stand for I(esus), H(eiland), S(eligmacher), *i. e.* "Jesus, Savior, Sanctifier." In Greek, I(esous), H(emeteros), S(oter), *i. e.*, "Jesus, Our Savior." In Latin, I(esus), H(ominum), S(alvator), *i. e.*, "Jesus, Men's Savior." Brewer suggests that those who would like an English equivalent may adopt J(esus), H(eavenly), S(avior).

The Earliest Standing Army.

The earliest standing army in Europe was that of Macedonia, established about 358 B. C., by Philip, father of Alexander the Great. It was the second in the world's history, having been preceded only by that of Sesostri's Pharaoh, of Egypt, who organized a military caste about 1600 B. C. Of modern standing armies, that formed by the Turkish Janissaries was first, being fully organized in 1362. It was a century later that the standing army of France, the earliest in western Europe, was established by Charles VII., in the shape of *compagnies d'ordonnance*, numbering 9000 men. Rivalry thereupon compelled the nations to adopt similar means of defence. In England a standing army proper was first established by Cromwell, but was disbanded under Charles II., with the exception of a few regiments called the Life Guards, or Household brigade. This was the nucleus of the present army which, though practically a standing army, is not legally so, being provided for from year to year by the annual army act.

Married Twenty-Five Times.

The following extract is taken from "Evelyn's Diary," and refers to a Dutch woman who lived in the seventeenth century:—"Toward the end of August I returned to Haarlem. They showed us a cottage where they told us dwelt a woman who had been married to her twenty-fifth husband, and, being now a widow, was prohibited to marry in the future; yet it could not be proved that she had ever made away with any of her

husbands, though the suspicion had brought her divers times into trouble."

Brace Up.

Somebody, in telling women how to shake off the appearance of years, says:—"Resist the first inclination to stoop. Brace up whenever the shoulders settle in the least. To place one's self sidewise before a mirror and allow the back to curve forward, then gradually to straighten it, will convince any one that, with every inch that is raised, ten years seem to be taken from the apparent age." Nothing so much assists one in making a favorable impression as a good carriage. It is much more effective than a pretty face, and is never associated with age in any one's mind. Any letting down of the shoulders or "settling" of the figure tells at once that time and the world are getting the best of one.

Industry of Welsh Women.

Among the mountains in Wales the hat most in vogue is made of a strong, coarse straw, with a very large, rather shallow crown, and narrow brim, which is the most convenient shape for carrying loads. On the top of the head is placed the "torch," a kind of pad made out of a stocking stuffed with wool. Over this the hat is fastened, and it is a usual thing for the women to walk five or six miles to the nearest town, buy their groceries or other necessaries, and carry them home on their heads, walking up and down the rough mountain paths with a baby tied to their backs, while their hands never cease the knitting, without which no true Welsh woman is ever perfectly happy.—*Queen*.

A Strange Marriage.

A century ago the law of Maine obliged a husband to pay all the debts of his bride in case she brought him any property. As outer clothing was legal property which could be taken for debt, an unfortunate couple who were deeply in love resorted to the experiment of marrying while the bride was clad only in her night clothes.

Superstitions About Friday.

Eggs laid on Friday, will, it is said, never decay, and will, if eaten, cure the colic.

"A Friday tree" is a saying used in England to characterize some misfortune or trial.

Journeys were rarely undertaken on Friday during the last century in many European countries.

In 1790 no merchant of London would begin a voyage or undertake any new enterprise on Friday.

In North Germany, it is said that witches obtain power over the person who goes out unwashed on Friday.

In Devonshire, it was thought a good day to plant crops, and in other places to commence weaning children.

Mediæval romances assert that fairies are on Friday turned into hideous animals, remaining so until Monday.

Friday is, according to the Welsh, Irish, and Scotch, a day consecrated to the fairies, who then can do much mischief.

A Dutch wife will, if she can, obtain a ring that is made from old nails during mass on Friday, lay it upon the gospels, and say a paternoster.

It was not a proper occasion, either in England or Holland, to engage a new servant, nor would any servant go to service in a new place on Friday.

Portuguese sailors have a custom of dressing their ships in mourning on this day, and of scourging and hanging an effigy of Judas at the yardarm.

The Talmud tells us that Adam was created, sinned, and was chased from Paradise on Friday. Mahomet, to prove his prophetic powers, declared the same.

It has been claimed as a lucky day for America—Columbus discovered land on that day, the pilgrims landed on the same day, and Washington was born on Friday.

Many persons reverse the rule, and declare that this is to them a lucky day. Dickens said that it was fortunate for his undertakings, most of which were successful when begun or ended on Friday.

In most European countries, marriages consummated on Friday are sure to be unhappy ones, and are rare;

but Germany and Scotland are exceptions, it being there considered a lucky day to wed.

Superstitions About Insects.

The Koran says all flies shall perish save one, the bee fly.

It is regarded as a death warning in Germany to hear a cricket's cry.

The Tapuya Indians of South America say the devil assumes the form of a fly.

Rain is, in some parts of our own country, expected to follow unusually loud chirping of crickets.

Flies are sometimes regarded as furnishing prognostications of the weather, and even of other events.

Spaniards, in the sixteenth century, believed that spiders indicated gold, where they were found in abundance.

Although a sacred insect among the Egyptians, the beetle receives but little notice in folk lore. It is unlucky in England to kill one.

In Germany, it is said to indicate good luck to have a spider spin his web downwards toward you, but bad luck when he rises toward you.

The grasshopper is a sufficiently unwelcome visitant of himself in this country, but in Germany his presence is further said to announce strange guests.

A Welsh tradition says bees came from Paradise, leaving the garden when man fell, but with God's blessing, so that wax is necessary in the celebration of the mass.

The ancients generally maintained that there was a close connection between bees and the soul. Porphyry speaks of "those souls which the ancients called bees."

It is said that upon the backs of the seven-year locusts, there sometimes appear marks like a letter of the alphabet. When this looks like a W it is thought that a war is imminent.

German tribes regarded stag beetles as diabolic, and all beetles are detested in Ireland, more especially a bronze variety known as "gooldie." It is also believed that to see a beetle will bring on a rain storm the next day.

There are said to be no spiders in Ireland, nor will spiders spin their web in an Irish oak, nor on a cedar roof. A spider is said to have saved Mohammed from his pursuers, by spinning its web across a cave where he sought refuge. The same is said of David, in the cave of Adullam.—*Cincinnati Enquirer*.

The Origin of O. K.

More than a century ago the best tobacco and the best rum came from Aux Cayes (pronounced O K), and the best of anything was designated as Aux Cayes, or O. K. This meaning of the phrase is still retained. In the Jackson campaign every lie that could be invented was invented to blacken the general's character, and an indorsement that he had made, "this is O. K." (meaning the best), was taken by Seba Smith, and declared by him to be but an abbreviation of the general's customary indorsement of papers as "oll kerrect." The Democrats took up this statement and fastened the mystic letters upon their banners. The meaning "all correct" stuck to the letters, and since then they have been used in the two meanings of "the best" and "all right."

England Ruled by Foreigners.

It is surprising to think how few of the men who hold the destinies of England in their hands are—Englishmen. The Marquis of Salisbury and Lord Hartington are typical of the national character. Mr. Gladstone belonged to every birthplace—save his own. The Duke of Portland is a Dutchman, one Hendrik Bentinck, Herr Van Dipenham in Overysse, Baron H. de Worms is a German, Mr. Ashmead-Bartlett belongs to the United States. Mr. Goschen is of Huguenot descent, as is "the Christian member for Northampton," Mr. Henry Labouchere, and also Mr. Shaw-Lefevre. The mother of the late Queen Victoria was a German. Her married sons and daughters have, with one exception, espoused foreigners. The exception is a Scotchman. The Argyll alliance, however, cannot be said to have been a remarkably happy one.—*Leeds Mercury*.

Bleeding to Death.

It is not now generally remembered, but it is literally true, that Washington was bled to death by his doctors. The doctors were not to blame for this. They only did what their professional forerunners had been doing under similar circumstances for ages, and what Washington himself would probably have desired had he been caught without medical advice. But—we speak under correction in this (says *The Nation*)—it is probably at least fifty years since any distinguished man has run any similar risk in the United States. In other words, within the past half century, American, English, and French doctors have abandoned what for thousands of years they had treated as the sheet anchor of their treatment, a remedy which they applied in nine out of ten cases which fell into their hands. A more striking illustration of the uncertainty of the medical art its revilers are not able to produce. It is true the doctors try to weaken the force of the illustration by pleading that the characteristics of diseases have changed, that they are no longer of the inflammatory type as they used to be, or so much the result of plethora; but this does not make much impression. The practice is still kept up in those countries in which medical education has made least advances—Spain, for instance, and Italy. Within our own time, another great man of the Washington type, Count Cavour, has been slain by medical bleeding precisely as Washington was. The worse Cavour grew, the more his doctors bled him, and he finally succumbed under the treatment, in the flower of his age and in the midst of his usefulness.—*San Francisco Argonaut.*

The Growth of Finger Nails.

It has been computed that the average growth of the finger nail is $\frac{1}{32}$ of an inch per week, or a little more than an inch and a half per year. The growth, however, depends to a great extent upon the rate of nutrition, and during periods of sickness or of abstinence it is retarded. It is understood to go on faster in summer than in winter, and differs for different fingers,

being most rapid in the middle finger and slowest in the thumb, according to one investigator, and in the little finger according to another.

The same two authorities, Bertholdi and Benham, differ, too, with regard to the equality of growth on both hands, the former holding that the nails of the right hand grow faster than those of the left, but the latter can perceive no difference between them. According to the rate of growth stated, the average time taken for each finger nail to grow its full length is about four and a half months, and at this rate a man of 70 would have renewed his nails 186 times. Taking the length of each nail at half an inch, he would have grown seven feet nine inches of nail on each finger, and on all his fingers and thumbs an aggregate length of seventy-seven feet six inches.

The Rod.

The advocates of whipping as a means of family discipline are accustomed to quote Solomon as saying: "Spare the rod and spoil the child." What Solomon said was: "He that spareth the rod hateth his son." But the word "rod" in that connection does not necessarily refer to corporal punishment. It simply means parental authority and guidance. The same Hebrew word is used in Psalm xxiii., where David says: "The Lord is my shepherd; I shall not want. * * His rod and His staff they comfort me." The rod was the symbol of authority and power, not a raw hide nor a hickory withe.

The Perusal of a Book.

Select books that are informing, and so far as in your power equip yourselves with wide knowledge in all branches of history, literature, and affairs. Are you deficient in any of these? Then seek the best authorities, and bring yourself to the highest standard in that field without delay. Let your intellectual progress be marked with positive accumulations. When you read a book that is really worth the time you spend with it, do not cram your mind with others, as a man in a hurry

is apt to cram his gripsack, but do a little earnest and profitable thinking before you take up its successor in your reading course. The perusal of a book gives birth to ideas in no way connected with the subject of which it treats. All careful readers should, however, avoid dwelling too long upon one line of study or thought. Light and varied reading should be interspersed with the solid and useful. An extreme in either direction is to be avoided.—*Magazine of American History.*

Long Hours.

An extraordinary instance of long hours of labor came to light through the sweating committee of the House of Lords. A Roumanian Jew, about thirty-five, small and of poor physique, was examined through an interpreter in a mixture of Hebrew and German. He arrived in Hull *via* Hamburg, intending to proceed to America, but not having money enough to pay his fare he was sent to Manchester. There he works from 5 o'clock in the morning until 12 at night, and sometimes until one or two in the morning, making an average of twenty hours a day for six days in the week, leaving only four hours for sleep. He earned 75 cents a day during the busy time, lasting about ten weeks, and from \$1.50 to \$2.00 per week in the slack season, and on this he had to support a wife and six children. He used to work in Roumania fourteen hours a day for \$4.00 a week, so that he was better off in Roumania than in England, but he had not sufficient means to return. He had written to dissuade his countrymen against coming to England.

An Extraordinary Mental Power.

I know of a case where the person who recognized evidence of a power of influencing another's mind through some sympathetic action, was most unwilling to be convinced. He was a doctor and opposed to all belief in faith cures, and to all which seemed to favor the doctrine that mind can influence mind. He had conceived also a strong feeling of personal dislike for the thought-reader—an American of some celebrity or

notoriety, I will not say which. He offered himself as a "subject," believing that the exhibition was chiefly humbug, the other "subjects" mostly confederates. He mentally located a "pain"—that is, he thought of a pain—in a particular nerve. To his surprise the thought-reader began to pass his hand over his (the exhibitor's) right jaw, and presently marked with his finger the precise course of the nerve along which the doctor had imagined the pain to extend.

We see in such experiments an inchoate form of the power which seems in some cases to have been possessed by persons under strong mental emotion, of influencing others at a distance. I do not know how the evidence can be rejected showing that on certain occasions such power has been exerted—usually without any conscious effort. It seems much more incautious to reject the evidence than to admit the existence of such a power—not, however, as something supernatural, nor even as preternatural or extra natural, but simply as a quality not yet explained or understood and recognized, as it seems to merit special investigation.—RICHARD A. PROCTOR in *Boston Globe*.

Bismarck's Famous Sentence.

It is proposed to use the famous sentence of Prince Bismarck, "We Germans fear God, but nothing else," as the national German motto. A number of students have been hunting for the origin of that expression ever since to prove that there is nothing new under the sun. One finds it in Racine's "Athalie," as the saying of the high priest Joash, and another has discovered a passage almost identical in Carlyle's eloquent description of Abbot Samson ("Past and Present," book II., chapter 17). These scholars would destroy all the patriotism in Germany if they had their way.

Witty Toasts.

Chambers' Journal has collected some witty and amusing toasts given at banquets, and, in reading them, one can only sigh, "Would I had been there?"

A rather cynical toast ran thus: "Woman—she requires no eulogy; she speaks for herself."

A gallant young man, under the same festal circumstances, referred to one member of the sex he eulogized as "a delectable dear, so sweet that honey would blush in her presence, and treacle stand appalled."

At the marriage supper of a deaf and dumb couple one guest, in the speech of the evening, wished them "unspeakable bliss."

A writer of comedies was giving a banquet in honor of his latest work, at which a jovial guest gave the toast: "The author's very good health! May he live to be as old as his jokes."

At another gathering were toasted, "The bench and the bar: If it were not for the bar, there would be little use for the bench."

As pithy was the following toast, proposed at a shoemaker's dinner: "May we have all the women in the country to shoe, and all the men to boot."

A Perfect Woman Nobly Planned.

A perfectly formed woman will stand at the average height of 5 feet 3 inches to 5 feet 7 inches. She will weigh from 125 to 140 pounds.

A plumb line dropped from a point marked by the tip of her nose will fall at a point one inch in front of her great toe. Her shoulders and her hips will strike a straight line drawn up and down. Her waist will taper gradually to a size on a line drawn from the outer third of the collar bone to the hips.

Her bust will measure from 28 to 36 inches; her hips will measure from 6 to 10 inches more than this, and her waist will call for a belt from 22 to 28 inches.

The upper arm of the perfectly formed woman will end at the waist line, so that she can rest her elbow on a table while standing erect, and her forearm shall extend to a point permitting the fingers to mark a point just below the middle of the thigh. Her neck and thigh should be of the same circumference. The calf of her leg and upper arm should measure about the same.

Her legs should be about as long as a line drawn from her chin to her finger tips, or about one-half her height. She should measure from her waist to her feet about a

foot more than from her waist to the crown of her head.

Her neck should be from twelve to fourteen inches around, her head erect and on a line with the central plane of the body, and her foot should be of a size and shape to conform with her hands.

The well-proportioned woman wears a shoe one-half the size of the glove that her hand calls for. Thus, if a woman wears a six glove she should wear a three shoe.

Coined Money—Its Origin.

When precious metals—gold, silver, copper or iron—began to be used for payment, they were at first simply weighed. Englishmen still speak of a pound instead of a sovereign. The next step was to issue pieces of gold and silver properly weighed, and then to mark the exact weight and value on each piece.

This was done in Assyria and Babylonia, where we find shekels or pounds of gold and silver. The commerce of the eastern nations was carried on for centuries by means of these weights of metal. It was the Greeks, the Greeks of Phocæa in Ionia, who in the seventh century B. C. first conceived the idea of coining money, that is of stamping on each piece their city arms, the phoca or seal, thus giving the warranty of their state for the right weight and value of those pieces. From Phocæa this art of coining spread rapidly to the other Greek towns of Asia Minor, and was thence transplanted to Ægina, the Peloponnesus, Athens, and the Greek colonies in Africa and in Italy.

The weight of the most ancient gold coin in all these countries was originally the same as that of the ancient Babylonian gold shekel, only stamped with the arms of each country, which thus made itself responsible for its proper weight. And this gold shekel or pound, in spite of historical disturbances, has held its own through centuries. The gold coins of Cræsus, Darius, Philip and Alexander have all about the same weight as the old Babylonian gold shekel, 60 of them going to 1 mina of gold; and, what is stranger still, a sovereign, or pound, or shekel, has nearly the same weight, 60 of them going to an old Babylonian mina of gold. In ancient times 20 silver drachmas or half shekels went to a gold

shekel, just as in England 20 silver shillings are equivalent to a sovereign. This ancient shilling was again subdivided into 60 copper coins, 60 being the favorite Babylonian figure.

Old Bank Notes.

The oldest bank notes are the "flying money," or "convenient money," first issued in China, 2697 B. C. Originally these notes were issued by the treasury, but experience dictated a change to the banks under government inspection and control. A writer in a provincial paper says that the early Chinese "greenbacks" were in all essentials similar to the modern bank notes, bearing the name of the bank, date of issue, the number of the note, the signature of the official issuing it, indications of its value in figures, in words and in the pictorial representation in coins or heaps of coins equal in amount to its face value, and a notice of the pains and penalties of counterfeiting. Over and above all was a laconic exhortation of industry and thrift: "Produce all you can; spend with economy." The note was printed in blue ink on paper made from the fibre of the mulberry tree. One issued in 1399 B. C. is still carefully preserved in the Asiatic museum at St. Petersburg.

Calendar Items.

The years 400, 800, 1200, as well as the intervening centennial years, were leap years; it was Pope Gregory XIII., who, in 1582, reformed the calendar so that only the centennial years, divisible without a remainder by four, should be leap years. A. D. 1600 was, and 2000 will be, a leap year. The months had respectively, these number of days:—31, 30, 31, 30, 31, 30, 31, 30, 30, 30, 30, 31, making a total of 365 days in the year. Augustus changed the name of Sextiles in his own honor (the Roman year began originally with March) and added to it one day, which he took from February; another of February's days he gave to October.

Why Sixty Seconds Make a Minute.

Why is our hour divided into sixty minutes, each minute into sixty seconds, etc.? Simply and solely be-

cause in Babylonia there existed, by the side of the decimal system of notation, another system, the sexagesimal, which counted by sixties. Why that number should have been chosen, is clear enough, and it speaks well for the practical sense of those ancient Babylonian merchants. There is no number which has so many divisors as sixty. The Babylonians divided the sun's daily journey into twenty-four parasangs, or 720 stadia. Each parasang or hour was subdivided into sixty minutes. A parasang is about a German mile, and Babylonian astronomers compared the progress made by the sun during one hour at the time of the equinox to the progress made by a good walker during the same time, both accomplishing one parasang. The whole course of the sun during the twenty-four equinoctial hours was fixed at twenty-four parasangs, or 720 stadia, or 360 degrees.

The system was handed on to the Greeks, and Hipparchus, the great philosopher, who lived about 150 B. C., introduced the Babylonian hour into Europe. Ptolemy, who wrote about 150 A. D., and whose name still lives in that of the Ptolemaic system of astronomy, gave still wider currency to the Babylonian way of reckoning time. It was carried along on the quiet stream of traditional knowledge through the Middle Ages, and, strange to say, it sailed down safely over the Niagara of the French Revolution. For the French, when revolutionizing weights, measures, coins, and dates, and subjecting all to the decimal system of reckoning, were induced by some unexplained motive to respect our clocks and watches, and allowed our dials to remain sexagesimal, that is, Babylonian, each hour consisting of sixty minutes. Here you see again the wonderful coherence of the world, and how what we call knowledge is the result of an unbroken tradition of a teaching descending from father to son. Not more than about a hundred arms would reach from us to the builders of the palaces of Babylon, and enable us to shake hands with the founders of the oldest pyramids and to thank them for what they have done for us.—MAX MULLER.

A Wonderful Watch.

At the time of her coronation at Moscow, in 1724, Catherine I., Empress of Russia, was presented with a watch as wonderful in every particular as the famous Strasburg clock; even more wonderful when the delicacy of its construction is taken into consideration. It weighed seven ounces and was both a repeater and a musical time-keeper. On the opposite side from the works or time keeping part of the wonder, there was an exact counterpart of the holy sepulchre with a carved image of the Roman guard; this scene could be viewed through the glass in the case. Upon opening the case the imitation stones would roll away from the mouth of the miniature sepulchre, the guard would kneel, angels appear at opposite sides of the opening, and about this time the music would start up and play, in soft, sweet strains, the Easter songs so well known to all Russians. The maker of this wonderful piece of mechanism is said to have worked upon it almost uninterruptedly for a period of nine years.—JOHN W. WRIGHT.

Watch Screws.

It is asserted that the smallest screws in the world are those used in the production of watches. Thus, the fourth jewel wheel screw is the next thing to invisible, and to the naked eye it looks like dust; with a glass, however, it is seen to be a small screw, with 260 threads to the inch, and with a very fine glass the threads may be seen quite clearly. These minute screws are $\frac{4}{10000}$ of an inch in diameter, and the heads are double; it is also estimated that an ordinary lady's thimble would hold 100,000 of these screws. No attempt is ever made to count them, the method pursued in determining the number being to place 100 of them on a very delicate balance, and the number of the whole amount is determined by the weight of these. After being cut the screws are hardened and put in frames, about 100 to the frame, heads up, this being done very rapidly by sense of touch instead of by sight, and the heads are then polished in an automatic machine 10,000 at a time. The

plate on which the polishing is performed is covered with oil and a grinding compound, and on this the machine moves them rapidly by reversing motion.

Separate Pieces in a Watch.

The average watch is composed of 175 different pieces, comprising upward of 2,400 separate and distinct operations in its manufacture. The balance has 18,000 beats or vibrations per hour; 12,960,080 in thirty days, 157,680,000 in one year; it travels 1 43-100 inches with each vibration, which is equal to 9 3-4 miles in twenty-four hours, 292 1-2 miles in thirty days, or 3,558 3-4 miles in one year.

A 500-Year-Old Clock.

After having regularly struck the hours for 500 years, the old clock of St. Quentins, in Mayence, has got out of order and is being repaired. After the repairs are made it is confidently expected that it will do its duty for five more centuries.—*New York Tribune*.

How Large Was Ancient Rome?

After carefully examining all the data we have, all the statements of the various ancient writers who allude to it, and all the facts which seem to bear on the question, I am convinced that in estimating the number at 4,000,000, I am rather understating than overstating it. It is much more probable that it was larger than that it was smaller. De Quincy also estimates the inhabitants of Rome at 4,000,000. I will only cite one fact, and then leave this question. The Circus Maximus was constructed to hold 250,000, or, according to Victor, at a later period probably, 385,000 spectators. Taking the smaller number, then, it would be 1 in 16 of all the inhabitants if there were 4,000,000. But as one-half the population was composed of slaves, who must be struck out of the spectators, when the circus was built there would be accommodation then for 1 in eight of the total population, excluding slaves. Reducing again the number one-half by striking out the women, there would be room for 1 in 4. Again striking out the young children and the old men and the sick and impotent, you

would have accommodation for nearly the whole population. Is it possible to believe that the Romans constructed a circus to hold the entire population of Rome capable of going to it?—for such must have been the case were there only 4,000,000 inhabitants. But suppose there were only 1,000,000 inhabitants, it is plain from the mere figures that it would never have been possible to half fill the circus.—*Blackwood's Magazine.*

The Seven Bibles.

The seven bibles of the world are the Koran of the Mohammedans, the Tri Pitikes of the Buddhists, the Five Kings of the Chinese, the Three Vedas of the Hindoos, the Zendavesta, and the Scripture of the Christians.

The Koran is the most recent of the five, dating from about the seventh century after Christ. It is a compound of quotations from both the Old and New Testaments and from the Talmud. The Tri Pitikes contain sublime morals and pure aspirations. Their author lived and died in the sixth century before Christ.

The sacred writings of the Chinese are called the Five Kings, the word "kings" meaning web of cloth. From this it is presumed that they were originally written on five rolls of cloth. They contain wise sayings from the sages on the duties of life, but they cannot be traced further back than the eleventh century before our era.

The Vedas are the most ancient books in the language of the Hindoos, but they do not, according to late commentators, antedate the twelfth century before the Christian era.

The Zendavesta of the Persians, next to our Bible, is reckoned among scholars as being the greatest and most learned of the sacred writings. Zoroaster, whose sayings it contains, lived and worked in the twelfth century before Christ. Moses lived and wrote the Pentateuch 1500 years before the birth of Christ; therefore, that portion of our Bible is at least 300 years older than the most ancient of other sacred writings.

The Eddas, a semi-sacred work of the Scandinavians

was first given to the world in the fourteenth century.
—*Exchange.*

Queer Questions.

Centuries ago Samson proposed a riddle—the earliest of which history treats—to the Philistines, allowing them a week in which to answer it, a length of time that would have been insufficient but for the assistance of Samson's wife.

Hiram, king of Tyre, had a mania for constructing riddles, as also had Solomon, and the wager of an immense sum of money between the two as to which could construct the most perplexing one was won by the latter.

Archimedes, the famous mathematician of Syracuse, passed most of his leisure—to the surprise of many of his friends—in the production or solving of puzzles, and his discovery of how much alloy its maker had mixed with the gold in King Hiero's crown was nothing but the solution of a puzzle.

The Greeks had a curious puzzle.

“If Achilles, racing with a turtle, gives the reptile 100 yards start, and runs ten yards while the reptile runs one, when will he overtake it?”

Theoretically, never; as a matter of fact, he must in the course of time.

A very perplexing question, one well calculated to catch the wise as well as the unwary, was that proposed to the Roman senate:

“Why does a pail of water, with a fish swimming in it, weigh no more than the same pail of water without the fish?”

It called forth much discussion from the members of that august body, who explained the singular circumstance in different ways to their entire satisfaction, but found by experiment that the pail of water did weigh more when there was a live fish in it.

A precisely similar story is related in connection with the Royal Society of London. In this case one of the Georges, when Prince of Wales, proposed the puzzling question:

An excellent, if an old, puzzle is—

How can a window having a height equal to its width

be made twice as large without increasing its height or width?

Impossible! Oh, no. In the first instance it is shaped like a diamond, then it is changed to a square.

Bachet, a French writer, furnishes the following:

Half a ship's crew, consisting of thirty persons—Christians and Turks in equal numbers—were to be thrown overboard during a gale. They consented to being placed in a row and every ninth person should be sacrificed counting from the first in the row, round and round again. It was desired to so place them that no Christian should be a victim, and this result was obtained arranging them thus:

4 C., 5 T., 2 C., 1 T., 3 C., 1 T., 1 C., 2 T., 2 C., 3 T., 1 C., 2 T., 2 C., 1 T.—*New York World*.

“To a T.”

There is a common expression, “it suits to a T,” that is a very old one. The T square, or rule, is an instrument used by mechanics when great exactness is required. When anything is exactly right, “it suits to a T.” That is, it is correct in every way, as a piece of work would be if measured by the T rule.

Statistics of Breathing.

In each respiration an adult inhales one pint of air.

A man respire sixteen to twenty times a minute, or twenty thousand times a day; a child twenty-five or thirty-five times a minute.

While standing, the adult respiration is twenty-two; while lying thirteen.

The superficial surface of the lungs, *i. e.*, of their alveolar spaces, is two hundred square yards.

The amount of air inspired in twenty-four hours is ten thousand litres (about ten thousand quarts).

The amount of oxygen absorbed in twenty-four hours is five hundred litres (744 grammes), and the amount of carbonic acid expired in the same time, four hundred litres (911.5 grammes).

Two-thirds of the oxygen absorbed in twenty-four hours is absorbed during the night hours from 6 P. M. to 6 A. M.

Three-fifths of the total carbonic acid is thrown off in the day time.

The pulmonary surface gives off one hundred and fifty grammes of water daily in the state of vapour.

An adult must have at least three hundred and sixty litres of air an hour.

The heart sends through the lungs eight hundred litres of blood hourly, and twenty thousand litres, or five thousand gallons, daily. The duration of inspiration is 5-12, of expiration 7-12, of the whole respiratory act; but during sleep inspiration occupies 10-12 of the respiratory period.

Curious Facts about the Finger Nails.

The average rate of growth of the finger nails has been estimated at one millimeter, or two-fifths of a line per week; a rate quadruple that of the toe nails, which require four weeks to grow the same length. This growth continues with little variation, even during disease, but the portion of the nail then formed is thinner and deficient in strength. In sudden and acute diseases, and in those accompanied with extreme debility, this attenuation is sufficient to mark the nails with deep, transverse grooves, the upper surface of which is abrupt and clearly marked. In scrofulous subjects these marks, together with peculiar variegations, are very commonly observable. Extreme anxiety and mental depression have the same effect on the nails as physical disease.

It is interesting to watch the history of a case of disease as recorded upon the finger nails. When we look at the patient's nails we see on each of them a distinct ridge, showing that the portion of the nail which has grown since the acute attack is much thinned out.

Take, for instance, a man in whom an acute double pneumonia occurred a few weeks ago. You will see on his finger nails the ridge showing the acuteness of the attack. This is quite distinct, and is seen on all of the nails. These marks are very interesting and tell us a perfectly straight story. They will remain for at least two years. If a person tells you that he has broken his arm within eighteen months, you will see the ridges on the nails of the hand of the affected side, while they

will be absent on those of the other side. If you are told that a patient has had typhoid fever, look at his nails and if the statement is correct, you will find the ridges. The more acute the illness the sharper will be the ridge.

When the illness comes on, the nutrition of the body, including that of the nail, ceases. We all know about the hair falling out after a disease like typhoid fever. It only begins to fall after the growth has recommenced and the hair is coming up out of the follicle. The nail is a much more enduring evidence of disease. If there has been an acute rheumatism coming on within a few hours, with a temperature of 104 or 105 degs., the nail will be cut down sharply. The nails look as though they had been cut across. In typhoid fever, when the disease comes on gradually, there is no such sharp cutting out of the nail. There will rather be an area of thinning, which will not be seen until the nail grows beyond the white mark at its base.

Divorces in Various Countries.

Divorces are scarcely ever known to occur in modern Greece.

In Hindostan either party for a slight cause may leave the other and marry.

In the olden times the Jews had a discretionary power of divorcing their wives.

Divorces are scarcely allowed in Thibet, unless with the consent of both parties. Remarriage is forbidden.

In Cochin China the parties desiring divorce break a pair of chopsticks in the presence of witnesses and the thing is done.

Two kinds of divorces are granted in Circassia. By the first the parties can immediately marry again; by the second not for a year.

Among some tribes of American Indians the pieces of sticks given the witnesses of the marriage are broken as a sign of divorce.

If the wife of a Turkoman asks his permission to go out and he says "go," without adding, "come back again," they are divorced.

In Siberia, if a man is dissatisfied with the most

trifling acts of his wife, he tears a cap or veil from her face and that constitutes a divorce.

In Siam the first wife may be divorced but not sold as the others may be. She may claim the first child. The others belong to the husband.

Among the Moors, if the wife does not become the mother of a boy, she may be divorced with the consent of the tribe and can marry again.

In the Arctic region a man who wants a divorce leaves home in anger and does not return for several days. The wife takes the hint and departs.

Chinese Customs.

Boats are drawn by horses; carriages move by sails.

Old women, instead of the young, are the idols of society.

Old men play ball and fly kites, while children fold their arms and look on.

The highest ambition of a Chinaman is to have a nice coffin and a fine funeral.

When a Chinaman expects a present and it does not come he sends one of lesser value.

Men wear long petticoats and carry fans, while the women wear short jackets and carry canes.

A previous acquaintance between the male and female prevents them from marriage. For this reason a man seldom weds a girl of his town.

Love making is only done three days before marriage. It is not only considered the safest way to get ahead of a rival, but the surest way to get a wife without losing much time.

To encourage honesty and sincerity, confidential clerks and salesmen in all branches of industry receive an annual net percentage of the firm's business, besides their regular salary.

When a Chinaman meets another he shakes and squeezes his own hands and covers his head. If great friends had not seen each other for a long time they would rub shoulders until they got tired.

When a Chinaman desires a visitor to dine with him he does not ask him to do so, but when he does not wish him to stay he puts the question: "Won't you stay

and dine with me, please?" The visitor will then know he is not wanted.

A rich man's servant gets no salary, yet many are the applicants; while big salaries are paid to the servants of the common people, but few make application. The perquisites of the former often more than triple the salaries of the latter.

If a Chinaman desires the death of an enemy he goes and hangs himself upon that enemy's door. It is considered a sure way to kill not only that particular enemy, but members of his entire family will be in jeopardy of losing their lives.

In China one can always borrow money on the strength of having a son, but nobody would advance him a cent if he had a dozen daughters. The former is responsible for the debt of his father for three generations. The latter is only responsible for the debts of her own husband.

Success and Heroism.

There are no qualities which succeed so well in this world as selfishness and strict honesty. It pays to be honest. There is nothing heroic about it. And there is nothing heroic about the success of the self-made man who takes all his chances and leaves his younger brothers and sisters to shift for themselves. The young man who stays at home in order to help those near him to rise from the slough of poverty is the hero. He is unselfish. We cannot gauge success by what appears to be success. If money making were the real test of success we should have no heroes. We should have no priests, no religions, no philanthropists, no poets, no orators. That man is truly successful and truly heroic who strictly performs his duty. The man who strains every nerve and sinew to make money is laying up for himself an old age of regret. How many old women's homes and libraries, founded with his wealth when it becomes a burden to him, can compensate for the remembrance of the grey heads and worn fingers nearest and dearest, who, unconsolated by him, went to their rest.

The Cherokee Written Language.

Sequoyah was the son of a Cherokee mother; his father a Dutch pedlar named George Gist. He was born in 1770, and brought up as an Indian. He neither read nor spoke the English language, and all his knowledge of written and printed speech only served to make him acquainted with the fact that in some way, by the signs of letters, language could be expressed. Meditating between 1809 and 1821 on the subject, he devised a system by which his own language could likewise be reduced to print. For each syllable of his own speech he contrived a sign, and by combining these signs he created a method of writing. When he had accomplished this analysis, and found that about eighty signs could express the sounds of his speech, he set about writing letters, and instituted a correspondence between his own people and their countrymen beyond the Mississippi. It is said that the young cherokees traveled great distances to be instructed in the art of writing by this modern Cadmus. It is also stated that with a few hours' instruction the young Indians learned to read and write their language.

It seems probable that this is the only case in the history of writing in which one individual has accomplished the task of creating a written form for speech. That an untutored Indian should, by a stroke of genius, with a continuity of labor paralleled in the case of few men, do this is a momentous fact in the history of the race.

The name of Sequoyah has been fitly commemorated in the scientific term applied to the greatest of American trees the giants of the California forests, which bear the name of Sequoia.

Feats of Memorization.

Pillsbury, the celebrated chess player, can play several games of chess simultaneously without seeing any of the boards on which the various games are being conducted. It is certainly a wonderful feat of memory, to see how attention and abstraction are retained throughout—a most extraordinary feat, and one performed by

him over and over again, as he stands alone attacking and defending himself against the several opponents who are arrayed against him.

Sir Benjamin Brodie, in his most interesting "Psychological Inquiries," cites the instance of the celebrated Jesuit Suarez, who is said to have known the whole of the works of St. Augustine by heart. These consist of eleven large folio volumes. The great thinker, Pascal, is said never to have forgotten anything he had ever known or read, and the same is told of Grotius, Leibnitz, and Euler. And we have all read how the Athenian Themistocles knew the name of every one of the 20,000 citizens of Athens.

The great critic, Joseph Scaliger, is pronounced by Sir William Hamilton to be the most learned man that the world has ever seen. Yet this good man with his bad memory complained that it took him twenty-one days to learn the whole of Homer by heart; he had to devote three months to learning in like manner the whole of the remaining Greek poets, and that in two years he succeeded in getting by heart the whole of the range of classical authors.

An Experiment with the Memory.

Starting with the word Washington, write down one hundred words just as they occur to you. Let your second word be the one which Washington naturally suggests to you. Possibly it will be capitol. It may be president. Take the word which first comes into your mind. In the same manner let the third word be suggested by the second, the fourth by the third, and so on. Be careful that the third word is not suggested by both the first and second. Drop the first entirely, and let your mind go from the second alone to the third. Having written this list of words, you will have furnished yourself with a cheap but very useful mirror of your mind. If you are able to use this mirror, you may discover some very serious defects in your mental processes. You may discover that you think along certain lines too frequently. You may discover that you are using superficial principles quite too much to the

neglect of more important laws of mind. You will thus be led to avoid certain linkings, and to encourage others of a more philosophical nature.—W. W. WHITE.

Safe Weather Indicators.

When you wish to know what the weather is going to be, go out and select the smallest cloud you see. Keep your eye on it, and if it decreases and disappears it shows a state of the air that is sure to be followed by fine weather; but if it increases take your overcoat with you if you are going away from home, for falling weather is not far off. The reason is this: When the air is becoming charged with electricity you will see every cloud attracting all lesser ones toward it until it gathers into a shower, and, on the contrary, when the fluid is passing off or diffusing itself, then a large cloud will be seen breaking into pieces and dissolving.

The Hottest Spot on Earth.

One of the hottest regions of the earth is along the Persian Gulf, where little or no rain falls. At Bahrin the arid shore has no fresh water, yet a comparatively numerous population contrives to live there, thanks to copious springs which burst forth from the bottom of the sea. The fresh water is got by diving. The diver, sitting in his boat, winds a great goat skin bag round his left arm, the hand grasping its mouth; then he takes in his right hand a heavy stone, to which is attached a strong line, and thus equipped he plunges in and quickly reaches the bottom. Instantly opening the bag over the strong jet of fresh water, he springs up the ascending current, at the same time closing the bag, and is helped aboard. The stone is then hauled up, and the diver, after taking breath, plunges in again. The source of these copious submarine springs is thought to be in the green hills of Osman, some five or six hundred miles distant.

Paris Number Twelve-and-a-Half.

A writer says:—"I wandered through the streets of Paris day after day. One fact I discovered was that

no house in any street I went through—and I went through many—was numbered thirteen. After the fact was first brought to my notice I made it a study to search for such a number. I always found number twelve, but the next number was invariably douze bis—twelve-and-a-half. And this is owing to the superstition of the French people concerning the number thirteen, which is the strongest of all their peculiar superstitions.”

Rights and Lefts.

Shakespeare makes nineteen allusions to boots, thirty-two to shoes and seven to slippers and pumps. One, which is considered important as denoting the fashion in Shakespeare's time, is that from “King John” :—

Standing on slippers which his nimble haste
Had falsely thrust on contrary feet.

Dr. Johnson's commentary on this a century ago was :—Shakespeare seems to have confounded the man's shoes with his gloves. He that is frightened may put his hand into the wrong glove, but either shoe will equally admit either foot. The author seems to be disturbed by the disorder which he describes.”

“Auld Robin Gray.”

One of the happiest instances of the kind of plagiarism which, like charity, blesses both giver and receiver, is to be found in the famous ballad of “Auld Robin Gray,” which is taken from the French. The poem of Paradis de Moncrif, which served as a model to Lady Anne Barnard, is entitled “Les Constantes Amours d'Alix et d'Alexis,” and, though now more than a century old, is still considered to be the finest example of what the French call a romance. It has the naivete and the prolixity, so charming in its apparent triviality, proper to that kind of composition; and in comparing it with Lady Anne's poem it is interesting to observe how in the passage of the tale northwards the romantic beauty of the original gives place to a tragic tensity in harmony with the severer genius of the Scottish muse. The author, Paradis de Moncrif, became a member of

the French academy in 1733, and died at the age of 83 in 1770, just a year before "Auld Robin Gray" saw the light; so there can be no doubt about the dates.

The "Arabian Nights" Translator.

Everybody has read the "Arabian Nights," but few of the thousands who have enjoyed the book are aware to whom the western world is indebted for the possession of this treasure house of Oriental folk lore. It was translated from the Arabic by Antoine Galland, a French savant and traveler, who died on Feb. 17, 1715. He obtained it in its original form during a residence in the east, as attache to the French embassy at Constantinople. He traveled extensively in the east, giving much attention to the study of eastern authors. His learning was prodigious, and he produced many laborious works, all of which are now forgotten. But he has secured a kind of immortality by his life task of translating the "Arabian Nights," which will doubtless never cease to be read.

Ice as a Heater.

One of St. Patrick's most famous miracles is thus commemorated in the old Irish ballad of "Polly Roe":—

St. Patrick, as in legends told,
 The morning being very cold,
 In order to assuage the weather,
 Collected bits of ice together;
 Then gently breathed upon the pyre,
 When every fragment blazed on fire.
 Oh! if the saint had been so kind,
 As to have left the gift behind
 To such a love-lorn wretch as me,
 Who daily struggled to be free;
 I'd be content—content with part:
 I'd only ask to thaw the heart,
 The frozen heart of Polly Roe.

Early Linen Paper.

The Moors are said to have made paper from linen in the thirteenth century, all paper known before that

being apparently made from cotton. In the British Museum are some specimens of linen paper from the fourteenth century. Recently Professor Church has discovered an Espiscopal Register of 1273 from Auvergne, in which paper some strands remaining show to have been linen. This carries linen paper back further than was supposed.

Winnie and Walter.

"Warm weather, Walter! Welcome warm weather! We were wishing winter would wane, weren't we?"

"We were well wearied with waiting," whispered Walter, wearily. Wan, white, woebegone was Walter, wayward, wilful, worn with weakness, wasted, waxing weaker whenever winter's wild, withering winds were wailing. Wholly without waywardness was Winifred, Walter's wise, womanly watcher, who, with winsome, wooing way, was well-beloved.

"We won't wait, Walter; while weather's warm, we'll wander where woodlands wave, won't we?"

Walter's wonted wretchedness wholly waned. "Why, Winnie, we'll walk where we went when we were with Willie; we'll weave wildflower wreaths, watch woodmen working, woodlice, worms wriggling, windmills whirling, watermills wheeling; we will win wild whortleberries, witness wheat winnowed."

Wisbeach woods were wild with wildflowers; warm westerly winds whispered where willows were waving; woodpigeons, wrens, woodpeckers, were warbling wild woodnotes. Where Wisbeach watermill's waters, which were wholly waveless, widened, were water-lilies, waxen white. Winifred wove wreaths with wedges with willow wands. Wholly without warning, wild wet winds woke within Wisbeach woods, whistling where Winifred wandered with Walter; weeping willows were wailing weirdly; waging war with wind-tossed waters. Winifred's wary watchfulness waked. "Walter, we won't wait."

"Which way, Winnie?"

Winifred wavered. "Why, where were we wandering? Wisbeach woods widen whichever way we walk; where's Wisbeach white wicket; where's Winston's water-mill?"

Wistfully Walter witnessed Winifred's wonder. "Winnie, Winnie, we were wrong, wholly wrong, wandering within wild ways. Wayfaring, weather-beaten waifs, well-nigh worn-out."

Winifred waited where, within wattled woodwork walls, wagons, wheelbarrows, wains were waiting, weighty with withered wood. Walter, warmly wrapped with Winifred's well worn wadded waterproof, was wailing woefully, wholly wearied. Winnie, who, worn with watching, well-nigh weeping, was wistfully, wakefully, waiting Willie's well-known whistle, wholly wished Walter's well-being warranted. With well-timed wisdom, Walter was wound with wide, white worsted wrappers, which wonderfully well withstood winter's withering, whistling winds. Wholly without warm wrappers was Winifred, who, with womanly wisdom was watching Walter's welfare, warding Walter's weakness.

"When will Willie wend where we wait?" wearily wondered Walter.

"Whist, Walter," whispered Winnie; "who was whooping."

"Whereabouts?"

Welcome whistling was waking Wisbeach woods when winter's windy warfare waxed weaker. "Winnie! Walter!" Winifred's wakefulness was well-grounded. "We're well, Willie; we're where Winston's wagons wait." Without waiting, Willie was within Winston's woodwork walls. "Welcome, welcome, Willie;" Winnie was weeping with weariness with watching Walter, weak with wayfaring.

"Why, Winnie! wise, watchful, warm-hearted Winnie," Willie whispered, wheedingly, "we won't weep; Walter's well; what were Walter without Winnie?"

Wholly wonderful was Winifred's well-timed, womanly wisdom, which well warranted weakly Walter's welfare. Whenever wandering within Wisbeach woods with Winnie, Walter would whisper, "What were Walter without Winnie? wise, watchful, warm-hearted Winnie!"

A Long Sentence.

The following is the opening sentence of a speech delivered by Mr. Gladstone at Birmingham:—"Sir

Charles Forster and Gentlemen—It is a great thing and a great praise to any constituency that it is able to maintain that standard of judgment and approbation and attachment which Walsall has maintained for so long a period while represented by Sir Charles Forster, to whom I owe a debt of gratitude for what he has most truly called an unswerving support, but I may say a support that did not derive its entire value even from its singularly decided character in reference to the principles of liberalism, but likewise from the entire character and action of the man who has been successful in making liberal principles honored by the whole house in association with active parliamentary service rendered to the House of Commons as such, without respect to party, while at the same time he has been one no doubt, as he has said himself, of the most intelligent upholders of the principles of party as being a necessary, though a secondary, instrument for promoting the benefit of the work and the empire.”

The Dominical Letter—The Golden Number—Why so Named.

The Dominical letter is the letter which in our almanacs marks Sunday (*dies Domini*). In the calendar the 1st of January is always denoted by A, and the Dominical letter is that which denotes the first Sunday, and except in leap year, all other Sundays of the year. In leap year there are two Dominical letters, the first for the Sundays between January 1 and February 29, the second for the other Sundays of the year, the interpolation being postponed until the end of February instead of being made at the beginning of the year. We do not know who invented the Dominical letter; perhaps Dionysius Exiguus, who lived A. D. 550, and devised the Dionysian or common era, dating it from the time of Christ. The Dominical letters are based on the Roman nundinal letters; the Roman market day happened every ninth day. The Christian adopted the Jewish week, and necessarily the nundinal letters fell into disuse among them. There are no year letters; the golden numbers represent the number of the year in the lunar cycle of nineteen years; at the end of that cycle the

moon has her changes on the same day of the solar year and month on which she had them nineteen years previously. The numbers of this cycle are of great use in determining Easter, and got their name by being written in the calendar in letters of gold.

Limbs of the Mind.

One is curiosity; that is a gift, a capacity of pleasure in knowing, which if you destroy you make yourselves cold and dull. Another is sympathy; the power of sharing in the feelings of living creatures, which if you destroy you make yourselves hard and cruel. Another of your limbs of mind is admiration; the power of enjoying beauty or ingenuity which if you destroy you make yourselves base and irreverent. Another is wit, or the power of playing with the lights on the many sides of truth, which if you destroy you make yourselves gloomy, and less useful and cheering to others than you might be. So that in choosing your way of work it should be your aim, as far as possible, to bring out all these faculties, as far as they exist in you, not one merely, nor another, but all of them. And the way to bring them out is simply to concern yourselves attentively with the subject of each faculty. To cultivate sympathy you must be among living creatures, and thinking about them; and to cultivate admiration you must be among beautiful things, and looking at them.—
J. RUSKIN.

Speed at Reading.

Though the speed at which we write is limited to about thirty words a minute, the speed at which we read is very different, especially when the words are presented in print so that the letters are clear and unambiguous. I gave an interesting novel the other day to a friend, and noted the time when the reading began, and also the time when the book was closed. I then made a calculation of the number of words read, and I found that more words had been read in an hour and a half than a child hears in the course of a day.

Other experiments have convinced me that the speed of silent reading, at least for those who know the lan-

guage, averages from 300 to even 400 words a minute.
—*Science.*

How a Cable Message is Received.

Only the feeblest currents should be used on submarine lines, since heavy pulses which could be employed with impunity on land lines, if they did not soon destroy the cable covering, would at least tend to develop faults which otherwise might long remain latent. Defects in cable covering that otherwise may not lead to harm admit moisture, and hence, under the action of a strong current, oxides are quickly formed, destroying insulation. The necessary use in ocean telegraphy of the lightest currents has led to the development of a class of recording instruments remarkable for delicacy of action—notably the siphon recorder, which indicates the electric impulses by a wavy ink line on a tape, and the reflecting galvanometer, which causes a spot of light to move from right to left in a darkened room. With these recorders and thirty cells of battery, messages sent across the Atlantic are telegraphically reproduced in ink at the rate of from twenty to twenty-five words a minute, each way, the cable being duplexed. But for electrostatic induction a single cell of battery would suffice for transmission from the earth to the moon, if those bodies could be connected by a wire of the size used in ocean cables.—CHARLES L. BUCKINGHAM.

Variations of the Game.

Every man when he takes up his cards at a game of whist holds one out of 635,013,559,600 possible hands. As for the total number of variations possible among all players, it is so enormous as almost to exceed belief. It has been calculated that if 1,000,000 men were to be engaged dealing cards at the rate of one deal every minute, day and night, for 100,000,000 years, they would not have exhausted all the possible variations of the cards, but only 100,000th part of them.

Primitive Telegraphs.

As is well known the Indians use rising smoke to give signals to distant friends. A small fire is started, and, as soon as it burns fairly well, grass and leaves

are heaped on the top of it. Thus a large column of steam and smoke rises. By covering the fire with a blanket the rising of the smoke is interrupted at regular intervals, and the successive clouds are used for conveying messages. Explorations in the Congo basin have shown that the system of drum signals prevails throughout Central Africa. The Bakuba use large wooden drums, on which different tones are produced with two drumsticks. Sometimes the natives "converse" in this way for hours, and from the energy displayed by the drummers and the rapidity of the successive blows, it seemed that the conversation was very animated. The same use of drums is found in New Guinea. From the rhythm and rapidity of the blows, the natives know at once whether an attack, a death, or a festival is announced. The same tribe use columns of smoke or (at night) fires to convey messages to distant friends. The latter are also used in Australia. Columns of smoke of different forms are used for signals by the inhabitants of Cape York and the neighboring islands. In Victoria hollow trees are filled with fresh leaves which are lighted. The signals thus made are understood by their friends. In Eastern Australia the movements of a traveler were made known by columns of smoke, and so was the discovery of a whale in Portland Bay.—*Science*.

Conductors of Sound.

As a general rule, the greater the density of a substance and the more elasticity it possesses the more perfect its conductibility of sound; thus it has been found that while sound travels at the rate of 1125 feet per second in the ordinary atmosphere, it will travel 4708 feet per second in water. This was proved by experiments in the Lake of Geneva. The traveling power of sound through solid substances may be stated generally to be more rapid than through either air or water. The metals, on account of their elasticity, naturally stand at the head of the list.

The French philosopher, Biot, by means of the empty water pipes of Paris, proved that sound will travel through iron at the rate of 16,822 feet per second, or about fifteen times faster than through air. It has been

proved that if a bell be struck in a vacuum in an air pump, no sound whatever can be heard, and that if hydrogen be introduced the sound is hardly perceptible. In fact, hydrogen, which is the most rarefied of all gases, is the worst conductor of sound, while iridium, the densest, is the best. This latter is very scarce, and consequently difficult to experiment with, so gold and platinum, which are among the densest of bodies, are commonly called the best conductors of sound.

Slang and Swearing.

The old Scotch lady who owned that "our Jemmy sweers awfu'," added, on reflection, "but to be sure it's a great offset to conversation." Both swearing and slang are popular with the unreflecting, because they are felt to be great offsets to conversation. Men, especially uneducated men, feel that desire to vivify and adorn the expression of their ideas which, among more highly developed human beings, finds its outlet in eloquence and blank verse.—*The London Spectator.*

Man's Relative Height and Weight.

A man five feet one inch high should weigh 120 pounds.

A man five feet two inches high should weigh 126 pounds.

A man five feet three inches high should weigh 133 pounds.

A man five feet four inches high should weigh 136 pounds.

A man five feet five inches high should weigh 142 pounds.

A man five feet six inches high should weigh 145 pounds.

A man five feet seven inches high should weigh 148 pounds.

A man five feet eight inches high should weigh 155 pounds.

A man five feet nine inches high should weigh 162 pounds.

A man five feet ten inches high should weigh 169 pounds.

A man five feet eleven inches high should weigh 174 pounds.

A man six feet high should weigh 178 pounds.

A Letter Carrier's Walk.

I have often been asked to explain how a letter carrier walks along, apparently with ease, at a rapid gait over slippery ground, and runs up and down icy front steps, while other folks are barely able to keep their footing while they creep along in rubbers or with a set of those steel prong nuisances fastened to their shoes. The carriers soon learn to walk over slippery places without falling because we have so much of it to do, and experience has taught us how we should handle our bodies and legs when on dangerous ground. When passing over sleety places we don't walk erect, but bend forward, taking short steps, and never letting one foot get far away from the other. Then, when we step, the foot is put down solidly, all of it at once, on the ground, with no heel and toe movement, which leads to slips and falls. It's not graceful this way of walking, but it's safe, and I can pass any ordinary pedestrian on a slippery day, and be in no danger of falling, while he is constantly slipping.—Letter Carrier in *Globe Democrat*.

To Make the Heart Strong.

Now there is but one legitimate way of making the heart strong. That is by taking regular, systematic, and sufficient muscular exercise, into which climbing heights or staircases enters as a prominent feature. Let a person who finds his pulse increased fifty to sixty beats in a minute after mounting a staircase climb a hundred staircases day after day for a month or more, and he will find that the exertion does not add ten beats to the normal number of his heart throbs. The exercise has acted upon this vital organ just as it does on the biceps of a prize fighter or a blacksmith, and strength and the capacity for endurance have been the result.

But this is not all the good that will be gained by climbing a hundred staircases a day—say fifty in the morning and fifty in the afternoon. Doubtless the per-

son with a weak heart has suffered more or less from what is called nervous dyspepsia. His food instead of being properly digested, has been mainly fermented in his stomach, and has caused him various uncomfortable feelings, which he has been in the habit of attributing to everything but their proper cause. Not only have the hundred minutes or so spent in climbing staircases put strength into his legs, expanded his chest, and saved his heart from fatty degeneration, but they have given tone to his abdominal muscles and to his digestive organs. His food no longer lies like a lump of lead in his stomach, torpor has disappeared from (what we physicians call, and which, for the sake of delicacy, I must here designate them) his chylopoetic viscera, and his system gets the full benefit of the food which is required for its nourishment.—Dr. WILLIAM A. HAMMOND.

Advice that is Easy to Give.

Don't worry.

"Seek peace and pursue it."

Be cheerful. "A light heart lives long."

Never despair. "Lost hope is a fatal disease."

"Work like a man, but don't be worked to death."

Spend less nervous energy each day than you make.

Don't hurry. "Too swift arrives as tardy as too slow."

Sleep and rest abundantly. Sleep is nature's benediction.

Avoid passion and excitement. A moment's passion may be fatal.

Associate with healthy people. Health is contagious as well as disease.

Don't overeat. Don't starve. "Let your moderation be known to all men."

Candlemas Day.

Candlemas Day, the 2d of February, is kept in the church in memory of the purification of the Virgin, who presented the infant Jesus in the Temple. From the number of candles lit this festival was called Candlemas. Its origin is ascribed by Bede to Pope Celasius in the fifth century.

A Sociological Power.

The genesis of voluntary attention is to be found in its utility. When the conditions of life become at all hard, and especially if they become so by more or less sudden changes, the power of adaptation to them is dependent upon voluntary attention to details; upon consideration of something besides the immediately attractive and useful. The savage is lazy; is inspired only by chase, by war, by play; his interest is in the unknown, the unforeseen, the chance. He is not capable of continuous labor. In half civilized communities work is repugnant. Voluntary attention is a factor of civilization, and is maintained with effort. The most constant characteristic of criminals is lack of power to pursue a steady calling; and the Italian anthropologists regard this as a reversion to primitive habits. Voluntary attention thus came in, and is maintained as a sociological power.—Prof. TH. RIBOT.

They All Died at 56.

Hugh Capet, King of France; born 940, died 996.

Henry VIII., King of England; born 1491, died 1547.

Henry IV., Emperor of Germany; born 1050, died 1106.

Frederick I., first King of Prussia; born 1657, died 1713.

Nicols Paganini, Italian violinist; born 1784, died 1840.

Alexander Pope, English poet; born 1688, died 1744.

George Sale, English orientalist; born 1680, died 1736.

Degli Alighieri Dante, Italian poet; born 1265, died 1321.

John Hancock, American statesman; born 1737, died 1793.

Maria Louisa, Empress of France; born 1791, died 1847.

Philip Massinger, English dramatist; born 1584, died 1640.

Saladin, Sultan of Egypt and Syria; born 1137, died 1193.

Robert Stephenson, English engineer; born 1803, died 1859.

Helvetius. French philosopher and author; born 1715, died 1771.

Henry II., first of the Plantagenet line; born 1133, died 1189.

Rev. Charles Kingsley, English author; born 1819, died 1875.

Juan Prim, Spanish general and statesman; born 1814, died 1870.

Caius Julius Cæsar, Roman general; born 100 B. C., died 44 B. C.

The elder Pliny, Roman naturalist and author; born 23, died 79.

Claudius II., Marcus Aurelius, Emperor of Rome; born 214, died 270.

Henry Knox, revolutionary general; born 1750, died 1806.

Thomas Mifflin, patriot and general; born 1744, died 1800.

Von Maarten Harpertzoon Troup, Dutch admiral; born 1597, died 1653.

Abraham Lincoln; born 1809, died 1865.

Barry Edward O'Meara, Irish surgeon in St. Helena; born 1780, died 1836.

Frederick Marryat, English naval officer and novelist; born 1792, died 1848.

Scipio Æmilianus Africanus Minor, Roman general; born 185 B. C., died 129 B. C.

Robert Dudley, Earl of Leicester, favorite of Queen Elizabeth; born 1532, died 1588.

George Whitefield, English founder of Calvinistic Methodism; born 1714, died 1770.

Johann Gaspar Spurzheim, German physician and phrenologist; born 1776, died 1832.

Frederick II., Emperor of Germany and King of Naples and Sicily; born 1194, died 1250.

Some Famous Suicides.

The following are some of the more noted suicides of which mention is made in history. These do not savor much of insanity, but rather of stoic philosophy.

Cato stabbed himself rather than live under the despotic reign of Cæsar; Themistocles poisoned himself

rather than lead the Persians against his countrymen; Zeno, when 98, hung himself because he had put his finger out of joint; and Hannibal and Mithridates poisoned themselves to escape being taken prisoners. When we search Scripture we find that Saul, rather than fall into the hands of the Philistines, commanded his armor-bearer to hold his sword that he might plunge upon it; Samson, for the sake of being revenged upon his enemies, pulled down the house in which they were revelling, and "died with them;" and Judas Iscariot, after selling the Savior for thirty pieces of silver, was overcome by remorse, "and went and hanged himself."

Modern Longevity.

In the year from March 25, 1888, to March 24, 1889, there were recorded in *The London Times* the deaths of 193 persons, inhabitants of Great Britain, aged 90 years and upward. Of these 68 were men and 125 women. Two women had attained 101. The rest were recorded as follows:—Aged 99, man 1, women 4; aged 98, women 3; aged 97, men 4, women 4, aged 96, men 4, women 7; aged 95, men 3, women 7; aged 94, men 8, women 7; aged 93, men 7, women 17; aged 92, men 12, women 24; aged 91, men 15, women 19; aged 90, men 14, women 31.—*London Times*.

Age of Parents and Vitality of Children.

Mr. J. Korosi, director of the Hungarian bureau of statistics, taking 24,000 cases as a basis, reaches the following conclusions:—

Children whose father is less than 20 years of age have a weak constitution. The issue of fathers of between 25 and 40 years are the strongest, while the descendants of fathers of over 40 years are weak. The healthiest children are those whose mother has not yet reached 35 years. Those born of mothers of between 35 and 40 years of age are 8 per cent. weaker, and those of mothers of over 40 years are 10 per cent. weaker. The children of aged fathers and younger mothers have, as a general thing, a strong constitution; but if the

parents are of the same age, the children are less robust.—*Revue Scientifique.*

Why Flowers Sleep.

That flowers sleep is evident to the most casual observer. The beautiful daisy opens at sunrise and closes at sunset, whence its name "day's eye." The morning glory opens its flower with the day. The "Four O'Clock" awakes at four in the morning, but closes its eyes in the middle of the day, and the dandelion is in full bloom only during the hours of strong light. The habit of some flowers is certainly very curious, and furnishes one of the many instances which prove the singular adaptability of everything in nature. The reason is found in the method by which this class of flowers is fertilized. It is obvious, says Sir John Lubbock, that flowers which are fertilized by night-flying insects would derive no advantage from being open by day; and, on the other hand, that those which are fertilized by bees would gain nothing by being open at night. Nay, it would be a disadvantage, because it would render them liable to be robbed of their honey and pollen by insects which are incapable of fertilizing them. It is possible, then, that the closing of flowers may have reference to the habit of insects, and it may be observed, also, in support of this, that wind-fertilized flowers never sleep.—*Jewish Messenger.*

The British Empire.

King Edward is now sovereign over a continent, 100 peninsulas, 500 promontories, 1000 lakes, 2000 rivers, and 10,000 islands. He waves his hand and 900,000 warriors march to battle to conquer or die. He bends his head and at the signal 1000 ships of war and 100,000 sailors perform his bidding on the ocean. He walks upon the earth and 30,000,000 human beings feel the least pressure of his foot. The Assyrian empire was not so populous. The Persian empire was not so powerful. The Carthaginian empire was not so much dreaded. The Spanish empire was not so widely diffused. The Roman power was weak in comparison, and Greece was as a small village.

A Boy Should Learn.

- To let cigarettes alone.
- To be kind to all animals.
- To be manly and courageous.
- To ride, row, shoot, and swim.
- To build a fence scientifically.
- To fill the wood box every night.
- To be gentle to his little sisters.
- To shut doors without slamming.
- To sew on a button and darn a stocking.
- To do errands promptly and cheerfully.
- To shut the door in winter to keep the cold out.
- To shut doors in summer to keep the flies out.
- To wash dishes and make his bed when necessary.
- To have a dog if possible and make a companion of him.
- To get ready to go away without the united efforts of mother and sister.

Friday is Not Unlucky.

Friday, February 22, 1732, George Washington was born.

Bismarck, Gladstone, and Disraeli were born on Friday.

Friday, March 25, 1609, the Hudson river was discovered.

Friday, June 30, 1461, Louis XI. humbled the French nobles.

Friday, March 18, 1776, the Stamp Act was repealed in England.

Friday, June 13, 1492, Columbus discovered the continent of America.

Friday, December 22, 1620, the Pilgrims made the final landing at Plymouth Rock.

Friday, June 13, 1785, General Winfield Scott was born in Dinwiddie County, Va.

Friday, June 10, 1834, Spurgeon, the celebrated English preacher, was born.

Friday, November 20, 1721, the first Masonic lodge was organized in North America.

Thomas Sutton, who saved England from the Spanish armada, was born on Friday.

Friday, January 12, 1433, Charles the Bold, of Burgundy, was born, the richest sovereign of Europe.

Friday, November 28, 1814, the first newspaper ever printed by steam, the London *Times*, was printed.

Friday, June 12, 1802, Alexander Von Humboldt, in climbing Chimborazo, reached an altitude of 19,200 feet.

Friday, September 7, 1465, Melendez founded St. Augustine, the oldest town in the United States by more than forty years.

Friday, April 8, 1646, the first known newspaper advertisement was published in *The Imperial Intelligencer*, in England.

Friday, May 14, 1586, Gabriel Fahrenheit, usually regarded as the inventor of the common mercurial thermometer, was born.

Friday, March 5, 1496, Henry VIII. of England, gave to John Cabot his commission, which led to the discovery of North America. This is the first American state paper in England.

Friday, July 7, 1776, the motion was made in congress by John Adams, and seconded by Richard Henry Lee, that the United States colonies were, and of right ought to be, free and independent.

Friday, March 20, 1738, Pope Clement XII. promulgated his bull of excommunication against the Freemasons. Ever since the allocution excommunicating indiscriminately all Freemasons the order has received an immense impetus in Italy, France, and Spain.

Sobriquets of Women.

Mary of Modena, Queen of James II. of England, bore the title of "Queen of Tears."

The title of "St. Filomena" was bestowed upon Florence Nightingale by Longfellow.

Jenny Lind, the famous singer, bore the appropriate name of "the Swedish Nightingale."

Elizabeth, Queen of Bohemia, and daughter of James I. of England, was called the "Queen of Hearts."

Johanna, the beautiful daughter of Edmund, Earl of Kent, gained the sobriquet of "Fair Maid of Kent."

Elizabeth Barton, a supposed seeress of the sixteenth century, was called the "Holy Maid of Kent."

Louise Labe, the French poetess, who lived in the sixteenth century, was called "The Beautiful Rope-maker."

"The Gem of Normandy" was the complimentary sobriquet given to Emma, daughter of Richard I., Duke of Normandy.

Anne, Countess of Sunderland, and daughter of the Duke of Marlborough, bore the political title of "The Little Whig."

Matilda, daughter of Henry I. of England, was given the title of "Lady of England" by a council held at Winchester in the twelfth century.

"The Semiramis of the North," was the sobriquet bestowed upon Margaret, daughter of Waldemar III., King of Denmark, for her warlike qualities.

"The English Sappho" was a sobriquet given to Mary Darby Robinson, who acquired a reputation for beauty, wit, and poesy, during the reign of George IV.

Augustina Zaragoza, of Spain, earned the sobriquet, "The Maid of Saragossa," by her bravery during the defence of Saragossa against the French in 1808-9.

Queen Mary of England was called "Bloody Mary." Mary was succeeded on the throne by her sister Elizabeth, who was known in history as "Good Queen Bess." Elizabeth was also called "The Virgin Queen."

The Influence of Color.

The influence of color upon the complexion and general tone of the toilet is very striking. Blondes should avoid the lighter shades of blue, which are apt to give an ashy hue to the complexion. The darker shades of blue may be worn more recklessly by the blonde than the brighter shades, because throwing out the complexion in high relief upon an accommodating background, and the darker and more velvety the shade the finer the effect. Brunettes cannot wear blue becomingly, since this shade, when shadowed by a yellow skin, enters into a composition of green, and the tawinness of the complexion is increased. The florid brunette can risk the wearing of blue. Green is a dangerous color for brunettes, but well adapted to the fair. A pale brunette can effectively wear red—it heightens the effect

of the brune beauty. It is stated by a reliable authority that "crimson should be charily indulged in by the brunette, but crimson may be worn with safety by the blonde. Yellow is highly becoming to the pale brunette, and especially by gaslight." Yellow grows paler and softer in artificial than in natural light; it enters into the olive shade in the brune skin with a softening effect, giving it a rich, creamy tint that becomes beautiful in contrast with brilliant dark eyes and rich dark hair. The artists long ago discovered what milliners are slow to perceive, and that is that yellow clears everything.

Slang Names for Coins.

Probably every country possesses peculiar or "slang" terms in every day use for its coins. For instance, a "nickel" very well defines the five cent piece of currency, and a "red cent" is equally expressive. In Scotland a man who "flies kites" is probably not worth a "boodle," which is an imaginary coin slightly differing from the same term here. In England the same person would not be worth a "mag." A "kite" is an accommodation bill; a "mag" is the smallest copper coin of the realm. On the race course in England one hears talk of betting a "pony," which is £25, (\$125), or winning a "monkey," which is £500 (\$2,500.) This latter, however, is somewhat rare.

A "quid" only has reference to tobacco when the term is used by sailors. Among landmen it means £1 (\$5.00.) Small gamblers play for "bulls" and "half-bulls"—in other words, five shillings and half-crowns. (\$1.25 and 63 cents.) Little boys occasionally toss for "joey's," or four-penny pieces (8 cents), and a hansom cab driver will expect you to tip him with a "tanner," which is what he calls a sixpence, (12 cents), while the common appellation of a shilling is a "bob," (25 cents.) These terms are commonly in use all over England.

Derivation of Words.

Ethics, from *ethos*, custom.

The dollar was the German thaler.

The guinea was first made in Guinea.

The florin was first made in Florence.

Mortal, from mar, meaning to mar, to kill.

Moral, from mos, which means simply custom.

Sandwiches were first made by Lord Sandwich.

The mark was stamped with the lion of St. Mark.

Law, A. S. legu, simply that which "lies" in due order.

Black doubtless comes from "night," the absence of light.

Electricity, from electron, amber, from which it was discovered.

Yellow comes from the trees with reference to their autumn foliage.

Green is from the same root as greno, referring to the trees and vegetation.

Influenza, so named because the epidemic was supposed to have been caused by the planets.

Magenta, a red or crimson dye derived from aniline, first brought into use near Magenta, Italy.

Rose, pink, violet, copper, bronze, orange, lemon, hazel (chestnut), ochre, ash, from objects in nature.

Superstition, that which remains or stands over, that which lingers after an opinion has been exploded.

Blue is of uncertain origin, probably from the German for "lead," though possibly from the Swedish name for "ink."

Ruins of Regamuende.

A city at the bottom of the sea was seen toward the end of October 1888 near Treptow, in Prussia, when a powerful south wind blew the waters of the Baltic away from the shore, uncovering a portion of ground usually hidden from sight by the waves. It was the ruins of the city of Regamuende, once a flourishing commercial station, which was swallowed by the sea some five centuries ago. The unusual spectacle was enjoyed but for a few hours, when the storm slackened and the waves returned to cover up the place which had once been the residence and field of labor of busy men.

Longest Twelve Word Telegram.

There were 450 competitors for the prize offered by an English journal for the longest twelve word tele-

gram, and the winner put in the following, which was accepted by the telegraph officers for transmission for sixpence, the regular rate: "Administrator general's counter-revolutionary intercommunications uncircumstantiated. Quartermaster general's disproportionableness characteristically contradistinguished unconstitutionals' incomprehensibilities."

An Intricate Language.

The intricacies of our language are well illustrated in the definition given of a sleeper.

A sleeper is one who sleeps. A sleeper is that in which the sleeper sleeps. A sleeper is that on which the sleeper runs while the sleeper sleeps. Therefore, while the sleeper sleeps in the sleeper, the sleeper carries the sleeper over the sleeper under the sleeper until the sleeper which carries the sleeper jumps the sleeper and wakes the sleeper in the sleeper by striking the sleeper on the sleeper, and there is no longer any sleeper sleeping in the sleeper on the sleeper.

Derivation of the Word "Salary."

The derivation of our word "salary" is very curious. In ancient times Roman soldiers received a daily portion of salt as part of their pay. Sal, in Latin, is salt, and when the salt was, in course of time, commuted for money, the amount was called *salarium*, or salt money. Hence our "salary," and hence, no doubt, the expression, "not worth his salt"—*i. e.*, his salary.

The Turks and the Crescent.

The crescent was not originally an emblem of the Turk. It was first used by the primitive Christians of Constantinople and the eastern provinces of the old Roman Empire as an emblem of the growing influence of Christianity. It was not until about the year 1453, after the Turks had overrun Asia Minor and parts of southeastern Europe, and had captured Constantinople, that the Turks adopted the crescent as their national emblem. The Koran prohibits the use of images and symbols in the religious ceremonies of the strict Turk,

or the internal decorations of their temples and mosques, the rule being so strict as not to allow the martial or civic decoration of their greatest generals or pashas, successful commanders or other distinguished persons. The adoption of the crescent by the Turk as a national emblem is an oddity which has, so far, remained unexplained.—*Exchange*.

Pigeon English—Origin of the Term.

The word pidgin, or pigeon, as connected with English, is a Chinaman's poor attempt to pronounce the word business. Dr. Brewer gives it—business, bidginess, bdigin, pidgin, pigeon. Pigeon English, therefore, means business English. It is a strange admixture of English, Chinese, and Portuguese, and is used in all parts of the far east as a means of communication between the natives and the foreigners. During nearly half a century, and especially since the opening of many of the Chinese ports to Europeans, business relations have developed to such vast proportions and reached into so many channels that some universally understood means of communication became absolutely necessary, and pidgin or pigeon English was the result. Its acquirement in the coast ports, at all events, is a matter of importance both with traders and with natives, who seek situations in foreign employ, and it has become a popular medium of communication.

Already this rude form of our language bids fair not only to reach all the peoples of the far east, but it is extending as a new form of speech in this country and in Australia, and wherever else the patient, industrious Chinaman locates himself for the purposes of gain. Experts in the east have amused themselves and their friends with translations of English poetry into pigeon English. Two verses of Longfellow's "Excelsior" have been rendered as follows:—

Two muchee darkee come chop chop
 One young man walkee, no can stop,
 Maskee snow! maskee ice!
 He cally flag with chop so nice.
Topside—Galah.

He muchee solly, one piecee eye
 Lookee sharp, so, all same my
 He talkee large, he talkee strong,
 Too muchee curio, all same gong.
 Topsyde—Galah.

As there is an Anglo-Chinese language called pigeon English, so there is an Anglo-Indian of a somewhat similar character, called baboo English, a mixture of English and Hindostan words.

English Words.

Shakespeare, who is considered rather wonderful than learned, had a vocabulary of about 15,000 words; Milton had one of about 8000 words. The average learned man has a vocabulary considerably smaller than Milton's; the average man who is not learned can get along with 3000 or 4000, and the man who doesn't do much of any thinking can get along with about 1000 words.

Crocodile Tears.

"Crocodile tears" are sham tears, or hypocritical sorrow. The crocodile was supposed to make moans and thus draw unsuspecting travelers into its power. Shakespeare says:

Gloster's show
 Beguiles him as the mournful crocodile
 With sorrow snares relenting passengers.

When Books were Written.

Byron began "Childe Harold" when he was 20.
 Le Sage composed his "Gil Blas" at the age of 42.
 Dante was 50 when he completed his "Commedia."
 Wordsworth was 44 when he wrote "The Excursion."
 Dr. Johnson commenced his dictionary at the age of 39.
 Goethe wrote his "Sorrows of Werther" when he was 23.

Keats wrote "Endymion" at 22; "The Eve of St. Agnes" at 24.

Addison was 39 when he commenced his "Spectator Essays."

Carlyle wrote "Sartor Resartus" at 39; "The French Revolution" at 42.

Swift wrote his "Battle of the Books" at 30; "Gulliver's Travels" at 59.

Sterne wrote "Tristram Shandy" at 46; "The Sentimental Journey" at 55.

Macaulay wrote "Ivry" at 26; "Essays," 40 to 42; "History of England" at 48.

De Quincey was 35 when he wrote "The Confessions of an Opium Eater."

Milton wrote "L'Allegro," "Il Penseroso," "Comus" at 29; "Paradise Lost" at 57.

Gray wrote the "Ode to Adversity" at 36; "Elegy in a Country Churchyard" at 43.

Manzoni, Italy's greatest novel writer, wrote "The Betrothed" when he was 43.

Schiller was 19 when he wrote "The Robbers," and 26 when he composed "Don Carlos."

Richard Brinsley Sheridan wrote "The Rivals" at 23; "The Duenna" at 25; "School for Scandal" at 26.

Bacon was 49 when he wrote "The Wisdom of the Ancients," and past 60 when he finished his "Novum Organum."

Shelley wrote his "Essay on the Necessity of Atheism" at 17; "Queen Mab," 18; "Prometheus and the Cenci," 27.

Coleridge wrote "The Ancient Mariner," and "Christabel" at 24; "Biographia Literaria" and "Table Talk," 44.

Fielding wrote "Love in Several Masques" at 20; "Joseph Andrews," 35; "Jonathan Wild," 36; "Tom Jones," 42.

Cervantes, the great Spaniard, was 50 years of age when he finished "Don Quixote." He wrote it during an imprisonment.

Robert Burns wrote his "Poor Maillie's Elegy" and "John Barleycorn" at 19, and all of his best work was done before he was 25.

Thackeray wrote "Michael Angelo Titmarsh Papers" at 30; "Vanity Fair," 35; "Pendennis," 39; "Henry Esmond," 41; "Virginians," 46.

Dumas, the elder, was 25 when he wrote his drama "Henry the Third," 41 when he wrote "The Three Musketeers," and 42 when he wrote the "Count of Monte Cristo."

Balzac gave to France his "Physiology of Marriage" at 31, and his "Comedie Humane," including "Pere Goriot," "Cousin Pons," "Eugene Grandet," &c., after he was 35.

Heinrich Heine, wit, poet, satirist, and philosopher, composed his first lyrics at 22—his "Youthful Sorrows." At 26 he wrote his celebrated "Reisebilder" (Pictures of Travel).

Victor Hugo wrote a volume of odes and ballads at 20, "Marion de L'Orme" at 29, "Ruy Blas" at 36, "Les Miserables," his greatest work, at 60, and the "Toilers of the Sea" at 63.

Goldsmith wrote "Vicar of Wakefield" at 36; "The Traveler," 36; "The Good Natured Man," 39; "Roman History," 41; "She Stoops to Conquer," 44; "History of Animated Nature," 46.

Lessing was 37 when he wrote the greatest critique, "The Laocoon;" 43 when he wrote his tragedy, "Emelia Galotti;" 46 when he gave to the world his charming comedy, "Minna von Bernheim."

Dickens wrote "Boz Sketches" at 24; "Pickwick," 25; "Oliver Twist," 26; "Nicholas Nickleby," 27; "Barnaby Rudge," "Old Curiosity Shop," "Master Humphrey's Clock," 29; "Martin Chuzzlewit," 32; "Dombey and Son," 36.

Scott wrote "Leonora" and "Wild Huntsman," at 25; "Lay of the Last Minstrel," 34; "Guy Mannering," "Rob Roy," "Ivanhoe," "The Heart of Midlothian," from 44 to 48; "Kenilworth," "Quentin Durward," "Peveril of the Peak," 48 to 54.

At the age of 29 Shakespeare wrote his "Lucrece." His "Venus and Adonis" was composed at an earlier age. When he had reached 32 many of his best dramas had been written—"Richard III.," "Merchant of Venice," "Midsummer Night's Dream," "Richard II.,"

and "All's Well That Ends Well." At 40 he wrote "Hamlet."

How Some Poems Were Written.

Gray's immortal "Elegy" occupied him for seven years.

Bryant wrote "Thanatopsis" in the shade of a grand old forest—a fitting spot for such a theme.

Cowper wrote one of the drollest and quaintest English ballads, "John Gilpin's Ride," when he was under one of those fits of depression so common to him.

General Lyle wrote his beautiful composition, "Antony and Cleopatra," which begins, "I am dying, Egypt, dying," on the night before his death. He had a premonition that he was going to die the next day.

The noted poem, "The Falls of Niagara," was written by its author, J. G. C. Brainard, the editor of a small paper in Connecticut, in fifteen minutes. He wrote it under pressure in response to a call for "more copy."

"After the Ball," the little poem which has made the name of Nora Perry known in the world of letters, was jotted down on the back of an old letter, with no idea of the popularity it was to achieve in the pages of a noted magazine.

Thomas Moore, while writing "Lalla Rookh," spent so many months in reading up Greek and Persian works that he became an accomplished Oriental scholar, and people found it difficult to believe that its scenes were not penned on the spot, instead of in a retired dwelling in Derbyshire.

Poe first thought of "The Bells" when walking the streets of Baltimore on a winter's night. He rang the bell of a lawyer's house (a stranger to him), walked into the gentleman's library, shut himself up, and the next morning presented the lawyer with a copy of the celebrated poem.

The "Old Oaken Bucket" was first suggested to the author, Samuel Woodworth, in a bar-room. A friend with whom he was drinking said that when they were boys the old oaken bucket that hung in his father's well was good enough for them to drink from. Woodworth immediately went home and wrote the famous poem.

"Old Grimes," that familiar "little felicity in verse," which caught the popular fancy as far back as 1823, was a sudden inspiration of the late Judge Albert G. Greene, of Providence, R. I., who found the first verse in a collection of old English ballads, and, enjoying its humor, built up the remainder of the poem in the same conceit.

Old Colloquial Phrases.

A writer in a literary monthly lately announced, with an air of surprise, his discovery of the word "flam," used in its present colloquial sense, in a work dated 1682. The surprise was natural, for probably few but professed students of our older literature know what a large number of present day words and phrases, modern and new fangled as they appear, are but survivals, sometimes with slightly changed meaning, from bygone times. In addition to a considerable number of such words the seventeenth century vocabulary was also rich in colloquial words and phrases, which, owing to changed conditions of life, and to the gradual and latterly rapid growth of the language, have either slowly died out of use, or have been elbowed out of favor and existence by more modern popular coinages. That will suit me "down to the ground," says the modern dealer in slang; two centuries and more ago it would have suited him "up and down." John Day, in his curious play, the "Isle of Gulls," 1606, says, "A thinge once well done is twice done; and I am in her mind for that, up and downe." "Friday-face" is a term still occasionally applied to a sour-visaged person; it was formerly in very common use. In the old comedy of "Wily Beguiled," 1606, we find: "What a friday-fac'd slave it is! I think in my conscience his face never keeps holiday." The phrase is doubtless derived from Friday being, ecclesiastically, the banyan day of the week.—*Gentleman's Magazine*.

The Indian Sign Language.

Although there are 73 different languages and about 800 dialects spoken by the Indians, the sign language is equally understood by all the tribes. Chief Natchez, of the Piute tribe, is an adept in the sign language. In

Washington city some years ago he held a consultation by signs with the best experts, in which he gave an account of the troubles existing at that time with some bands of renegade Indians up near the Oregon line, describing a trip he made to the camp of the hostiles. Natchez enjoys the almost solitary honor of having had his talk published in the government reports on these matters, with a full explanation of every sign he used in conveying the intelligence sought from him. He was highly spoken of by government experts for his great knowledge of and readiness in the Indian sign language.

A Poetic Aphorism.

The lines,

“Though the mills of God grind slowly,
Yet they grind exceeding small;
Though with patience He stands waiting,
Yet with exactness grinds He all.”

may be found in Longfellow's translations from the “*Sinngedichte*” of Friedrich von Logan, under the head of “Poetic Aphorisms.”

Origin of a Famous Song.

Once over the bar at its entrance from the Gulf, the Suwanee River holds its way with a deep current, in places of forty feet, far up through the forests of the best hard pine in the State. This dark river has, too, its romance, as being the place which gave rise to a melody which, like “Home, Sweet Home,” the affection of the heart will never let go. For it was here that a French family in the time of Louis XIV. came over and settled upon the Suwanee and made a plantation. After a while the father and mother and all died save one daughter, who, disheartened and desolate, returned to France, and there wrote, adopting in part that negro dialect which she had been familiar with on the plantation in her girlhood, a feeling tribute to “the old folks at home” in their graves in the far-off country.

Extraordinary Longevity.

The records prove that the following persons have attained an age exceeding 125 years. The year designated in the left hand column is the year of death. When not otherwise specified, the subject was a resident of the British Isles.

Year.	Age.
1759 Don Cameron	130
1766 John Delasomer	131
.... George King	129
1767 John Taylor	130
1774 William Beattie	133
1778 John Watson	130
1780 Robert M'Bride	127
.... William Ellis	131
1764 Eliza Taylor	131
1775 Peter Garden	131
1761 Eliza Merchant	133
1772 Mrs. Keith	133
1767 Francis Ange	134
1777 John Brooke	134
1714 Jane Harrison	135
1759 James Shellie	136
1768 Catherine Noonan	136
1771 Margaret Foster	136
1776 John Miarait	137
1772 J. Richardson	137
1793 — Robertson	137
1757 William Sharpley	138
1768 J. M'Donough	138
1770 — Fairbrother	138
1772 Mrs. Clum	138
.... Countess of Desmond	140
1778 Swarling (a monk)	142
1773 Charles M'Finley	143
1757 John Effingham	144
1782 Evan Williams	145
1766 Thomas Winsloe	146
1772 J. C. Drakenberg	146
1652 William Mead	148
1768 Francis Confi	150

Year.	Age.
1542 Thomas Newman	152
1656 James Bowels	152
.... Henry West	152
1648 Thomas Damme	149
1635 Thomas Parr	152
1797 Joseph Surrington	160
1668 William Edwards	168
1670 Henry Jenkins	169
1780 Louisa Truxo	175
1820 Solomon Nibet	143
1822 Lucretia Stewart	130
1839 Wm. James (S. Carolina)	132
1846 Thos. Lightfoot (Canada)	127
1861 Marian Moore (England)	131
1869 — Lockhart (Iowa)	127
1878 Eulalia Perez (California)	140
.... Edna Goodman (Arkan.)	127
1888 Granny Rose (S. Carolina)	131
1889 — Wapmarek (Germany)	126

The cases of Thomas Parr, Henry Jenkins, and Louisa Truxo are the best authenticated of any in the list, notwithstanding that they are given as being among the oldest. In 1887, James James, a negro, living near Santa Rosa, Mexico, proved to the satisfaction of a number of doctors that he was 135 years old.—*St. Louis Republic*.

A Bit of History.

Edward VII. King of Great Britain and Emperor of India, is the oldest son of the late Queen Victoria, who was the niece of William IV., who was the brother of George IV., who was the son of George III., who was the grandson of George II., who was the son of George I., who was the cousin of Queen Anne, who was the sister-in-law of William III., who was the son-in-law of James II., who was the brother of Charles II., who was the son of Charles I., who was the son of James I., who was the cousin of Elizabeth, who was the sister of Mary, who was the sister of Edward VI., who was the son of Henry VIII., who was the son of Henry VII., who was the cousin of Richard III., who was the uncle

of Edward V., who was the son of Edward IV., who was the cousin of Henry VI., who was the son of Henry V., who was the cousin of Richard II., who was the grandson of Edward II., who was the son of Edward I., who was the son of Henry III., who was the son of John, who was the brother of Richard I., who was the son of Henry II., who was the cousin of Stephen, who was the cousin of Henry I., who was the brother of William Rufus, who was the son of William the conqueror.

Thus King Edward can trace his ancestors back to about 800 years ago.

Eskimo Dogs.

During his wonderful sledge journey from Hudson Bay to the Arctic Ocean, Frederick Schwatka had abundant opportunity to learn the habits and the disposition of the Eskimo dog. He started out with sixty of them, using them to draw the sledges, and only nineteen were alive when he returned to Hudson Bay. The others had died, mostly of starvation. He says:—

“They were through all this horrible time perfect respecters of their human allies, and the little children used to go among them and play with them by pelting them over the back with their toy whips; and yet the same dogs were starving, and should one of them die his comrades would eat him. I notice this particularly, as some sensational writers have tried to make their readers believe that the Eskimo dogs are liable to become dangerous fellows, even to a powerfully built man, when simply hungry, and to be worse than wild beasts when ravenous. Any onslaught of Eskimo dogs is unknown among the northern natives where I traveled.

“It was pitiable in the extreme to see their sufferings as they so devotedly helped us along, many of them up till the very minute they had to be taken from the harness and abandoned on the road. As they dropped out along the way, we harnessed ourselves in their places to the sledge traces, and it was thus we were not compelled to leave important parts of our load.”

The Rewards of Editing.

To the Editor of the *Pall Mall Gazette*.

SIR,—Apropos of the presently raging controversy between authors and publishers, some interest may be felt in the following list of honoraria paid to different editors of the various editions of Shakespeare, Milton, Ben Jonson, Beaumont and Fletcher:—

For Editing Shakespeare.

Mr. Roose was paid	(\$180.)	£36	10	0
Mr. Hughes	(140.)	28	7	0
Mr. Pope	(1,087.)	217	12	0
Mr. Fenton	(153.)	30	14	0
Mr. Gay	(175.)	35	17	0
Mr. Whalley	(60.)	12	0	0
Mr. Theobald	(3,260.)	652	10	0
Dr. Warburton	(2,500.)	500	0	0
Mr. Capel	(1,500.)	300	0	0
Dr. Johnson (1st Edition)	(1,575.)	375	0	0
Dr. Johnson (2nd Edition)	(500.)	100	0	0

Pope's edition of Shakespeare was originally sold to subscribers at six guineas a copy (\$30.00), whereas Sir Thomas Hanmer's only cost three guineas a copy (\$15.00).

For Editing Milton.

Dr. Bentley, in 1732, was paid	(\$525.)	£105	0	0
Dr. Newton (for "Paradise Lost")	(3,150.)	630	0	0
Dr. Newton (for "Paradise Re-gained")	(525.)	105	0	0

For Editing Ben Jonson.

The Rev. Mr. Whalley was paid (\$1,050.)	£210	0	0
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For Editing Beaumont and Fletcher

Mr. Theobald was paid	(\$785.)	£157	10	0
Mr. Simpson	(333.)	66	15	0
Mr. Seward	(275.)	55	10	0

Dr. Smollett, for preparing a new edition of his "Universal History" was paid (\$7,875.) £1,575 0 0

—Faithfully Yours, TRACEY LAYARD ROBINSON.

Newstead Villas, Newstead Road,
Lee, S. E., *March* 1889.

Mottoes for Sun Dials.

Dials live over into this age of cheap clocks and watches not by reason of their use or convenience, but because of their associations. They were formerly designed with taste, and bore inscriptions suited to their purpose. Many of these are historic, as the one that used to be at Paul's Cross in London, which said, in Latin, "I number none but sunny hours."

An old-fashioned dial in a garden of Sussex, England, is said to bear upon its plate these four mottoes, each for its own season: "After Darkness, Light;" "Alas! how swift;" "I warn whilst I move;" "So passes Life."

Familiar old mottoes are some of our every day proverbs. Some of these are, "All things do wax and wane;" "The longest day must end;" "Make hay while the sun shines."

One of the most appropriate of these mottoes used to be borne by a dial that stood in the old Temple Gardens, and it is said to have been furnished by the great Lord Chancellor Bacon. His lordship was hard at work one day in his chambers, when an idle student dropped in to ask for a motto for the new sun dial which was then being built. Twice the student humbly made his request, but the grave chancellor gave no reply or sign of having heard it. At last, as the petitioner began for the third time, Bacon looked up and said angrily:

"Sirrah, be gone about your business!"

"A thousand thanks, my lord," replied the suitor. "The very thing for the dial! Nothing could be better."

—*Youth's Companion.*

The Fourteen Great Mistakes.

It is a great mistake to set up our own standard of right and wrong, and judge people accordingly; to measure the enjoyment of others by our own; to expect uniformity of opinion in this world; to look for judgment and experience in youth; to endeavor to mold all dispositions alike; to yield to immaterial trifles; to look for perfection in our own actions; to worry ourselves and others with what cannot be remedied; not to alleviate all that needs alleviation as far as lies in our power; not to make allowances for the infirmities of others; to consider everything impossible that we cannot perform; to believe only what our finite minds can grasp; to expect to be able to understand everything.

Unappreciated.

The perversity of human judgment has often been illustrated in sneering dispraise or utter neglect of a new literary work that has since proved its right to immortality. In the case of some masterpieces lapse of time or the death of their author seems necessary to open the eyes of critics to their merits.

Soon after "Paradise Lost" was published, the (then) celebrated poet Waller said of it, "The old blind school-master, John Milton, hath published a tedious poem on the fall of man; if its length be not considered as a merit it hath no other."

Pepys in his Memoirs thus speaks of Hudibras, "When I came to read it, it is so silly an abuse of the Presbyter knight going to the wars that I am ashamed of it; and by and by, meeting at Mr. Townsend's at dinner, I sold it to Mr. Battersby for eighteen pence."

Newspaper Names in the Far West.

One of our western historical societies possesses copies of the following newspapers. The names were copied from its files, and published in *The Writer*, of Boston, by Mr. F. O. Popenoe.

Kansas Prairie Dog, Cheyenne County Rustler, Clark County Clipper, Cash City Cashier, Morganville News and Sunflower, The Saturday Cyclone, The Brick, The

Eye, The Allison Breeze and Times, The Head Centre and Daily Morning Sun, The Broad Axe, Grip, Locomotive, Kansas Cowboy, The Ryansville Boomer, Hill City Lively Times, Western Cyclone, Conductor Punch, Cimaron Herald and Kansas Sod House, The Montezuma Chief, Ensign Razzoop, Border Ruffian, the Jayhawker and Palladium, Santa Fe Trail, Comanche Chief and Kiowa Chief, Daily Infant Wonder, The Scout, Gopher, and Winona, The Hatchet, The Fanatic, The Comet, the Boomerang, the Hornet, The Wasp, Astonisher and Paralyzer, Inkslingers' Advertiser, Grisby City Scorcher, Sunday Growler, The Prairie Owl, Springfield Soap Box, The Whim-Wham, Sherman County Dark Horse, The Bazoo, Thomas County Cat, and Grit.

Gathering the Vanilla Bean.

The vanilla bean is the costliest bean on earth. It flourishes in Mexico, chiefly in Papantla and Misantla. It grows wild, and is gathered and marketed by the natives. Just as they come from the forests the beans sell at \$10.00 per 1,000. After the beans are dried and cured they are worth from \$10.00 to \$11.00 per pound, according to quality. They are used by druggists and confectioners, and are an important article of commerce.

Consolation for the Red Haired.

It may be consoling to light haired and red headed people to read that out of 165 patients at an English insane asylum only one has red hair, and only four have light hair and complexion. We venture the guess, however, that that red headed chap makes matters as lively as all the other 164 put together. It used to be supposed that a pale complexion specially marked tendency to mental excitement and brain disorder. The statistics, however, show this to be an error. What is true of men is also true of women; they are, with one exception in fifty, dark haired and dark hued. It is sometimes the case that the hair turns white with insanity. Probably the error arose from this fact. The reason why dark people are more inclined to mental disorder has not been explained.

Curious Italian Superstitions.

St. John's day in Italy is thus observed at Revello, Italy. The people here have a curious superstition connected with this eve of St. John's day, which is observed by many. They repeat their rosaries until midnight, and then look out, firmly believing that they will see Herodias and her daughter pass, riding on a fiery plank, the daughter saying: "Mother, why did you say it?" and the mother saying, "Daughter, why did you do it?" and then plunge into the sea, the reason why, after St. John's day, the temperature of the sea rises, and bathing begins.

How to Select a Wife.

In the first place, see the girl you intend to honor as early in the morning as possible, and note whether she is fresh and tidy or limp and frowsy.

Watch how she treats her pets—her dog, her canary, her little sisters.

Discover what she eats and drinks, and make yourself certain whether she bathes or uses perfumery.

Remember if she makes a habit of walking or driving.

Inform yourself whether she dotes upon Owen Meredith and Henry James, or reads Longfellow and Fenimore Cooper.

Go to church with her and see if she cares more for the preacher than for the Gospel.

Make a sly study of her anatomy when you get a chance. Walk with her as fast as you can, and dance a whole waltz through with her, and mark if she allows herself breathing room and wears tight slippers.

Familiarize yourself with her father's affairs and her mother's temper; and then, my boy, when you've found a girl who is neat, trim, true, healthy, wealthy and wise, sail in and win her.

Big Gold Nuggets.

No name nugget, found at Weebville, August 1, 1869, weighed 12 pounds, worth \$2,750.

Sir Dominic Daly nugget, found February 27, 1862, weighed 26 pounds, and sold for \$6,240.

No name nugget, found at Bakery Hill, March 6, 1885, weighed 40 pounds, and was worth \$9,600.

Nil desperandum nugget, found at Black Hills, November 29, 1859, weighed 45 pounds, and sold for \$10,800.

Welcome stranger nugget, found on Mount Moliagel, February 9, 1869, weighed 190 pounds, and was worth \$45,000.

Uncle Jack nugget, found at Buningorg, February 28, 1857, weighed 23 pounds 5 ounces, and was sold for \$5,620.

No name nugget, found at Ballarat, February 3, 1853, just 12 feet below the surface, weighed 30 pounds, and sold for \$7,360.

Oates & Delson nugget, found at Donnelly gold field in 1880, at the roots of a tree, weighed 189 pounds, and sold for \$50,000.

The Welcome nugget was found at Bakery Hill, June 9, 1858; it weighed 184 pounds 9 ounces 16 pennyweights, and was worth \$44,360.

No name nugget, found at Bakery Hill, Ballarat, March 5, 1855, near the surface, weighed 47 pounds 7 ounces, and was sold for \$11,420.

The Kohinoor nugget, found at Ballarat, July 27, 1860, at a depth of 160 feet from the surface, weighed 69 pounds, and was sold for \$16,680.

No name nugget, found in Canadian Gully, January 20, 1853, at 18 feet below the surface, weighed 93 pounds 1 ounce 11 pennyweights, and sold for \$22,350.

No name nugget, found in Canadian Gully, Ballarat, January 22, 1853, at a depth of 25 feet, weighed 84 pounds 3 ounces 15 pennyweights, and was sold for \$20,235.

The Leg of Mutton nugget was found at Ballarat, January 31, 1853, at a depth of 65 feet. It weighed 134 pounds 11 ounces, and was sold to the bank for \$32,360. This nugget was shaped like a leg of mutton, hence its name.

The largest piece of gold in the world was taken from

Byer & Haltman's gold mining claim, Hill End, New South Wales, May 10, 1872. Its weight was 640 pounds; height, 4 feet 9 inches; width, 3 feet 2 inches; average thickness, 4 inches; worth \$148,000.

Ahead of His Time.

On leaving Cambridge University, Harvey, the discoverer of the circulation of the blood, went to Padua to attend the lectures of a professor of anatomy, who taught the existence of valves in all the veins of the body. It was in trying to discover the use of such valves that Harvey discovered the circulation of the blood. He found that by placing a ligature upon an artery it became distended with blood on the side nearest the heart, but by placing one upon a vein it became distended on the side furthest from the heart, whence he proved the course of the blood from the heart through the arteries, and its return to the heart by the veins. Harvey's work cost him twenty-six years to bring to maturity; his discovery was coldly received; most persons opposed it; others said it was old, while very few agreed with him. To an intimate friend Harvey complained, after his book on the circulation was published, he fell considerably in his practice, and it was believed by the vulgar that he was crack-brained, or what in these times we would call a crank. Twenty-five years elapsed after the publication of the book setting forth his system before it was received in all the colleges and universities of the world.

In Famous Names.

Did you ever notice how common to great names the initial "W" is? No. Then just run your eye over the following list:—William Shakespeare, Walter Raleigh, William Blackstone, John Wesley, George Whitefield, William Penn, Roger Williams, James Watt, William Wilberforce, William Cowper, William Wordsworth, Richard Whately, George Washington, Joseph Warren, William Pitt, Wellington, William M. Thackeray, Winfield Scott, William Henry Harrison, Daniel Webster, Washington Irving, W. E. Channing, William H.

Seward, Wendell Phillips, Henry W. Longfellow, John G. Whittier, William Cullen Bryant, Oliver Wendell Holmes, Ralph Waldo Emerson, Henry Ward Beecher, Walt Whitman, W. E. Gladstone, George William Curtis, William E. Evarts, William T. Sherman, and others too numerous to mention. I defy any one to produce an equally illustrious list of names with any one of the other twenty-five letters of the alphabet common to all.

Air in Crowded Rooms.

A writer in *The Nineteenth Century* says: "Within doors we find that the number of micro organisms suspended in the air depends, as we should have expected, upon the number of people present, and the amount of disturbance of the air which is taking place. In illustration of this the following experiments, made at one of the Royal Society's conversaziones, held at Burlington House, may be mentioned. At the commencement of the evening, when a number of persons were already present, and the temperature was at 67 degs. Fahr., the two gallons of air examined yielded 326 organisms; later on, as the rooms became densely crowded, as indicated by the temperature rising to 72 degs. Fahr., the number reached 432. The next morning, on the other hand, when the room was empty, the air yielded only 130, but even this is doubtless in excess of the number which would be present in the room in question under normal conditions, in which, judging from experience, I should expect to find about 40 to 60 in the same volume of air."

To Increase Lung Power.

Men and women can increase their lung power—chest expansion it is called technically—by five minutes' exercise morning and night. Stand up straight on the balls of the feet, head thrown back, and inhale deeply, first inflating the lower part of the lungs and then the upper. Then expire slowly, letting the chest sink first, and then the lungs. Do this fifteen times morning and evening, and you'll spend less money on colds and catarrhs.

A Curious Funeral Ceremony.

One curious ceremony still survives, and has puzzled the learned. When a Parsee dies, a dog (originally a fox-eyed dog was demanded, but now a yellow dog with white ears is orthodox) is brought in and made to look upon the body. What the significance of this is the modern Parsis cannot explain, or rather they offer contradictory explanations.

Perhaps it is connected with the Parsee tradition of the dogs of Yima, the lord of death, who has two hounds which go through the earth scenting out those who are marked for the grave, and afterward escort their souls to the place of judgment, guarding them on the way from the evil spirits. Possibly the bringing in of the dog to look at the corpse had its origin in the idea of securing the attention of the dogs of Yima to the just departed spirit, and so insuring the due protection of the latter on its last perilous journey.

Laughter as a Health Promoter.

In his "Problem of Health," Dr. Greene says that there is not the remotest corner or little inlet of the minute blood vessels of the human body that does not feel some wavelet from the convulsions occasioned by good hearty laughter. The life principle, or the central man, is shaken to its innermost depths, sending new tides of life and strength to the surface, thus materially tending to insure good health to the persons who indulge therein. The blood moves more rapidly, and conveys a different impression to all the organs of the body, as it visits them on that particular mystic journey when the man is laughing, from what it does at other times. For this reason every good hearty laugh in which a person indulges tends to lengthen his life, conveying, as it does, new and distinct stimulus to the vital forces.

Some Old Odd Remedies.

Aspen leaves used to be considered good against ague.
Snails boiled in barley water were sovereign for an ordinary cough.

Whooping cough could be cured by any one who rides on a piebald horse.

The heart-shaped leaves of the ordinary wood sorrel were remedial in heart disease.

Turmeric, on account of its deep yellow color, was of great reputation in the treatment of jaundice.

Any one suffering the agonies of toothache was instantly relieved by merely smelling a dead man's tooth.

A little of the moss growing on a skull, dried well, reduced to powder, and used as snuff, was specific for headache.

Warts:—"Put three droppes of the blood of a wart into an eldern leafe, and burie it in the earthe and the warts will vanish away."

The powdered flesh of a mummy was of sovereign power in physic, especially in contusions, where it prevented the blood from settling and coagulating at the injured part.

The flowers of the lily of the valley being closely stopped up in glass, put into an ant hill and taken away again a month later, ye shall find a liquor in the glass, which being outwardly applied, helpeth gout.

From Beaumont and Fletcher's fine comedy, "The Knight of the Burning Pestle," we learn that chilblains should be rubbed well with a mouse skin, or the sufferer should roll his feet and ankles in hot embers.

Some Things we Don't Know.

We may come down from our pedestal for a little—there are still two or three things that we don't know. We do not know, for instance, how many of our kind there are on this globe. It is, after all, but a very small portion of the world that we know anything about, and the beaten path is but as a trail on a mountain. The interior of Newfoundland is a terra incognita; there are islands in the Pacific of which we know nothing more than that they exist; China and Thibet are largely closed volumes, and about many other portions of this world there is as much guess work as there was in the days of Marco Polo. We cannot tell why of two exactly similar bulbs put into precisely similar soil one

should bloom out as a tulip and the other come out as an onion. We do not know how the flowers receive their color or perfume, nor why it is that while we can catch the shadow in the camera we cannot also imprison the color.

There are many things, too, for which we have not been able to frame laws. We cannot agree as to the cause of earthquakes, the origin of volcanic fires, or the birth-throes of the whirlwind. We do not even know our own origin, and the thinking world is divided between evolution and creation. We do not know even the normal color of man, whether we are bleached from the dark original, or whether the dark races are sun-burnt editions of the early whites. Was the flood local or universal? Did Atlantis exist? Were there giants in those days? These are a few of the many questions that might be asked and remain unanswered.

Various Nicknames.

In nearly every occupation the capable worker has a nickname for the "botch" in the same profession, and the terms are used in reproach to make distinction between the good and the bad worker. The first-class lawyer, whose cranium contains more dignity than law, is termed an attorney or councillor, while the ne'er-do-well is called a "shyster." At sea an incompetent sailor is called a "marine;" on land the third-rate actor is stigmatized as a "barnstormer" or "hamfatter;" the physician who never cures is a "quack."

Counting Out Rhymes.

The following are a few of the many rhymes used by boys to decide who shall take the first innings in many games:—

Ana, mana, mona, mike;
 Barcelona, bona, strike,
 Care, ware, frow, frack;
 Hallico, ballico, we, wo wack!

This, also, is subject to countless variations; "Barcelona" becomes "tuscatona," etc. One form ends in:

Huldy, guldy, boo, out goes you.
 Ana, mana, dipery Dick;
 Delio, dolio, Dominick;
 Hitcha, pitcha, dominitcha,
 Hon, pon, tush.

In some districts the third line is given as, "Houtcha, poutcha, dominoutcha," and in others, "Hotcha, potcha," etc. "Tush" may also become "tus" or "tusk."

THE COUNT OUT.

Haley, maley, tippety, fig;
 Tiney, toney, tombo, nig;
 Goat, throat, country note;
 Tiney, toney, tig.

Eatum, peatum, penny pie,
 Babyloni, stickum stie,
 Stand you out thereby.

Besides rhymes of the character of the above, *i. e.*, consisting of a mixture of gibberish with disconnected words, there are many rhymes containing no uncouth words, but possessing in general a jingle easily recognizable.

One, two, three,
 Nanny caught a flea;
 The flea died and Nanny cried;
 Out goes she!

1, 2, 3, 4, 5, 6, 7, 8,
 Mary at the cottage gate,
 Eating grapes off a plate,
 1, 2, 3, 4, 5, 6, 7, 8.

This is given also, "plums" in place of "grapes," and "garden gate" for "cottage gate." When "cottage door" ends the second line the counting stops at "four" to satisfy the rhyme.

Threads Spun by the Spider.

The scientist Leuwenhock says: "I have often compared the size of the thread spun by full grown spiders with a hair of my beard. For this purpose I placed the

thickest part of the hair before the microscope, and from the most accurate judgment I could form, more than a hundred of such threads placed side by side could not equal the diameter of one such hair. If, then, we suppose such a hair to be of a round form, it follows that 10,000 of the threads spun by the full grown spider, when taken together, will not be equal in substance to the size of a single hair."

Cinder in the Eye.

Railroad conductors get a great deal of medical information and the understanding of many helpful little schemes in the course of a long year's run. Many of the conductors, who, among the many other ills and ailments of their passengers, have found that of a particle of dirt or cinder in the eye to be the most frequent and painful, carry with them a supply of horse hair. Their experience makes them experts in doubling the hair and drawing it over the eye while the lid is closed.

Garnet Ledges in Alaska.

The extensive garnet ledges at Fort Wrangell are an inexhaustible source of beautiful and ornamental curiosities. The cropping of the ledge is about ten feet wide, standing perpendicularly, and running north-east and southwest several miles in length; the depth of it no man has ever found out. The rock is of a mica slate formation, and contains from two to four dozen garnets to the cubic foot. The gems are regular polygons, beautiful in color, and when fresh from the mines have a dashing and brilliant lustre; but when exposed for a time they become dull and opaque. The crystal varies in dimensions from the size of a pea to that of a hen's egg, and to the novice are quite fascinating and have the appearance of much value for ornamental and other purposes.

The lapidaries, however, have failed to utilize them for any purpose whatever, except as a curio and to demonstrate the certainty of the unerring law of nature which governs every phenomenon. Every plane of the polygon is of the same form; every angle of the same

degree, and every gem is the equal and like of its fellow. The mining and shipment of this rock has become quite a business. It is worth \$20.00 per ton on the wharf at Fort Wrangell, and is shipped to all parts of the country to fill the cabinets of the wealthy and the collections in public institutions.

The First Deed in English.

Deeds in England were formerly written in Latin or French; the earliest known instance in English is the indenture between the Abbot of Whitby and Robert Bustard, dated at York in 1343.

The Power of Numbers.

To see nine magpies is extremely unlucky.

In France the seventh son in direct succession is called a *marcou*.

Virgil tells us in the eighth eclogue, that the gods esteemed odd numbers.

The seven days of creation led to a septenary division of time to all ages.

There were seven wise men in antiquity, and seven wonders of the world.

Nine grains of wheat, laid on a four-leaved clover, enable one to see the fairies.

It was an ancient belief that a change in the body of man occurs every seventh year.

Falstaff says: "They say there is divinity in odd numbers, either by nativity, chance, or death."

Nine knots made in a black woollen thread formerly served as a charm in the case of a sprain.

In many parts of England and in the United States an odd number of eggs is put under a setting hen.

The number three was the perfect number of the Pythagoreans, who said it represented the beginning, middle, and end.

In the Ferve Islands there is a superstition that seals cast off their skins every ninth month and assume the human shape.

For seven days seven priests with seven trumpets invested Jericho, and on the seventh day they encompassed it seven times.

Elisha sent Naaman to wash in the Jordan seven times, and Elijah sent his servant from Mount Carmel seven times to look for rain.

Miraculous powers are supposed to be possessed by the seventh daughter, but, as usual in the case of women, it is an occult power.

When a servant maid finds nine green peas in one pod she lays it on the window sill, and the first man who enters will be her "beau."

Among the Chinese heaven is odd, earth is even, and the numbers 1, 3, 5, 7, 9 belong to heaven, while the even digits are of the earth, earthy.

There is a well known superstition, current since the days of Ovid, that particular virtue, strength, or danger lies in the ninth wave of a series.

The ancients not only noted the importance of seven as an astronomical period, but also connected with the seven planets the seven metals then known.

The second digit acquired an especially evil reputation among the early Christians, because the second day hell was created, along with heaven and earth.

The number nine, besides being regarded as a lucky one, is possessed of mysterious properties, intensified from its being the product of three times three.

The Siamese have a regard for odd numbers, and insist on having an odd number of doors, windows, and rooms in their houses, and that all staircases must have an odd number of steps.

How to Tell a Person's Age.

Among many ingenious schemes for telling a person's age this is one of the easiest and best. Let the person whose age is to be discovered do the figuring. Suppose, for example, if it is a girl, that her age is 15, and that she was born in August.

Let her put down the number of the month in which she was born and proceed as follows:—

Number of month	8
Multiply by 2	16
Add 5	21

Multiply by 50	1050
Then add her age, 15	1065
Then subtract 365, leaving	700
Then add 115	815

She then announces the result, 815, whereupon she may be informed that her age is 15, and August, or the eighth month, is the month of her birth.

The two figures to the right in the result will always indicate the age and the remaining figure or figures the month the birthday comes in.

This rule never fails for all ages up to 100. For ages under 10 a cipher will appear prefixed in the result, but no account is taken of this.

Errors of History.

William Tell was a myth.

Coriolanus never allowed his mother to intercede for Rome.

Blondel, the harper, did not discover the prison in which Richard I. was confined.

Alfred never allowed the cakes to burn, nor ventured into the Danish camp disguised as a minstrel.

Fair Rosamond was not poisoned by Queen Eleanor, but died in the odor of sanctity in the convent of Godstow.

The Duke of Wellington at Waterloo never uttered the famous words, "Up, guards, and at them!"

Charles Kingsley gave up his chair of modern history at Oxford because he said he considered history "largely a lie."

Chemists have proved that vinegar will not dissolve pearls nor cleave rocks, in spite of the fabled exploits of Cleopatra and Hannibal.

Charles IX. did not fire upon the Huguenots with an arquebus from the window of the Louvre during the massacre of St. Bartholomew.

The siege of Troy is largely a myth, even according to Homer's own account. Helen must have been 60 years old when Paris fell in love with her.

The number of Xerxes' army has been grossly ex-

aggerated, and it was not stopped at Thermopylæ by 300 Spartans, but by 7,000, or even, as some authors compute, 12,000.

The Abbe Edgeworth frankly acknowledged to Lord Holland that he had never made the famous invocation to Louis XVI. on the scaffold: "Son of St. Louis, ascend to heaven."

Philip VI., flying from the field of Crecy, and challenged late at night before the gates of the castle of Blois, did not cry out, "It is the fortune of France." What he really said was, "Open, open; it is the unfortunate King of France."

Voltaire, on being asked where he had heard the story that when the French became masters of Constantinople in 1204, they danced with the women in the sanctuary of the Church of Santa Sophia, replied, calmly: "Nowhere; it is a frolic of my imagination."

There is no evidence that Romulus ever lived, that Tarquin outraged Lucretia, that Brutus shammed idiocy and condemned his sons to death, that Mucius Scævola thrust his hand into the fire, that Clœlla swam the Tiber, that Horatio defended a bridge against an army.

Six Literary Printers.

Walt Whitman began as a compositor.

David R. Locke (Petroleum V. Nasby) was at one time a type setter.

Joaquin Miller says that he got his first idea of writing while setting type in California, at 16 years of age.

Bret Harte began setting type at Eureka, Cal., and afterward pursued the same business in San Francisco.

Samuel L. Clemens (Mark Twain) got his start by setting type, and thinks that the time spent at it has proved of great advantage to him.

One of the last men you would suppose to have been in a way educated at the case is William D. Howells, and yet he had very little formal instruction.

Patron Saints.

St. Joseph, spouse of the Blessed Virgin Mary, is the patron of the universal church.

- St. Pancras, patron of childhood.
- St. Aloysius, patron of youth, purity, and students.
- St. Agnes, patron of maidens.
- St. Monica, patron of matrons.
- St. Maxima, patron of virgins and wives.
- St. Vincent de, Paul, patron of charities.
- St. Cammillus of Lellis, patron of hospitals.
- St. Sabine, invoked against gout and rheumatism.
- St. Apollonia, invoked against toothache.
- St. Benedict Joseph Labre, invoked against lightning.
- St. Roch, invoked against contagious diseases.
- St. Barbara, invoked for the last sacrament.
- St. Blase prevents and cures sore throats.
- St. Sebastian is the patron saint of soldiers.
- St. Hubert is the patron of hunters.
- St. Thomas Aquinas, patron of schools.

Why a Pump Operates.

No pump draws water; a pump can no more lift water than it can lift itself; it lifts nothing at any time. The plunger or bucket of a pump displaces the air which is in the barrel of the pump, and exhausts that which is in the feed or water pipe, called by custom the suction pipe—probably because it doesn't suck anything. After the air is displaced from the pipes the pressure of the atmosphere pushes the water to fill the vacuum. The pump has no other office to perform than to get the air out of the pipes.

How Water Quenches Fire.

Now, in the large amount of heat which water can take up, and the fact that ordinary inflammables must be raised to a high temperature in order to burn, we have the cause of water putting out a fire. Put a burning match into a very small drop of water, and it is extinguished, because of the very large amount of heat taken from the match in reducing the water to steam, which reduces the temperature of the match to far below 212 degrees, or at least that far, if there is water enough, and so the carbon and its compounds forming the wood will no longer unite with the oxygen of the

air. For the same reason a hot iron thrust into water is cooled, and water sprinkled on the floor cools the air, the heat of evaporation in the latter case coming from the air itself, thus cooling it. Now, if we could find a fluid, very plentiful, which requires much more heat than water to make it boil, evidently we could put large fires out much more readily.

Humidity.

The atmosphere is the gaseous envelope that surrounds the earth; it consists of oxygen, nitrogen, and carbonic acid, together with a very variable quantity of watery vapor. When more than 80 per cent. of watery vapor is present, the atmosphere is saturated. The 84 per cent. of humidity or wateriness is therefore 84 per cent. of what the atmosphere can carry; that is, it is 84 per cent. of a possible 80 per cent.

Air in Water.

The phenomenon of air in water, and the fact that in compressing water the air is not forced out, has long been an interesting subject of scientific study, the simple explanation being that water, as well as many other liquids, has the property of absorbing various gaseous substances without thereby increasing in volume; and far from reducing the capacity of the liquid to absorb a certain gas, the application of pressure increases it, the law being substantially that the amount of gas absorbed increases directly as the pressure increases, and contrairiwise. Thus, if water at ordinary atmospheric pressure will absorb one-fourth of its volume of air, at two atmospheres it will absorb another one-fourth, at three atmospheres still another fourth, and so on.

The capacity of water thus to hold large volumes of gaseous substances under pressure is well shown in the familiar example of carbonated waters. These are bottled under considerable pressure, the gas itself furnishing the pressure, in order that they shall become charged with a great quantity of the gas, which, being liberated as the pressure is removed by drawing the

cork, gives rise to the well known effervescence. In absorbing or discharging the gas, however, there is no change in the volume of the liquid.

The Evil Eye.

Our forefathers believed firmly enough in the evil eye. As far back as we are able to pierce through the obscurity of antiquity we find abundant evidences of this strange belief. Chaldean conjurations against the power of the evil eye are still in existence. An Assyrian incantation of the seventh century B. C. against a sorcerer represents the glance of the evil eye as most dangerous to man. Various Egyptian papri refer to this fatal power, and formulæ are given to preserve one from its effects. Vedaic hymns recite prayers to Aquia against the sorcerer, with his baleful glance, and there was a formula in an old Hindoo marriage ceremony recited by the groom against the possible evil effect from the glances of the bride. Among the curious laws governing the Brahmin is one that, in satisfying the wants of nature, he must not look at the sun, moon, stars, or planets, nor at a temple, a statue, a sacred tree, or a cow, for his glance would then be harmful to any of these. The Persian sacred books are full of the subject. A man of evil life is here deemed able to arrest the growth of plants and the current of living water, or to deaden the ripening fruit.

An allusion to this deadly power is found in Ecclesiastes. Various ancient writers give accounts of people who possessed this power to a wonderful extent. The cases of Medea and of the Gorgons will recur to every one. Pliny speaks especially of the Scythian and Illyrian women. Ovid, Plutarch, Horace, Herodotus, and other classical writers frequently allude to it. St. Mark puts an allusion to the evil eye in the mouth of Christ, and St. Paul alludes to it in the epistle to the Galatians. The early fathers of the church reason much about it with the result of leaving the matter in great confusion, but none of them question this power. They usually ascribe to the Deity the source of this great influence, but later writers assign it to the malevolence of Satan.

Superstitious Remedies.

For sore eyes a touch from an old gold wedding ring is a popular remedy, and many an old woman's ring has earned for itself a great name as an eye healer. Apparently reliable people can be found who assert that they have been cured by a touch of this description. Borlase asserts as a fact that a halter with which any one has been hanged will cure headache instantly if tied around the head, and he adds, "Moss growing upon a human skull, if dried and powdered and taken as snuff, is no less efficacious."

Brand tells of several superstitious remedies or charms:—"Hollow stones are hung up in stables at night to prevent nightmare or ephialtes. They are usually called in the north of England 'holy stones.' The chips of gallows and places of execution are used as amulets against agues. For warts we rub our hands before the moon, and commit any maculated part to the touch of the dead. The Rev. Mr. Shaw, in his history of the 'Province of Moray,' says that in hectic or consumptive diseases they pare the nails of the fingers and toes of the patients, put these parings into a rag cut from his clothes, then wave the hand with the rag thrice round the head crying 'Deas Soil.' After this they bury the rag in some unknown place. He tells us he has seen this done, and Pliny, in his 'Natural History,' mentions it as practised by the magicians or Druids of his time."

A Brief History of Thimbles.

The thimble was originally called a thumb bell by the English, because worn on the thumb, then a thumble, and finally its present name. It was a Dutch invention, and was first brought to England in 1695. Thimbles were formerly made only of iron and brass, but in comparatively late years they have been made of gold, steel, horn, ivory, and even glass and pearl. In China beautiful carved pearl thimbles are seen, bound with gold, and with the end of gold. The first thimble introduced into Siam was a bridal gift from the king to the queen; it is shaped like a lotus bud, made of

gold, and thickly studded with diamonds arranged to spell the queen's name.

The Glorious Apple Tree.

Men will journey a long distance, women will go into ecstasies, adjectives will be worn into shreds, and crowds will push and jostle to see a century plant in full bloom. If, now, a good, healthy, honest old apple tree would bloom but once in a hundred years, the century plant would be utterly forgotten. The overwhelming beauty and fragrance of the tree would infinitely surpass the odorless glories of the plant. Ten thousand lovely flowers on a single stalk, a mass of perfume, and a fabric of delicate beauty wherein the tint of a thousand sea shells is seen! And yet, by reason of its commonness, the apple tree in full bloom receives small tribute of praise and appreciation.

Hindoo Superstitions.

Rising in the morning while but half awake, the Hindoo repeats the name of Rama several times.

If a Hindoo happens to yawn he immediately fillips his thumb and middle finger, though he does not know why.

Some are so superstitious that if any evil portent occurs on the way they would return home, have a smoke, or chew a betel leaf, and proceed afresh.

If a fox crosses his path, if he hears a gong or shell summoning him to worship, or if he meets a Brahmin with his head uncovered, he would rejoice, hailing it as auspicious.

Should one sneeze, or should he hear the cawing of a crow, or the cry of a kite, or should he meet an old man, or one blind or lame, or see a cat cross his path, he would be greatly distressed as to the day before him.

Bengal Superstitions.

Shouting the name of the king of birds (Garuda) drives away snakes. Shouting Ram, Ram, drives away ghosts. Cholera that attacks on Monday or Saturday ends fatally, but not cholera that attacks on Thurs-

day. The flowering of bamboos augurs famine. In fanning, if the fan strikes the body it should be thrice knocked against the ground. When giving alms the giver and receiver should not be standing on different sides of the threshold. It is bad to pick one's teeth with one's nails. If a snake is killed, it should be burned, for it is a brahman. At night the words "snake" and "tiger" should not be used; call them creepers and insects. Do not wake up a sleeping physician. A morning dream always comes to pass. Devotion without head gear is wrong. Iron is a charm against ghosts. A black cat with a white face is very auspicious.

Some Mexican Superstitions.

It is believed that the murderer who has slain his victim with sword or dagger will escape if the body falls upon its side or back; but if the body falls face downward, then the murderer surely soon will be captured and put to death. This belief is said to be so firmly rooted among the people of north-eastern Mexico that when a murdered man falls upon his face his slayer makes no effort to escape, and even sometimes voluntarily surrenders himself to justice. If a bride, while dressing for her wedding, is pricked by a pin so that blood flows, great misfortune impends. If two people think of the same thing at the same time, a soul is loosed from purgatory.

The Horse-shoe Superstition.

The belief in the horse-shoe attained its greatest diffusion at the end of the last century and the beginning of this. Aubrey, in his "Miscellanies," tells us that in his time most houses in the west end of London had a horse-shoe nailed over the threshold. In 1813 Sir Henry Ellis counted seventeen horse-shoes in Monmouth Street, but in 1841 only five or six remained. Lord Nelson nailed a horse-shoe to the mast of the *Victory*, and "Lucky Dr. James" attributed the success of his fever powders to the finding of a horse-shoe, which symbol he adopted as a crest for his carriage.

Inherited Propensities.

Primitive man—our early ancestors—lived almost exclusively by hunting and fishing, and the passion for this sport was inherited from them. What is at first a necessity at length becomes a pleasure. The man who goes into business in order to maintain himself and family continues it after he is beyond the reach of want because habit has made it a pleasure to him. He will even deny himself needed rest and recreation because he is not contented when away from his business. The wild beast in a menagerie, although born in captivity, will pace restlessly up and down its cage, imitating the actions of its ancestors while running the plains in search of its prey. Although food is supplied in abundance, it continues to walk rapidly and look cautiously about, as did its great-grandparents when impelled by hunger to prowl about the jungle in search of food.

The hog, no matter how well fed, continues to root as though life depended upon it, as was the case with its untamed ancestors. The beaver, when in captivity, will pursue its passion for building, and so on throughout the whole animal kingdom.

Ducks in China.

It is stated that there are more ducks in China than all the world outside of it. They are kept on every farm, on the private roads, and on all the lakes, rivers, and small streams. There are many boats on each of which as many as 2,000 are kept. Their eggs constitute one of the most important articles of food. They are hatched in establishments fitted up for the purpose. Some of them turn out as many as 50,000 young ducks every year. Salted and smoked ducks are sold in all the towns, and many of them are exported to countries where Chinamen reside.

The Hornbill's Defences.

A traveler in South America writes: We passed the nests of several hornbill birds. When they are ready to lay, the nest is made in a hollow tree; the female goes within, leaving her whole immense bill sticking

out, and the male plasters the hole round it up with mud, that hardens at once; she lays her eggs and sits on them until they are hatched, the male feeding her all the time. The monkeys and snakes looking for eggs see this formidable looking beak sticking out of the hole and are afraid to tackle it, so she hatches in peace. The poor male in feeding her gets so poor that he can hardly fly.

Difference in Eggs.

In form and general aspect the difference among birds' eggs is endless. Some are elongated, some are spherical, some are dull on the surface, some are polished, some are dark and others gray or white, others very bright. The shape of eggs offers as much diversity as their size and weight. They may be thrown, however, into six different or typical forms—the cylindrical, the oval, the spherical, the ovicular, oviconical and the elliptic. The ovicular form of eggs belongs to the Passeræ and Galliacæ, the ovoid to the rapacious birds and the Palmipedes, the conical to the wading birds and some Palmipedes, the short to some game and many stilted birds, and the spherical to nocturnal birds of prey and the kingfisher.

If a farmer has a flock of one hundred hens they produce in egg-shells about one hundred and thirty-seven pounds of chalk annually; and yet not a pound of the substance, or, perhaps, not even an ounce, exists around the farm house within the circuit of their feeding grounds. The materials of its manufacture are found in the food consumed and in the sand, pebble stones, brick dust, bits of bones, etc., which hens and other birds are continually picking from the earth.

The Bamboo Tree.

The bamboo tree does not blossom until it attains its thirtieth year, when it produces seed profusely and then dies. It is said that a famine was prevented in India in 1812 by the sudden flowering of the bamboo trees, when 50,000 people resorted to the jungles to gather the seed for food.

Oysters in Antiquity.

Raw oysters were eaten at Athens and Rome as a preprandial whet. The Romans coated their oysters with honey, and kept them until they were slightly putrid. The simple and clumsy methods of Apicius, the third celebrated glutton of the name, for preserving oysters, was to wash them in vinegar and pack them in vessels coated with pitch. The oysters thus prepared and sent from Britain to the Emperor Trajan, when in Parthia, were considered "fresh," and have been sufficient to entitle this man's name to be handed down through twenty centuries. If he is to be deemed famous in direct proportion to the nastiness of his invention, he should be famous indeed. Brillat Savarin's preprandial whet consisted of three or four dozen oysters. Sieur Laperte, whom he used to entertain *tête-à-tête* at dinner, is said to have complained because he could not get his fill of oysters. Savarin determined to give him satisfaction in this respect, and let him go to his thirty-second dozen, when Laperte turned his attention to the dinner with powers unembarrassed by his prelude.

Egyptian Cats.

The Egyptians are the first people among whom we find notices of the cat. It figures largely upon the monuments as a domestic pet, and was honored when dead. Comical stories are told by Herodotus of the anxiety to save the cats when a house took fire, and of the grief when one died. The cat seemed to have served as a retriever in fowling expeditions, and even in fishing. It seems strange that no mention of the cat occurs in the Bible or in any Assyrian record. Even in India, Professor Max Muller is reported as saying that it was but recently known as a domestic animal. Its Sanskrit name is *marjara*, from a root meaning to clean, from the creature's habit of licking herself at her toilet. Her mousing habits were well known to the Romans, and even to the Etruscans, as shown by antique gems and even wall paintings. The mouse killer domesticated among the Greeks, called *gale*, described by Aristotle,

and humorously referred to by Aristophanes in the "Peace," has been shown by Professor Rolleston to have been the English white breasted marten. Besides the cat, the Egyptians domesticated the ichneumon, popularly known as Pharaoh's rat, which is still to be seen in the houses at Cairo.

Animals that See Both Ways.

Nature has enabled some animals to see objects behind them as well as in front without turning round. In insects this is noticeably true. Approach a fly ever so carefully from behind and notice how it sees your movements.

The hare has this power in a marked degree. Its eyes are large, prominent, and placed laterally. Its power of seeing things in the rear is very noticeable in greyhound coursing, for though this dog is mute while running, the hare is able to judge to a nicety the exact moment at which it will be best for it to double.

Horses are another instance. It is only necessary to watch a horse driven invariably without blinkers to notice this. Take, for instance, those on the horsecar lines. Let the driver even attempt to take the whip in hand, and if the horse is used to the work he will at once increase his pace.

The giraffe, which is a very timid animal, is approached with the utmost difficulty, on account of its eyes being so placed that it can see as well behind as in front.

Thick Skinned Animals.

The whale, which belongs to the mammalia, no doubt holds the palm for thickness of skin. At some parts of its body the skin is only two inches thick, but in many places its pelt is fully two feet in thickness. The skin of the whale is the substance usually known as blubber, and in a large specimen will weigh altogether more than thirty tons. The distinction of being the thickest skinned quadruped belongs to the Indian rhinoceros, whose hide has a knotty or granulated surface, and is so impenetrable as to resist the claws of the lion or tiger, the sword, or the balls of the old

fashioned musket. So stiff and hard is this skin, that were it not divided by creases or folds, the animal imprisoned in its armor could scarcely move. It is manufactured into leather of great strength and durability, and targets and shields are made of it that are absolutely proof against darts or sword strokes. The skin of the hippopotamus runs that of the rhinoceros very closely as regards thickness. When dried it is also used for shields, which are highly prized by the natives.

Every Animal its own Doctor.

Animals get rid of their parasites by using dust, mud, clay, etc. Those suffering from fever drink water, and sometimes plunge into it. When a dog has lost its appetite it eats that species of grass known as dog's grass, which acts as an emetic and a purgative. Cats also eat grass. Sheep and cows, when ill, seek out certain herbs. An animal suffering from chronic rheumatism always keeps as far as possible in the sun. The warrior ants have regularly organized ambulances. Latreille cut the antennæ of the ant, and other ants came and covered the wounded part with a transparent fluid secreted in their mouths.

If a chimpanzee is wounded, it stops the bleeding by placing its hand on the wound or dressing it with leaves and grass. When an animal has a wounded leg or arm hanging on it completes the amputation by means of its teeth. A dog on being stung on the muzzle by a viper was observed to plunge its head repeatedly for several days into running water. This animal eventually recovered. A terrier hurt its right eye. It remained under a counter, avoiding light and heat, although it habitually kept close to the fire. It adopted a general treatment of rest and abstinence from food. The local treatment consisted in licking the upper surface of the paw, which it applied to the wounded eye, again licking the paw when it became dry.

A Blooded Racer's Pluck.

A blooded racer possesses one essential quality that scrub horses seldom have—pluck. You will find many

common horses that possess fine points, so far as wind, muscle, and structure are concerned; but in a race they will nearly always throw up their tails and give up in disgust if passed by an adversary, or if they feel they can't win. All blooded animals do not possess pluck, however, and such as are lacking in this quality are more fit for the plow than the track.

Long Tailed Sheep.

There are no species of sheep indigenous to Australia. The fat tailed sheep is found in Asia and Africa, in Syria, India, and China, also in Barbary, and such large numbers are raised in the colony of the Cape of Good Hope that it is often known as the Hottentot sheep. This sheep is of small size, with soft and short wool. Its peculiar characteristic is the enormous development of the tail, by the growth of a large mass of fat on each side of the lower part of this appendage. This is sometimes so great that the tail alone has been known to weigh seventy pounds or more. This tail is esteemed a great delicacy for food, and to protect it from being injured by being dragged on the ground, the shepherd often places it upon a board or small truck with wheels, which is attached by a light string harness to the body of the animal.

A Jewel in a Serpent's Head.

It is doubtful whether Shakespeare's toad,

"Ugly and venomous,
Wears yet a precious jewel in his head;"

but there is a belief current in all parts of India that a certain variety of snakes called Shesh Nag, when it attains the age of 1,000 years, has a precious jewel formed in its head. This jewel, it is affirmed, possesses the quality of sucking up the poison of the deadliest snake, if applied to the wounded part. Strangely enough, a Parsee gentleman is reputed to possess this invaluable jewel, according to a correspondent of a Gujarati weekly published at Wadhan, in Gujarat.

The correspondent says that when the present owner—who, by the way, is now sixty-three—was twenty-three

years old, he lighted upon a snake of the above mentioned variety, which he killed. Then he found the jewel in his head. It has already saved several lives. Last year, when Mr. Vidal, the Collector of the district, was there it was shown to him too. The jewel is said to contain a thin, crescent-like fibre, which unceasingly oscillates in the centre. His Highness the Gaikwar of Baroda, His Highness the Maharajah of Kolhapur, and several other native princes, are said to have offered several hundred thousand rupees for this unique jewel. The name of the owner is Mr. Framji Dadabhal Govekar, Tarapur, Bombay Presidency.—*Notes and Queries.*

Hunting Rattlesnakes.

In Berkshire County, Mass., and Sullivan County, New York, the rattlesnake is hunted every summer for his oil, which sometimes fetches \$2.00 an ounce. Here is a description of the way the serpent is caught.

“Choosing a hot summer day, the rattlesnake hunters saunter forth. One man carries a fishpole, another a sharp scythe. The fishpole has a stout wire attached to it, and there is an ordinary pickerel hook on the end of the wire. Moving cautiously through the grass, so as not to disturb the sleeping snake, who is almost always found basking in the warm sun near a loose ledge of rock, one of the men prods his snakeship more or less gently with the fishpole, being careful also to hold the hook invitingly near to the rattler’s head. The snake wakes up angry, makes a dart at the nearest irritating object, which is the fishhook, and very accommodatingly allows the sharp times to penetrate his jaws. The man with the fishpole holds the entrapped rattlesnake at a safe distance, while his comrade moves up and severs the snake’s head from his body. The body is then deposited in a bag, and the hunters go in search of another snake.”

The Egyptian Cobra.

The Egyptian cobra is unlike the Asiatic species, wanting the curious, spectacle-like mark that distinguishes the latter. It is of a somewhat dark and greenish hue, marked with brown, and attaining a

length of from three to five feet. The Egyptian conjurers know how to render this serpent stiff and immovable by pressing the nape of the neck with the finger and throwing it into a sort of catalepsy. The serpent is thus apparently converted into a rod or a stick.

Odd Things on the Head.

In Norway a high hat, shaped something like a flower pot, is worn, and the Cossack wears a hat like a stovepipe, without a brim.

To-day among the Swiss a hat is worn similar in form to the old Puritan hat. It, however, is often ornamented with gay colored ribbons about it.

The marabout, or black priest of Mohammed, who wanders among the African tribes, wears upon his sable head a white cap and fez, such as he expects to wear in Paradise.

In Mohammedan countries the turban is found. Some of these are scarfs wrapped and twisted about the head. Others are combinations of scarf and fez, with a button and tassel.

When stovepipe hats were first introduced among Indians they usually punched the top out of them the first thing for the sake of ventilation, as they did not care to have their heads hot.

An African hat is in the form of a helmet, woven of rushes or straw, having a peak on top and a mask or visor extending down over the face. There are two holes or goggles for the eyes.

The Chinese mandarins and men of consequence wear little round silk skull caps most of the time. These are ornamented on the top with buttons whose colors denote the order or rank of the wearer.

A singular Corean hat is a great round mat of straw worn by a mourner. This goes with a costume of coarse cloth. The hat is bound down at the sides so as almost to conceal the head and face of the wearer. He carries in his hand a screen or fan, and when in the road any one approaches him he holds the screen in front of him so that it, together with the hat, completely conceals him.

History of a Horse-shoe.

The Lefthanded Club of Houston, Tex., has hanging over one of the doors of its house a horse-shoe, or rather a mule-shoe, with a history. One day ten years ago, at Pass Cavallo, a mule waded out into deep water. First he knew, one of his hind legs disappeared in the big mouth of a passing shark. A few days afterwards the shark was caught by the crew of the state quarantine schooner, and the leg of the mule was found in the interior of the big fish. The shoe was taken from the hoof, and now keeps off the witches in the home of the before mentioned Lefthanded Club.

Barometric Bells.

To inhabitants of Lebbeke, Belgium, the hearing of certain small bells, four or five miles away, is a certain indication of rain. One bell, about six miles distant, is heard twice a year—In March or April and in September or October—and always during the same atmospheric commotions. M. de Ridder finds that not only does moisture favor the transmission of sound, but that contrary winds are not always an obstacle.

An Ancient Chair.

What is probably the most venerable piece of furniture in existence is deposited in the British museum. It is the throne of Queen Hatasu, who reigned in the Nile valley some 1,600 years before Christ and twenty-nine years before Moses. This now dilapidated object seems to be of *lignum vitæ*, the carving of the legs being inlaid with gold, and those of the back with silver.

A Certain Sign of Death.

M. Lessenne, at a meeting of the Societe Medicale d'Amiens, indicated a certain sign of death, simple and trustworthy. After pricking the skin with a needle the puncture remains open, just as when a piece of leather is pricked. On the living body, even if the blood does not come to the surface, as would happen if the person was hysterical, the pin-prick closes at once, and does not leave the slightest trace.

When to Give Medicines.

Iodine or the iodides should be given on an empty stomach. If given during digestion the acids and starch alter and weaken their action. Acids, as a rule, should be given between meals. Acids given before meals check the excessive secretion of the acids of the gastric juice. Irritating and poisonous drugs, such as salts of arsenic, copper, zinc, and iron, should be given directly after meals. Oxide and nitrate of silver should be given after the process of digestion is ended; if given during or close after meals the chemicals destroy or impair their action. Potassium permanganate, also, should not be given until the process of digestion is ended, inasmuch as organic matter decomposes it and renders it inert. The active principle of the gastric juice is impaired and rendered inert by corrosive sublimate, tannin, and pure alcohol; hence they should be given at the close of digestion. Malt extracts, cod liver oil, the phosphates, etc., should be given with or directly after food.

How to Prolong Life.

Activity, without overwork, healthful living, moderation, self-control, the due exercise of all the faculties, the cultivation of the reason, the judgment, and the will, the nurture of kindly feelings, and the practice of doing good—all things, in fact, which tend to build up a noble manhood—also prepare the way to a long life and a happy and blessed old age.

Longevity of Insects.

Sir John Lubbock has shown how long insects may live when kept out of harm's way. The greatest age attained by any insect, so far as is known, is that reached by the queen of an ant (*Formica fusca*), which lived in his care until August 8, 1888, when she must have been nearly 15 years old. Another queen of the same species died at the advanced age of over 13 years.

A Centipede's Enemy.

A centipede is afraid of a tarantula, and when he lies down to sleep he always takes the precaution to

build a cactus fence about him. A tarantula will never crawl over cactus; and thus, securely hedged in his own corral, the centipede knows he may sleep as long as he wants to, and his enemy can't get at him. It is laughable, out on the Mojave desert, to watch the security of these centipedes as they lie and sleep, while their arch enemies, the tarantulas, are looking over the garden wall, so to speak, trying to get at them. I have seen the tarantulas nose around for hours before giving it up. But the cactus is a sure barrier. When once they become satisfied there is a complete barrier they go away, and cease to thirst for the gore of the centipede. The latter, however, always takes a careful look around before he removes the cactus and ventures forth.

Fecundity of Flies.

A fly lays four times during the summer, each time 80 eggs, which makes	320
Half of these are supposed to be females, so that each of the four broods produces 40; the first eighth, or the 40 females of the first brood, also lay four times in the course of the summer, which makes	12,800
The first eighth of these, or 1,600 females, lay three times during the summer, making a total of	384,000
The second eighth twice, or	256,000
The third and fourth eighth at least once each..	256,000
The second eighth, or the 40 females of the second brood, lay three times, the product of which is	9,600
One sixth of these, or 1,600 females, lay three times, or a number of eggs corresponding to	384,000
The second sixth lay twice, or eggs to the number of	256,000
The third sixth once, or	128,000
The third eighth, or the 40 females of the third brood, lay twice and produce eggs to the number of	6,400
One-fourth of these, 1,600 females, lay twice more, or eggs numbering	256,000

The fourth eighth, or 40 females of the fourth brood, lay once and produce eggs numbering	3,200
Half of these, 1,600 females, lay once more and hatch flies to the number of	128,000

Total progeny of a single fly in one summer.. 2,080,320

Mosquitoes in England.

Mr. G. H. Ferrall, F. E. S., commenting on some statements made in the daily press, says: "There are about a hundred species of mosquitoes in the world, occurring in all climes. Eight or ten species have been known to inhabit England for more than fifty years, in fact, since they were first studied. No new species to Britain have been recorded for more than fifty years. No specially tropical species has ever been recorded as having occurred in Britain, but one of our well-known British species has recently been recorded in Mexico. Most, if not all, of our British species bite in very hot weather, when, apparently, like their betters, they require more liquid refreshment. Finally, mosquitoes, as well as Hessian flies, are as common in England as white butterflies."

Great Mountain Ranges.

The South American Andes, which have an extreme length, without allowance for deviations, of 4,500 miles, is the biggest mountain range in the world. But to mark the scale on which nature has molded the New World, the Andes may be regarded as merely a part of the sufficiently continuous chain of about 9,000 miles, which loses itself near the mouth of the river Mackenzie toward the shores of the Arctic Ocean. The Old World has nothing to bring into comparison with this as regards bulk, though in height the Himalayas stand unequaled, with an average altitude of from 16,000 to 20,000 feet, culminating in a stupendous peak that soars nearly 30,000 feet into the air. The length of the Himalayas is, however, only a third of that of the Andes considered separately, or a sixth of the grand American chain taken as a whole.

Audible Vibrations.

While the deepest tone that our ears are capable of recognizing is one containing sixteen vibrations a second, the phonograph will record ten vibrations or less, and can then raise the pitch until we hear a reproduction from them. Similarly, vibrations above the highest rate audible to the ear can be recorded on the phonograph, and then reproduced by lowering the pitch until we actually hear the record of those inaudible pulsations.

Water Power.

The artesian wells of North and South Dakota are probably the most remarkable for pressure and the immense quantity of water supplied of any ever opened. More than 100 of such wells, from 500 to 1,600 feet deep, are to-day in successful operation, distributed from Yankton, in the extreme south, to Pembina, in the extreme north, giving forth a constant, never varying stream, which is in no wise affected by the increased number of wells, and showing a gauge pressure in some instances as high as 160, 170, 175, and 187 pounds to the square inch. This tremendous power is utilized in the more important towns for water supply, fire protection, and the driving of machinery at a wonderful saving on the original cost of plant and maintenance when compared with steam.

Who's Superstitious.

Do you believe in witches, spirits, elves, fairies, vampires, ghouls, ogres, gnomes, imps, bogies, brownies, pixsies, or leepreehauns?

Do you believe in an evil genius?

Do you believe in the evil eye?

Do you believe in a bottomless pit?

Do you believe in a devil with horns, cloven foot, and a long spiked tail?

Would you pass a night in a graveyard or church, with a corpse in a church or in a charnel house?

Do you wear anything which can be considered in the nature of a talisman or mascot?

Did you ever employ anything as a talisman?

Do you attach any meaning to four-leaved clover?

Would you willingly pass under a ladder?

Do you feel uncomfortable when you spill salt?

Would you sit down with thirteen at table?

Would you start on a trip on a Friday, or would you defer commencing an important work on that day?

Do you attach any particular importance to certain numbers, especially to three, seven, and nine?

Would you give a child of yours the same name as that of one who had just died?

Are you afraid of the dark?

Did you ever have your fortune told by gypsy, astrologer, cards, or similar tests?

Were you ever made uneasy by hearing the insect commonly known as the death-watch?

Would you venture to knock three times at midnight on the door of an empty church?

Do you believe in dreams, omens, portents, signs, warnings, harbingers, or handwritings on the wall?

A Few Superstitions.

If you shiver, some one is walking over your future grave.

When your nose itches, something will soon happen to vex you.

When your right eye itches, it is a sign of good luck; when your left eye, of bad luck.

When rooks desert a rookery, it forebodes the downfall of the family on whose property it is.

A spider descending upon you from the roof is a token that you will soon have a legacy from a friend.

Candle and other lights are supposed to burn blue and dim when invisible beings are present, especially if they be evil spirits.

It is a good omen for swallows to take possession of a place and build their nests around it; while it is unpropitious for them to forsake a place which they have once tenanted.

The magpie is deemed a bird of evil omen. Its unluckiness has been accounted for by its being the

only bird which did not go into the ark with Noah.

If you have any white marks on your nails, commonly called "gifts," you may expect to get as many presents as there are marks, as soon as these get up to the nail ends, in the course of their natural growth.

When an experienced old shepherd sees the first lamb in the spring, he notes whether its head or tail is turned towards him. If the former, he will have plenty of meat to eat during the year; if the latter, he looks for nothing beyond milk and bread, and vegetables without beef, and perhaps ham.

Superstitions About Shoes.

The German mother says that should she lose the heel of her shoe, one of her children will die before the year is out.

The Scotch lassie believes that should she by accident drop her new shoes before they have been worn, they will surely lead her into trouble.

It is said that old maids believe that when their shoes come untied, and keep coming untied, it is true their sweethearts are talking and thinking about them.

The sweetheart, when on his way to see his lady love, should he stub his right toe he will surely be welcome, but if he stubs his left he may know that he is not wanted.

It is said that if old shoes are burned, snakes will squirm away from the place, while to keep old shoes that are past wearing about the place will surely bring good luck.

Should a young man be careless of his shoe laces 'tis said that he will be as neglectful of his wife, but in case he laces his shoes very tight he will be attentive, but very stingy toward her.

Among negroes in the south, the "old aunties" say that burned shoe soles and feathers are good to cure a cold in the head, and parched shoes and hog hoofs is a good mixture for coughs.

Should you meet a person whose shoes are "worn on the toes" you may put it down as a certainty that "he spends as he goes;" and on the same authority

it is said that the girl that has her shoes "worn on the side" is surely fated to be a "rich man's bride."

When a pair of new shoes are brought home, never place them on a shelf higher than your head if you would have good luck while wearing them, and never blacken them before you have had both shoes on, else you may meet with an accident, and perhaps sudden death.

The Bible's History.

Two thousand one hundred and eighty-seven years ago, in the year 285 B. C., seventy of the wise men of Alexandria engaged themselves in compiling and collating the Hebrew Scriptures into their present united form and further simplifying the works by translating them into Greek for the benefit of the Jews then in Egypt. The results of their labors have since been known collectively as the Septuagint, from the fact that it is the work of the seventy translators.

About 400 years later, in the second century, A. D., the books of the New Testament were added and the whole translated into Latin.

The Itala, or Latin version, soon became the standard of the primitive Christians, and was used to the exclusion of both the Hebrew and Greek versions for two centuries, until the St. Jerome revision of A. D. 405. After St. Jerome had finished his crowning work, a great deal of which he performed in the village of Bethlehem, almost in sight of the birthplace of Jesus, the Dalmatian and Pannonian monks hid away their old versions of the Bible and would use no other except the one which had been given them by their patron, Jerome, himself.

The Jerome revision was as superior to the work of the seventy as their work was to the old semi-barbaric work which existed prior to the translation of 285 B. C.

St. Jerome.

The most carefully written copies of the Bible obtainable were consulted by the scholarly saint and compared with the Arabic, Hebrew, and Syriac versions,

in all of which he made emendations and corrections which have stood the test of all subsequent time. The herculean task undertaken by St. Jerome will be better understood when the reader has been informed that over 200 versions of the Evangelists, each differing from the other in many of its essential details, were presented for the consideration of the sages at the council of Nice, in 325 A. D. For hundreds of years copyists had added to and taken from the Scriptures to such an extent as to make it extremely difficult for even the most learned to decide what should remain for the edification of future generations or what should be eliminated from the sacred pages as apocryphal.

The word "bible," meaning book, or as applied by the early writers, "the book," was first used by Chrysostom as early as the fifth century, where he speaks of the sacred writings collectively as the *Biblia*, or "the Books." The infinite variations which occurred in the manuscripts written by the early Christian fathers have caused a great deal of contention among churchmen, some admitting certain books as canonical which are rejected by others as apocryphal. This you can find illustrated by comparing a Douay and a King James Bible of to-day; the former admits several books which the King James translators would not, as they considered them uncanonical.

The several books as arranged and accepted at present are the results of years of labor and of countless councils and revision assemblages. For 1,200 years after the Savior of Men ended his brief career on the rugged heights of Calvary, the touching details of which are known to over 700,000,000 of people, and in every land on the globe, each book of the Bible was one continued story, undivided into chapters, paragraphs, or verses.

Divisions of the Bible.

Prior to the time of the Spanish rabbi, the Jew had employed a system of dividing the chapters into verses in the Old Testament, a system which had never been adopted by the Christians, and which was discarded for that of the learned Spaniard by the Jews them-

selves. The New Testament was not divided into verses until after the invention of the art of printing, by the Robert Stephens Greek edition in 1551.

Of the early translations of the Bible the most important, aside from the Septuagint and the St. Jerome versions, are the threefold Egyptian translation of the fourth century. This remarkable work of the copyist was in three languages, and was intended for all parts of Egypt; the *Versio Figurata*, collated by Jacob of Edessa, in the eighth century; that of Paul, Bishop of Tela, in 617; and the eighth, ninth, and tenth century translations, made respectively by Bede, Alfred, and Ælfric.

During the dark ages, and on down to the time Luther gave his masterpiece to the world, several translations were made, including that of Notker-Labeo, 980 A. D.; that prepared under the supervision of Petrus Waldus, 170; the important work of Louis the Pious, 1227; that of Charles the Wise, 1380; the Guyars version of 1286; the thirteenth century version in Spanish during the reign of Alphonso V.; and the two excellent works of Wickliffe and Huss, the latter for the Bohemians and the former for the English speaking people. With the invention of printing every person who had ever laid claim to literary abilities seemed from on high to translate the Word of God, as one would naturally infer from the fact that not less than seventeen German translations alone were given to the public between the time of Guttenberg and Faust and that of Martin Luther.

The early printed editions of the Bible remind one of what the philosopher said about the human frame—they were “curiously and wonderfully made.” The Wickliffe (sometimes spelled Wycliffe) version of 1384 was the first English translation. John Wickcliffe, the translator, was condemned to be burned for presuming to do such a thing without the consent of the clergy, but was finally allowed to die a natural death. His Bible was never printed; however, there are many manuscript copies of it.—JOHN W. WRIGHT.

Origin of Vitality.

What is the vital spark which animates organic life? The origin of vitality is as truly one of nature's dark secrets, utterly hidden from the eye of the scientific man of to-day as from the perceptions of the earnest inquirers of 4,000 years ago. There is more known of the method of its manifestations and growth than they knew, but whether a correlative or substantive of heat, light or electricity, whether measurable or immeasurable, there is one thing pretty well ascertained, and that is that there is a fixed quantity apportioned to things and to mankind, and that vitality is an individual allotment, a separate characteristic, so to speak, bestowed upon each individual member of the organic creation, no two things of the same variety and genus receiving the same quantity.

About Brains.

It has been estimated that we get a complete new outfit of brains about every two months. The duration of a nerve's life is about sixty days. Each nerve cell has its own independent functions, subordinate to the higher functions of the whole brain *en masse*; and the latter acts as a sort of boss or overseer to the individual actions and life of each separate cell. Every cell is destroyed and renewed every two months, so we each get six brand new brains per year.

The Way to Fall Down.

The special providence that seems to hover over drunken men and children has something of an explanation, in the fact of the main cause of the breakage of bones from falls being from a resistance of the tendons more often than from the violence of the shock incident to the actual fall. A child, or an intoxicated person, will rarely endeavor, with any great effort, to recover his balance when he slips or topples over. Hence no special resisting force is exercised, and he sinks into a collapsed heap without serious

injury. When an adult in possession of his sound senses undertakes, with endless contortions and gyrations, to save himself from going down, he draws every muscle and sinew taut, and if the wrench is too severe the bone breaks.

Handy.

The cold of Siberia is so great in winter that many kinds of provisions, which are with us either sealed or salted, are there kept by simple freezing. The appearance of the markets at that season is described by Mr. Lansdell.

Frozen chicken, partridges and other game are often thrown together in heaps, like bricks or firewood. Butchers' meat defies the knife, and some of the salesmen place their animals in fantastic positions before freezing them.

Frozen fish are piled in stacks, and milk is offered for sale in cakes or bricks. A stick or string is generally congealed into a corner of the mass to facilitate carrying, so that a wayfarer can swing a quart of milk at his side, or wrap it in his handkerchief, at discretion.

The Wandering Jew—The Tradition as Given in 1228.

The legend of the Wandering Jew was brought to Europe from the east late in the eleventh century, after the first crusade under Peter the Hermit. In the year 1228 this legend was told for the first time by an Armenian bishop, then lately arrived from the Holy Land, to the monks of St. Alban, in England. According to his narrative, Joseph Cartaphilus was doorkeeper at the prætorium of Pontius Pilate when Jesus was led away to be crucified. As Jesus halted upon the threshold of the prætorium Cartaphilus struck him in the loins and said: "Move faster! Why do you stop here?" Jesus, the legend continues, turned round to him and said, with a severe look: "I go, but you will await My coming." Cartaphilus, who was then thirty years old, and who since then has always returned to

that age when he had completed a hundred years, has ever since been awaiting the coming of our Lord and the end of the world. He was said to suffer under the peculiar doom of ceaselessly traversing the earth on foot. The general belief was that he was a man of great piety, of sad and gentle manners, of few words, often weeping, seldom smiling, and content with the scantiest and simplest food and the most poverty stricken garments. Such was the tradition which poets and romancists in various lands and many languages have introduced into song and story. As the ages rolled on new circumstances were added to this tale. Paul of Eitzen, a German bishop, wrote in a letter to a friend that he had met the Wandering Jew at Hamburg in 1564, and had a long conversation with him. He appeared to be fifty years of age. His hair was long, and he went barefoot. His dress consisted of very full breeches, a short petticoat or kilt reaching to the knees, and a cloak so long that it descended to his heels. Instead of Joseph Cartaphilus, he was then called Ahasuerus.

Training for Girls

Did girls get from childhood the same business training as boys, and were it clearly understood to all families that it is not a credit, but a discredit, for women to be idle, to hang helpless on the men instead of doing their own work, and, if necessary, earning their own living, I believe society would not be the worse but the better for the change. Men would find out that the more they elevate women the greater use they get out of them. If, instead of a man working himself to death for his unmarried daughters, and then leaving them ignominiously dependent upon male relations, he educated them to independence, made them able both to maintain and to protect themselves, it would save him and them a world of unhappiness. They would cease to be either the rivals—a very hopeless rivalry—or the playthings first, and then the slaves of men, and become, as was originally intended, their co-mates, equal and yet different, each sex supplying the other's deficiencies, and therefore fitted to work

together, not apart, for the good of the world.—*The Forum*.

The Blind in China.

Miss Gordon Cumming has published some very curious and interesting particulars concerning a successful attempt to teach the blind in China. It is stated that there are more than 500,000 of blind people in China. Through the instrumentality of Mr. W. H. Murray, who introduced a phonetic system of teaching by means of embossed dots, a school for the blind has been opened at Peking, and it is worthy of note that the pupils there learn to read more quickly than those who have the use of their eyes, tending to show that Chinese typography requires remodelling.

Wonders of the Body.

The skin contains more than 2,000,000 openings, which are the outlets of an equal number of sweat glands. The human skeleton consists of more than 200 distinct bones. An amount of blood equal to the whole quantity in the body passes through the heart once every minute. The full capacity of the lungs is about 320 cubic inches. About two-thirds of a pint of air is inhaled and exhaled at each breath in ordinary respiration. The stomach daily produces 9 pounds of gastric juice for digestion of food; its capacity is about 5 pints. There are more than 500 separate muscles in the body, with an equal number of nerves and bloodvessels. The weight of the heart is from 8 to 12 ounces. It beats 100,000 times in 24 hours. Each perspiratory duct is one-fourth of an inch in length, of the whole about 9 miles. The average man takes 5 1-2 pounds of food and drink each day, which amounts to one ton of solid and liquid nourishment annually. A man breathes 18 times in a minute, and 3,000 cubic feet, or about 375 hogsheads of air every hour of his existence.

Short Life of the Dog.

A lover of dogs writes: The dog is short lived. He is aged at 15 years, as old in point of decrepitude as a

horse at 30, more so than a man at 80. It is sad to think for how short a time we have this prime favorite with us, and what lamentations are poured over his early grave. He doubtless lives a fast life. He has fine faculties, scent and sight and hearing, and he uses them without stint. His digestion must be pretty good, too, judging by the way he bolts his food. Perhaps nature has designed him to wear himself out quickly, so that he shall not live long enough to know too much—to learn to speak and to write—in short, to rival her proud piece of work, man, as he might if he had fifty years instead of fifteen to do it in.—*Montreal Star.*

Contrasts Between Paris and London.

In the streets French traffic all goes to the right; London coachmen drive always to the left. Parisians live together in large houses like barracks; Londoners have one family in a house. They have a latch key, the Frenchman a concierge. Paris has its cafés, London its clubs. Parisian beds are up in an alcove in the wall; Londoners sleep in the middle of the room. London takes three or four meals a day, Paris two. Paris dines, London eats. Paris loaves are long, London loaves are square. Paris drinks wine, London beer. Paris takes coffee, London tea. Frenchmen while dining talk to their neighbor and enjoy each other's society; Britons sit alone at table and don't say much but enjoy their food. London workmen work in their ordinary clothes, call each other "mate," smoke clay pipes, and punch each other's heads occasionally. Parisian workmen do their business in blouses, call their friends "citizen" or "sir," smoke cigarettes, take their hats off to each other, and do their fighting with their feet.—*Tit Bits' Guide to Paris.*

Unscrewing a Fountain Pen.

If you use a fountain pen, and find it difficult to unscrew the nozzle, wrap a rubber band a few times around it. That will give a grip almost equal to a pair of pincers, and will not injure the holder. If you haven't a rubber at hand a string or a dampened piece

of paper will do. A glass stopper may thus be easily removed from a bottle or inkstand after defying the strongest grip of moist fingers.

There Has Been an Improvement.

The rules of etiquette laid down now regarding court functions are comical, but don't compare with the following regulations, which were prescribed by the lord chamberlain 200 years ago for the benefit of officers, many of them belonging to noble families. When invited to dine with royal persons they were to be neatly dressed, with clean coats and boots, and not to enter the room in a half drunken condition. They were warned not to drink after each mouthful, as that would make them drunk too soon, nor to empty more than one goblet for every two dishes. They were not to put their hands in the plates, their bones under the table, lick their fingers, wipe their noses on the table cloth, or drink so much as to make them fall off the chairs or unable to walk straight. These are extracts from a guide carefully drawn up for the guidance of officers and gentlemen of noble families, which shows that manners have improved since 1624.

Method of Embalming.

There are various methods of embalming bodies, but the "Brunelli process" is held to be the best. In performing that the circulatory system is cleansed by washing with cold water till it issues quite clear from the body. This may occupy from two to five hours. Alcohol is injected so as to take out as much water as possible. This occupies about a quarter of an hour. Ether is then injected to abstract the fatty matter. This occupies from two to ten hours. A strong solution of tannin is then injected. This occupies for imbibation from two to ten hours. The body is then dried in a current of warm air passed over heated chloride of calcium. This may occupy from two to five hours. The body is then perfectly preserved and resists decay.

An Important Period.

Those of us not yet 50 years of age have probably lived in the most important and intellectually progressive period of human history. Within the past half century the following inventions and discoveries have either been placed before the world or elaborated: Ocean steamships, railways, street railroads, telegraph lines, ocean cables, telephone, phonograph, photography, and a score of new methods of picture making, aniline colors; kerosene oil, electric lights, steam fire engines, chemical fire extinguishers, anæsthetics and painless surgery, gun cotton, nitro-glycerine, dynamite, and a host of other explosives; aluminum, magnesium, and other new metals; electro-plating, spectrum analysis, and the spectroscope; audiphone, pneumatic tubes, electric motors, electric railways, electric bells, typewriters, cheap postal system, steam heating, steam and hydraulic elevators, vestibule cars, cantilever bridges. These are only a few out of a multitude. All positive knowledge of the physical constitution of planetary and stellar worlds has also been attained within this period.

Tree Superstitions.

The ash has always been associated with superstition, more of a divinatorial character than anything else.

Among the ancients it was generally believed that lightning would not touch the bay tree.

In classic times the laurel, one of our most beautiful evergreens, was famous for its many virtues.

One of the most sacred trees in the east is the peepul, which is venerated alike by the Buddhist and the Hindoo.

The withering of the bay tree was considered an omen of the most dangerous character, and a sure presage of death.

To a belief that the whitethorn formed Christ's crown of thorns is due a French superstition that this tree utters groans and cries on Good Friday.

The old superstition, which refuses to give up the

ghost, is that if the oak gets into leaf before the ash, we may expect a fine and productive year.

The pine tree is one of the most useful and luxuriant of our forest trees, and in ancient days it received an amount of veneration amongst the Greeks and Romans, similar to the oak tree amongst the Druids.

It is believed that a twig of the hazel placed over the door of a dwelling house is an infallible charm against lightning; and various other supernatural powers are attributed to this mystic tree.

From Mexico there comes a peculiar tree known as the "tree of little hands." It is thus called owing to the fact that its five peculiarly curved anthers bear some slight resemblance to the fingers of a child.

The holly tree has become an object of worship, like the mistletoe, and at one time new born children were sprinkled with water impregnated with holly to ward off evil spirits.

The Brahmins believe that to dream of a mango tree is indicative of the coming of a friend; that if the mango tree be in bloom he will come with good news; if in fruit, with some rich presents.

The juice of the hemlock, which is deadly in its effect, was abstracted by the Greeks; and, in cases of capital offences, the criminal was given a dose if his crime had not been particularly heinous.

Arabia has a curious tree, the seeds of which, it is said, if pulverized and taken in small doses, will excite even the most sedate persons to perform all the contortions, facial and bodily, of a circus clown, for about the space of one hour.

Why Running Produces Heat.

Running makes a person warm because of the inhalation of an increased amount of air, and causes the blood to pass more rapidly through the lungs. The rapid inhalation of air involves the introduction of a greater quantity of air into the body, which renders the combustion of the blood more rapid, and the blood itself more heated. The quantity of air breathed while running at the rate of six miles an hour is six times that breathed while walking at the rate of one mile an hour.

The superfluous heat arising from the exertion of running is disposed of through the skin by means of increased perspiration.

A Curious Race.

A curious race was recently witnessed in Westphalia, the contest being between pigeons and a number of bees, the respective owners of which had wagered their favorites to win. The course was three miles and a half, and a dovecot which happened to be near a hive was selected as the winning post. It was found no easy matter to mark the bees so as to make their identity unmistakable, but the difficulty was at last surmounted by rolling them in flour previous to starting them on their journey. This, while making them easily recognized on their arrival, probably retarded their flight; but nevertheless, and though the pigeons were looked upon by those interested as the most likely winners, the race resulted in a victory for the bees; the first bee arriving at the post twenty-five seconds before the first pigeon, and three other bees before the second.

The Speed of Thought.

It takes about two-fifths of a second to call to mind the country in which a well-known town is situated or the language in which a familiar author wrote. We can think of the name of the next month in half the time we need to think of the name of last month. It takes on the average of one-third of a second to add numbers containing one digit and half-a-second to multiply them. Such experiments give us considerable insight into the mind.

Those used to reckoning can add two to three in less time than others; those familiar with literature can remember more quickly than others that Shakespeare wrote "Hamlet." It takes longer to mention a month when a season has been given than to say to what month a season belongs.

The time taken up in choosing a motion, the "will time," can be measured as well as the time taken up in perceiving. If I do not know which of two colored lights is to be presented, and must lift my right hand if

it be red and my left if it be blue, I need about one-thirteenth of a second to initiate the correct motion. I have also been able to register the sound waves made in the air by speaking, and thus have determined that in order to call up the name belonging to a printed word I need about one-ninth of a second, to a letter one-sixth of a second, to a picture one-quarter of a second, and to a color one-third of a second.

A letter can be seen more quickly than a word, but we are so used to reading aloud that the process has become quite automatic, and a word can be read with greater ease and in less time than a letter can be named. The same experiments made on other persons give times differing but little from my own. Mental processes, however, take place more slowly in children, in the aged and in the uneducated.—*Nineteenth Century*.

Pneumonia's Victims.

Pneumonia usually strikes the healthy, robust person more often than it does the weak, thin people. The cause is a very simple one. As a general rule, the healthy people pay the least attention to the condition of their health, believing that their constitution is sufficiently strong to withstand all ordinary exposure. On the other hand, the weakly person or invalid takes more than the usual precaution against even the most ordinary exposure. They do not stand within dangerous air drafts, they do not change heavy for light underclothing, and they do not do many other things of an equally dangerous character.

The Dying Suffer Not.

The act of dying, it is now ascertained, is absolutely free from suffering; it is really unconscious, insensibility always preceding it. Any anguish that may attend mortal illness ceases before the close, as thousands who have recovered, after hope had been surrendered, have borne witness. Sudden and violent death, shocking to the senses, may not be, probably is not, painful to the victim. Drowning, hanging, freezing, shooting, falling from a height, poisoning of many kinds, beget stupor

or numbness of the nerves, which is incompatible with sensation. Persons who have met with such accidents, and survived them, testify to this. Records to the effect are numberless.—JUNIUS H. BROWNE.

Things Eaten from the Fingers.

The list of things that can be eaten from the fingers is on the increase. It includes all bread, toast, tarts, and small cakes, celery and asparagus, when served whole, as it should be, either hot or cold; lettuce, which must be crumpled in the fingers and dipped in salt or sauce; olives, to which a fork should never be put any more than a knife should be used on raw oysters; strawberries, when served with the stems on, as they should be, are touched to pulverized sugar; cheese in all forms, except Brie or Roquefort or Cammerbert, and fruit of all kinds, except preserves and melons. The latter should be eaten with a spoon or fork. In the use of the fingers greater indulgence is being shown, and you cannot, if you are well-bred, make any very bad mistake in this direction, especially when the finger bowl stands by you and the napkin is handy.

Royal Blood in Everybody's Veins.

Every man has two parents, four grand-parents, eight great-grandparents, sixteen great-great-grandparents, thirty-two great-great-great-grandparents, etc. Now, if we reckon twenty-five years to a generation, and carry on the above calculation to the time of William the Conqueror, it will be found that each living person must have had at that time even the enormous number of 35,000,000 of ancestors. Now, supposing we make the usual allowance for the crossing or intermarrying of families in a genealogical line, and for the same person being in many of the intersections of the family tree, still there will remain a number at that period even to cover the whole Norman and Anglo-Saxon races. What, therefore, might have been pious, princely, kingly, or aristocratic, stands side by side in line with the most ignoble, plebeian or democratic. Each man of the present day may be certain of having had, not only barons and squires, but even crowned heads, dukes, princes of

bishops, or renowned generals, barristers, physicians, etc., among his ancestors.

How a Baby Opens Its Mental Eyes.

Professor Preyer records that sensibility to light, touch, temperature, smell and taste are present on the first day of infant life. Hearing, therefore, is the only special sense which is not active at this time. The child hears by the third or fourth day. Taste and smell are senses at first most active, but they are not differentiated. General organic sensations of well-being or discomfort are felt from the first, but pain and pleasure, as mental states, are not noted till at or near the second month.

The first sign of speech in the shape of utterance of consonant sounds is heard in the latter part of the second month, these consonants being generally "m," "r," "g," or "t." All the movements of the eyes become co-ordinate by the fourth month, and by this time the child begins to have "the feeling of self," that is, he looks at his own hands and looks at himself in the mirror. The study of the child's mind during the first year shows conclusively that ideas develop and reasoning processes occur before there is any knowledge of words or language; though it may be assumed that the child thinks in symbols, visual or auditory, which are clumsy equivalents for words. By the end of the year the child begins to express itself by sounds; that is, speech begins. The development of this speech capacity is, according to Preyer, in accordance with the development of the intellectual powers. By the end of the second year the child's power of speech is practically acquired.

The Psychology of Joking.

Dr. Hughlings-Jackson regards punning as the lowest stage of the evolution of humor, but even in the pun he sees a material for the study of normal mentation. In a pun we have two ideas called to the mind at once—a double vision, as it were; and, as all thought is the comparison of relations, this is simply a caricature of

the normal process of thought. Again, the world owes a great debt to the first punster, because he began the "play" of the mind (in the same sense as art is founded on the play instinct), and so detached himself from the grossly useful, and showed a surplus energy capable of developing into the highest traits of mankind. To lack a sense of humor is a bad thing, "The man who has no sense of humor, who takes things to be literally as distinct as they superficially appear, does not see fundamental similarities in the midst of great superficial differences, overlooks the transitions between great contrasts. I do not mean because he has no sense of humor, but because he has not the surplus intellect which sense of humor implies."

How to Read a Book.

Lord Macauley, in recalling some instances of his childhood, said: "When a boy I began to read very earnestly, but at the foot of every page I read I stopped and obliged myself to give an account of what I had read on that page. At first I had to read it three or four times before I got my mind firmly fixed. But I compelled myself to comply with the plan, until now, after I have read a book through once, I can almost recite it from the beginning to the end."

Posy and Motto Rings.

Posy rings came into vogue with the sixteenth century. These were motto rings, and they form one of the most interesting chapters of ring lore. It is said that the famous ring which Essex sent to Queen Elizabeth by the Countess of Nottingham, but which the wilful woman did not deliver until after the duke's death, was a posy. These rings were common between lovers and friends all over Europe. They bore rhyming mottoes and affectionate sentiment, and the lady without a posy ring was looked upon as forlorn, and with but few hopes of marriage ahead.

Shakespeare knew the posy ring, for in the "Merchant of Venice" he makes Gratiano and Nerissa say:

Gratiano—

About a hoop of gold, a paltry ring,
That she did give me, whose posy was,
For all the world like cutler's poetry
Upon a knife, "Love me, love me not."

Nerissa—

What talk you of the posy, or the value?
You swore to me when I did give it you,
That you would wear it till your hour of death.

Some of the mottoes on the old posy rings are beautifully quaint. The list of them is entirely too long to be embodied in this article, but I cannot refrain from giving a few.

"In thee my choice, I do rejoice."
"May God above increase our love."
"Not two but one till life is done."
"My heart and I until I die."
"As gold is pure, so love is sure."
"As long as life, your loving wife."
"Love is sure where faith is pure."
"Love is heaven, and heaven is love."
"Not for a day, but, love, for aye."
"When this you see, then think of me."
"In gold I'm cast to bind two fast."
"My heart is thine, true love of mine."

T. C. HARBAUGH.

Medicinal Vegetables.

Celery acts upon the nervous system, and it is a cure for rheumatism and neuralgia. Tomatoes stimulate the liver, and spinach and common dandelion, prepared in the same way, have a direct effect on diseases of the kidney. Onions, garlic, and olives promote digestion by stimulating the circulatory system, with the consequent increase of the saliva and gastric juice. Raw onions are also regarded as a remedy for sleeplessness, and the French believe that onion soup is an excellent tonic in cases of debility of the digestive organs.

Propagation of Date Palms.

The date palms, which form the wealth of the Arabs of the desert, are all female; the male or pollen bearing flowers of the date kind always grow on a separate tree; and as pollen is produced by them in vast quantities, it is not necessary in palm groves to have more than a single male stem to some forty or fifty fruit bearing individuals. The Arabs, therefore, never raise their palms from seed, as they cannot make sure of the sex of seedlings; they take suckers from the root of a female tree, already known to be a good bearer of fine fruit; and these suckers not only follow the sex of the so-called mother, but also reproduce its special peculiarities of flower and seed in every respect.

Killing Trees that Sprout.

The best way to get rid of willows or other trees liable to sprout from the stump is to girdle them and let them stand until they cease to produce leaves. The silver maple frequently sends up sprouts which occupy the ground to the exclusion of everything else in the vicinity of the tree. If the tree is girdled, and all the sprouts are cut close to the ground in August, there will be no trouble with them afterward. Some kinds of timber trees having a very thin sap wood can be killed very quickly by girdling.

The Monkey Bread Tree.

The baobob or monkey bread tree is another most extraordinary production of nature. Imagine to yourself a tree 30 feet in diameter at the base, and only 40 feet high, with the trunk rapidly diminishing toward the top, and then spreading out into what looks like a little forest. In one of the old trees the branches form a spherical head 100 to 150 feet in diameter, the centre branch rising to the height of sixty feet, while others drop over the main trunk, and conceal it from view. Some of these trees have been hollowed out, and a space made large enough to hold twenty to thirty men without any apparent injury to the tree. The baobob must be

the slowest growing plant in the world, as it is supposed to be one of the oldest. A tree has been cultivated in the gardens of Kew, England, over forty years, and thus far it has attained the height of only 4 1-2 feet. Some of these trees are estimated to be 5,000 years old, and dates are cut in the bark which were made in the fourteenth century.

Trees with Large Leaves.

Trees of the palm family have larger leaves than any others. The Inaja palm, which grows on the banks of the Amazon, has leaves which reach a length of from 30 to 50 feet and are 10 to 12 feet in breadth. Specimens of the leaves of the Talipot palm, a native of Ceylon, have been met with that were 20 feet long and 18 feet broad. These leaves are used by the natives to make tents and form very efficient shelters from the rain. The leaves of the double cocoanut palm are often 30 feet long and several feet wide.

The Most Noted Dog.

The most famous dog in history is that of Ulysses, which kept itself alive for twenty years in anticipation of his return, and when he did return in disguise, to find forty-two suitors for his wife's hand—living at his expense—was the only living creature that recognized him. Then, of course, as the fable prettily adds, it crawled to his side, licked his hand and died.

It was a Greek who next brought the dog prominently into history. Alcibiades, wishing to distract the attention of the Athenians from his political schemes, cut off the ears and tail of his favorite dog, painted his sides in different colors, and, whistling the monster to his heels, promenaded the agora or market place.

When asked why he had so maltreated the poor brute, he replied: "To give the Athenians something to talk about." This was the origin of the phrase, "cutting off the tail of Alcibiades' dog," the application of which is obvious.

An Irresistible Bait for Rats.

An interesting, not to say valuable, discovery has been made by Captain Weedon, in charge of the animals at the Zoo. The building is infested by rats, and how to get rid of them has long been a perplexing question. Traps were used, but nothing would tempt the rodent to enter. In a store room drawer was placed a quantity of sunflower seeds, used as a food for some of the birds. Into this drawer the rats gnawed their way, a fact which led the captain to experiment with them for the bait in the traps. The result was that the rats can't be kept out. A trap which appears crowded with six or eight rats is found some mornings to hold fifteen. They are turned into cages containing weasels and minks. The latter will kill a rat absolutely almost before one can see it, so rapid are its movements. The weasels are a trifle slower, but none of the rats escape them.—*Washington Cor. Cincinnati Commercial.*

To Stop a Runaway Horse.

The Russian method for stopping a runaway horse is said to be very effective, and is not particularly cruel. They place a cord with a running knot around the horse's neck near the neck straps. To this slip noose attach a pair of reins, which may be thrown over the dashboard ready to be seized at once. When the horse starts take up the extra reins, and tighten the cord around the horse's throat. The most furious horse thus choked stops instantly, and will not kick or fall.

Weather Told by Animals.

If a cat sneeze it is a sign of rain.

The goat utters a peculiar cry before rain.

When the fox barks at night it will storm.

The sand mole makes a mournful noise just before frost.

If rats and mice make much noise it indicates rain.

If the deer's coat be gray in October a severe winter will follow.

If the dog eats grass in the morning it will surely rain before night.

If the tracks of bear are seen after the first snow fall, look for a mild winter.

The wind will blow from the point the cat faces when she washes her face, and fair weather will follow.

If the bull goes first to pasture, it will rain; if the cows precede him the weather will be uncertain.

It is a sign of rain if the cat washes her head behind the ear. Cats rub against an object before a storm.

Sheep are said to ascend hills and scatter before clear weather, but if they bleat and seek shelter it will snow.

If the dog digs a deep hole in the ground, or howls when one leaves the house, or refuses meat, it indicates rain.

If the hair of a horse grows long early the winter will be mild. The hair of a horse becomes rough before rain, and they are frisky before a cold wave, and restless and uneasy before a rain.

Sailors do not like cats, and they have a saying when the cat is frisky she has a gale of wind in her tail, and a charm is often resorted to in a calm by throwing the cat overboard to raise a storm.

If cows fail in their milk look for stormy and cold weather. If they bellow in the evening it will snow before morning, and when a cow stops and shakes her foot there is bad weather behind her.

If cattle lie down early in the day expect rain, also when they lick their fore feet, lie on the right side, scratch against posts, when they refuse to go to pasture in the morning, and when they low and look at the sky.

Hogs run with sticks and straws in their mouths before cold weather, and carry leaves and make them warm beds. There is an old proverb that "pigs can see the wind," as they are restless and squeal loudly before a storm.

A Hungarian proverb says a cat does not die in the water, but its paws disturb the surface, hence the flaws on the water are called "cat's paws;" a large flurry on the water is called a "cat's skin," and the English call a stormy north-wester a "cat's nose."

A Dog Habit.

It has been remarked that dogs turn around several times before lying down. The habit is supposed to point to the time in canine history when the dog was wild and inhabited jungles or tall grass. Then it was necessary to turn several times in order to twist the grass into the proper position for pressing down into a comfortable nest. The habit became fixed and the modern dog has not outgrown it.

Early Bridges.

The first bridges were of wood, and the earliest of which we have any account was built in Rome 500 years B. C. The next was erected by Julius Cæsar for the passage of his army across the Rhine. Trajan's great bridge over the Danube, 4,770 feet long, was made of timber, with stone piers. The Romans also built the first stone bridge, which crossed the Tiber. Suspension bridges are of remote origin. A Chinese one mentioned by Kirchen, made of chains supporting a roadway 830 feet in length, was built A. D. 65, and is still to be seen. The first large iron bridge was erected over the Severn in 1777.

The Surface of Mars.

Through the agency of the Lick telescope the surface of the planet Mars has been mapped out with additional clearness. The canals, which can be very plainly seen, lie in the torrid, and warmer portions of the temperate zone, and extend from the Northern to the Southern ocean. They are in general 2,000 or 3,000 miles in length and over 30 miles in breadth. They are generally arranged in pairs 200 or 300 miles apart, and so exactly parallel that usually no deviation can be detected. They cut up the continent surface so there is no spot more than 400 miles distant from one of these markings. There is still much surmise as to whether these assumed canals are artificial or natural. It is argued that they cannot be artificial because of their great width, but, on the other hand, it is equally inconceivable that the forces of nature could by the laws of accident have

constructed such an intricate system of marking and observed an equal width in every case. The late Professor Proctor suggested that the canals are the diffracted images of rivers, produced by mists which hang over the river beds.

Coffee Among the Arabs.

The great event of the visit is the coffee. The host has a kind of brazen shovel brought, in which he roasts the beans; then he takes a pestle and mortar of the oak of Bashan, and with his own hands he pounds it to powder, making the hard oak ring forth a song of welcome to the guest. Many of these pestles and mortars are heirlooms, and are richly ornamented and beautifully black and polished by age and use; such was the one in question. Having drunk coffee (for the honored guest the cup is filled three times), you are quite safe in the hands of the most murderous.

So far do they carry this superstition that a man who had murdered another fled to the dead man's father, and before he knew what had happened drank coffee. Presently friends came in, and, as they were relating the news to the bereaved father, recognized the murderer crouched beside the fire. They instantly demanded vengeance. "No," said the father, "it cannot be; he has drunk coffee, and has thus become to me as my son." Had he not drunk coffee the father would never have rested until he had dyed his hands in his blood. As it was, it is said he further gave him his daughter to wife.—*Last Journal of Bishop Hannington.*

How the Turks Make Coffee.

The Turks, without being scientific, are practical. They have learned from experience, and pulverize their coffee to a powder in a marble mortar and pass it through a fine sieve. When semi-pulverized more than half the material is lost, and with it the benefits. The Turks combine the two to advantage in the following manner:—They take of the finely pulverized coffee half the quantity ordinarily used in this country, or about a teaspoonful for each cup; put it in an ordinary coffee

pot of the form of a truncated cone, pour over it boiling water and stir it thoroughly. They set the pot on a gentle fire to accelerate the chemical combination of the particles with the water. In the process of ebullition the particles afloat will gather on the surface, forming a thick cream, which serves as a cover and prevents the aroma contained in the essential oil from evaporating. When it commences to boil the surface cream rises to overflowing, to prevent which the pot is taken off the fire to permit the boiling to subside. This operation is repeated several times, until the creamy surface has thinned, ready to break or bubble. Then the pot is taken down, covered up and set to rest in a warm corner of the range for about five, or six minutes to settle. When served it is decanted gently so as not to disturb the sediment. Thus is prepared the famous Turkish café noir, or black coffee, for they use neither sugar nor milk.

Why 33,000 Pounds is a Horse Power.

When men begin first to become familiar with the methods of measuring mechanical power, they often speculate on where the breed of horses is to be found which can keep at work raising 33,000 pounds one foot per minute, or the equivalent, which is familiar to men accustomed to pile driving by horse power, of raising 330 pounds 100 feet per minute. Since 33,000 pounds raised one foot per minute is called one horse power, it is natural for people to think that the engineers who established that unit of measurement based it on the actual work performed by horses.

But such, explains *The Manufacturers' Gazette*, was not the case. The horse power unit was established by James Watt about a century ago, and the figures were settled in a curious way. Watt, in his usual careful manner, proceeded to find out the average work which the horses of his district could perform, and he found that the raising of 22,000 pounds one foot per minute was about an actual horse power. At this time he was employed in the manufacture of engines, and had almost a monopoly of the engine building trade. Customers were so hard to find that all kinds of artificial encourage-

ments were considered necessary to induce power users to buy steam engines. As a method of encouraging business, Watt offered to sell engines reckoning 33,000 foot pounds to a horse power, or one-third more than the actual. And thus, what was intended as a temporary expedient to promote business has been the means of giving a false unit of a very important measurement to the world.

Legends About Birds.

From remote antiquity much mysterious lore has existed on the subject of birds, and ornithomancy, or the science of divination by birds, has still many credulous believers. The feathery denizens of the air were supposed to be favorites with the gods, having always some subtle connection with the shadowy region beyond, and, therefore, endowed with unusual prescience concerning the powers of nature.

The gods of heathendom were frequently transformed into birds, and classical authors abound in instances of ordinary mortals condemned to exist in bird shape for periods of greater or less duration. In Vedaic lore, Agni often appeared as a falcon or eagle. Zeus or Jupiter became an eagle to seduce the young Ganymede, and a swan in order to make love to I.eda. King Arthur, the early British hero, was, said popular tradition, transformed into a raven. In Irish lore, the children of Lir were transformed into swans, to wander for centuries.

Many of the ancient gods and goddesses have as attributes certain ones of the feathery tribe. The eagle was the bird of Jove; the peacock, the goose, and the cuckoo belonged to Juno; the owl, symbol of meditation, to Athens; while Apollo also claimed the goose. To Mars was dedicated the woodpecker; to Venus the sparrow and dove. The woodpecker is Picus, a soothsayer, who failed to reciprocate Circe's love, and was metamorphosed in consequence. Much popular lore relates to this bird.

Savages had many legends about birds, usually in connection with meteorological phenomena. The Haidah Indians claim descent from the crow. Votan, the Maya

hero, is represented as a swallow, and the owl is a cultured hero of the Tupaquas of California. The Pimas say the eagle caused the deluge.

It is a very old conception that the soul passes to heaven in the form of a bird, and some say these souls flutter about us in bird shape. The Powhatan tribe would not touch wood birds, regarding them as the animated souls of their dead chiefs, and the Indians near St. Anthony's Falls said the spirits of dead warriors hovered about in the shape of eagles.

The Hurons thought that turtle doves were the abodes of departed souls, and the Abipones claimed the same for the red headed duck, regarding it as an omen of death to see it flying slowly overhead. Several South American tribes entertained similar ideas concerning many birds.

Thlinkets revered Yehr, the creator crow, and Delawares thought their guardian spirit, in eagle shape, hung over them, and that, if pleased, corn would be plentiful, and the hunting successful, but if it were angry, thunder and lightning would attend its rage. The diver was sacred among the Hurons, embodying the souls of the dead. The Flatheads say the speckled duck is a metamorphosed weeping Indian wife. The Kailla Indians say the soul is carried to heaven by a bird; but a hawk that follows will catch it if it is impeded by its sins. The Ojibways call the bridge over which souls travel "the owl bridge." This conception of the bird as a soul is a common one, and in this shape the soul is frequently figured in mediæval prints as escaping from the body.

Several birds are sacred in popular lore. The swallow is one of these. A Swedish tradition represents it as flying over the cross during the crucifixion of Christ, and crying "Svala! svala!" (comfort). Its presence about the house or barn is an auspicious omen in most countries, and it is unlucky to disturb its nest.

A tradition similar to that given above is related of the stork, a bird venerated all over Europe. Swedish legends say that it flew about the cross, saying "Styrka! styrka!" (strengthen). And it is therefore a bird of good omen.

There are three of the smaller birds common to many countries, which are also regarded as sacred. These are the robin, the wren, and the cuckoo. In Scotland the robin is never molested, for it is said to have a drop of God's blood in it.

A Breton tradition alleges that the wren brought fire from heaven, but lost a part of its plumage. There is a popular legend that this little bird claimed the title of king of birds by a contest with the eagle as to which could mount the highest. Perched upon the back of the larger bird, the little wren soared beyond its competitor and won the title.

The cuckoo bears a character in popular lore much like that of the wren. It is more of a prophet, however.

The dove is a well known emblem of fidelity and gentleness. As the sign of incarnation and of immortality it has always been sacred to Christians.

The eagle is the subject of much popular lore.

An old superstition declares that the king of birds ascends into the fiery regions about the sun once in ten years, and then plunges into the sea to renew its youth.

A popular idea, dating from antiquity, was that of the dying swan, whose sweet notes were heard only just before its dissolution.

The pelican was also the subject of a curious tradition. She was said to pierce her breast to feed her young; and it was also asserted that young pelicans were hatched dead, and the cock revived them by a drop of blood from his breast.

Another equally ancient superstition was that concerning the kingfisher, which brought good weather (halcyon days) while sitting on her eggs. Pliny, Virgil, and many other ancient authors refer to this superstition.—F. S. BASSETT.

The Famous Carthusian Table.

Not a great way from Monterey, Mexico, is the famous Carthusian table, one of the greatest natural curiosities on the continent. It is a table land 1,400 feet high and 2,500 above sea level. The figure of the table land is an almost perfect crescent, running east and

west, and on its summit is more than 80,000 acres of perfectly level land, abounding in running water. The only way to reach the top is by a perilous road five feet wide and three miles long. This singular mountain was named for the Carthusian monks by a former tribe of Indians who occupied it and were taught by the fathers. It is now owned as a summer resort by Señor Don Patricio Melmo, a rich banker of Monterey, a lucky Irishman who in his native land was known as plain Pat Mullens.

The Mexican Monolith.

The removal of the great monolith, the goddess of water, from the ancient Mexican city of Teotihuacan, attracted widespread attention among scientific men. The top of the statue was below the surface of the surrounding plain, and as it was over ten feet lower, it is seen that the task of its removal was no ordinary one. It is of granite, contains 262 1-2 cubic feet of solid rock. Its weight is estimated at 25 tons. A temporary railroad track, nearly three miles long, was laid from the station on the Mexican railway over to the place where the statue now stands. Its age is supposed to be about 1,400 years.

A Heavy Family.

A family which claims the honor of being the heaviest in Kennebec county is that of William Merrill, of Gardiner. Mr. Merrill himself weighs 303, Mrs. Merrill, 264; the eldest daughter, 300; a younger daughter, 260, and the only son, 215—a total fortune of 1,342 pounds.—*Lewiston (Me.) Journal.*

Gems and their Composition.

The ruby is not called a ruby because it is red, for, the topaz, which may be yellow or a delicate wine color, and the sapphire, which is blue, or both rubies. The humble toiler consoling himself with his clay tobacco pipe, the potter moulding the plastic clay into shape upon his magic wheel, or the delver in damp slate quarries, probably does not know that his pipe and his clay and his brittle slate are of the very substance from

which the flaming Oriental ruby, the mellow topaz and the rich sapphire are evolved; but such is the fact. They are among the most beautiful of gems, yet are but simple crystals of a siliceous earth—mere bits of alumina. The glorious blue light that lurks within the sapphire is the chemical action of one grain of iron on every 100 grains of alumina. The red ruby owes its brightness and hue to a mingling of chromic acid with the parent clay.

Different from the Oriental topaz is the topaz from Brazil, which, beautiful as it is, is nothing but a compound of silica or flint and alumina, which also make the garnet and largely compose the Occidental emerald and the beryl stone. These two stones also contain an earth known as glucina, so called because of the sweetness of the salts discovered in it.

The diamond is the king of gems, a monarch blazing like the sun, and the opal is its moonlight queen. Yet, as every one knows, the diamond is only a chip of coal and the opal, as every one does not know, is simply a mingling of silica and water. But the diamond is the spiritual evolution of coal, the realization of its highest being. Ten parts of water and ninety parts of silica combined in the mystic crucible of nature form the opal, the water giving to the gem that shifting, changeable, iridescent coloring which is the opal's peculiar charm. Who would imagine that the fire in the opal is not fire at all, but, of all things, water! And yet the silica that holds the radiant moisture captive is the common flint from which our forefathers struck the igniting sparks into their tinder boxes.

But the opal is not the only precious stone that owes its being to flint. The amethyst, the cat's eye, the Egyptian jasper—all are idealizations of the ultimate efforts of natural chemistry acting on silica. What is the lapislazuli? A bit of common earth painted throughout with sulphuret of sodium. And the turquoise—what forms it? and how did it receive its soft, pale blue color? The turquoise is phosphate of alumina, and copper in the earth gave it its lovely hue. Chrysolite is the pure silicate of magnesia. Of the rare decorative stones and marbles, if there were no carbonate of copper the

seeker after malachite would find his search fruitless and the sculptor would sigh in vain for the matchless Carrara marble if there were no carbonate of lime.

What Ambergris Is.

Ambergris, which is used as a basis for nearly all standard perfumery, was first found an unattractive mass floating on the surface of the sea or lodged upon the shore. How so unlikely a substance ever suggested itself as a perfume is unknown, but it has been in use for centuries, and it is only until comparatively recent times that its origin has become known. It is nothing more than the morbid secretion of the liver of a sick spermaceti whale. It is described as a fatty, waxy substance, disagreeable to sight or touch, but even in its crude state exhaling a pleasant odor. The crude substance is subjected to chemical action to extract the active principle called amberine. It was recently reported that a Maine fisherman picked up a mass of the substance which nearly filled a barrel and is worth \$25,000. This is probably an exaggeration, both as to size and price, for the largest piece on record was found at the Windward Islands, weighing 130 pounds. This was sold for about \$2,600.

Superstitions About Babies.

In Ireland a belt made of a woman's hair is placed about a child to keep harm away.

Garlic, salt, bread, and steak are put into the cradle of a new born babe in Holland.

Roumanian mothers tie red ribbons around the ankles of their children to preserve them from harm, while Esthonian mothers attach bits of asafetida to the necks of their offspring.

Welsh mothers put a pair of tongs or a knife in the cradle to insure the safety of their children; the knife is also used for the same purpose in some parts of England.

Among Vosges peasants children born at a new moon are supposed to have their tongues better hung than others, while those born at the last quarter are sup-

posed to have less tongue but better reasoning powers. A daughter born during the waxing moon is always precocious.

At the birth of a child in Lower Brittany the neighboring women take it in charge, wash it, crack its joints, and rub its head with oil to solder the cranium bones. It is then wrapped in a tight bundle and its lips are anointed with brandy to make it a full Breton.

The Grecian mother, before putting her child in its cradle, turns three times around before the fire while singing her favorite song to ward off evil spirits.

In Scotland, it is said that to rock the empty cradle will insure the coming of other occupants for it.

The Swedish mother places a book under the head of the new born infant that it may be quick at reading, and puts money into the first bath to guarantee its wealth in the future.

The Turkish mother loads her child with amulets as soon as it is born, and a small bit of mud steeped in hot water prepared by previous charms, is stuck on its forehead.

In Spain the infant's face is swept with a pine tree bough to bring good luck.

Why we are Right-Handed.

Primitive man, being by nature a fighting animal, fought for the most part at first with his great canine teeth, his nails, and his fists, till in process of time he added to those early and natural weapons the further persuasions of a club or shillalah. He also fought, as Darwin has conclusively shown, in the main for the possession of the ladies of his kind, against other members of his own sex and species. And if you fight you soon learn to protect the most exposed and vulnerable portion of your body. Or, if you don't, natural selection manages it for you, by killing you off as an immediate consequence.

To the boxer, wrestler, or hand-to-hand combatant, that most vulnerable portion is undoubtedly the heart. A hard blow, well delivered, on the left breast, will easily kill, or at any rate, stun a strong man. Hence, from an early period, men have used the right hand to fight

with, and have employed the left arm chiefly to cover the heart and to parry a blow aimed at that specially vulnerable region. And when weapons of offence and defence supersede mere fists and teeth, it is the right hand that grasps the spear or sword, while the left holds over the heart for defence the shield or buckler.

From this simple origin then, the whole vast difference of right and left in civilized life takes its beginning. At first, no doubt, the superiority of the right hand was only felt in the manner of fighting. But that alone gave it a distinct pull, and paved the way at last for the supremacy elsewhere. For when weapons came into use, the habitual employment of the right hand to grasp the spear, sword, or knife, made the nerves or muscles of the right side far more obedient to the control of the will than those of the left. The dexterity thus acquired by the right—see how the word “dexterity” implies this fact—made it more natural for the early hunter and artificer to employ the same hand preferentially in the manufacture of flint hatchets, bows and arrows, and all the other manifold activities of savage life. It was the hand with which he grasped his weapon; it was therefore the hand with which he chipped it. To the end, however, the right hand remains especially “the hand in which you hold your knife;” and that is exactly how your own children to this day decide the question which is which, when they begin to know their right hand from their left for practical purposes.—*Hall's Journal of Health*.

Large Churches.

St. Peter's, Rome, will accommodate 54,000; Duoma, Milan, 37,000; St. Paul's in Rome, 25,000; St. Sophia, Constantinople, 23,000; Notre Dame de Paris, 21,000; the Dome of Florence, 20,000; the Cathedral of Pisa, 13,000; St. Marc in Venice, 7,000.

Coin Substitutes.

Norway even now uses corn for coin.

The skins of animals were the earliest forms of money.

In India cakes of tea pass as currency, and in China pieces of silk.

Sheep and oxen among the old Romans took the place of money.

Oxen form the circulating medium among the Zulus and Kaffirs.

Tin to-day forms the standard of value at the great fairs of Nishni Novgorod.

In the retired districts of New Guinea female slaves form the standard of value.

Among some of the native Australians greenstone (jade) and red ochre form the currency.

Chocolate is still used in the interior of South America for a currency, as are cocoanuts and eggs.

Iron spikes, knives, and spear heads, and brass rods are employed in certain parts of Central Africa.

The archaic Greek money was in the form of thick, round lumps of metal, stamped with the given value.

According to Adam Smith it was not so very long ago that nails were used as a subsidiary coin in Scotland.

Whales' teeth are used by the Fijians, red feathers by some of the South Sea Islanders, and salt in Abyssinia.

The old Chinese gold coins were in the form of cubes, while the bronze was shaped like knives and mining tools.

The Icelandic and Irish laws yet have traces of the use of cattle for money. Many Teutonic fines were paid in cattle.

In the early colonial times of 1652 tobacco and tobacco receipts were legal tender; corn and beans and codfish were also employed.

The small, hard shell known as the cowrie is still used in India, the Indian islands, and Africa, in the place of subsidiary coin.

According to Prescott, the money of the Aztecs and the nations in kin consisted of quills filled with gold dust and bags of chocolate grains.

Before the introduction of coined money into Greece, skewers or spikes of iron and copper were a currency, six being a drachm or handful.

The Carthaginians had better money. Barbarossa,

during his fight with Milan in 1158, issued leather tokens, and so did John the Good of France in 1360.

In the British West Indies pins, a slice of bread, or a pinch of snuff have all a purchasing power, while on the African coast axes are the accepted currency.

In 1652, during the early colonial times of America, musket balls passed for change at a farthing apiece, and were a legal tender for sums under a shilling.

Wampum was the commonest currency of all. It was the shell bead money of the Indians, and was soon accepted by the colonists as a convenient token.

The strangest coin of all, though, was the ideal money spoken of by Montesquieu as being found in certain parts of Africa. It is an ideal money called "maconte," but is purely a sign of value without a unit.

Human Insect Eaters.

Humboldt relates that yellow ants are eaten in Brazil, mixed with resin as sauce.

Locusts are now eaten in the Crimea, Greece, India, Arabia, Persia, Africa, and Madagascar.

The aborigines of Australia make a cake of the pounded bodies of a night-flying creature of the moth genus.

Not contented with the honey and wax which the bees yield, the Cingalese eat the insects themselves.

The Chinese are fond of the larvæ of a species of hawk moth, some of which, according to Dr. Erasmus Darwin, are very delicious.

White ants are much prized as food in various parts of Africa. The Hottentots eat them both raw and cooked and thrive wonderfully on them.

In India and the East Indies the natives mix white ants with flour, and make them into pastry, which is considered to be highly nutritive.

The wire worm, the larvæ of a small beetle, is eaten in large quantities by Turkish women, and the Chinese also eat some species of worms.

The cicadæ, loudly humming four winged insects, were largely eaten by the Greeks, and their delicate flavor was commented on by many writers.

One of the same species of the cossus, about the

thickness of one's finger, is still eaten in some parts of America, Africa, and the West Indies and Mauritius.

Spiders nearly an inch in length are roasted over the fire and eaten by the natives of New Caledonia. Even educated Europeans have been known to eat them.

Locusts have been eaten from the remotest antiquity, and some Ethiopian tribes, from this circumstance, received the name of *Acridophagi*, or locust eaters.

Snails have been used as food from very ancient times. Pliny states that they were much appreciated in Rome, and were fattened on meal until they attained great size and excellent flavor.

Pliny says that the famous *coSSI* were held in high esteem among the Roman Patricians, and were fattened upon flour and wine. These insects are supposed to be grubs of a large Longicorn beetle.

Perhaps the most disgusting instance of reptile eating is that recorded by Humboldt (*"Personal Travels,"* ii. 205), who asserts that he saw Indian children drag out of the earth centipedes eighteen inches in length, and eat them.

The nations of the lake regions of Central Africa make a sort of cake out of the multitudes of small dead insects which they gather on the shores of the lakes; and in Central America the natives make bread of the eggs of a large moth.

The Chinese, who are noted for their economy, eat the chrysalis of the silkworms, after they have unwound their silk from the cocoons. They fry them in butter or lard, add the yolks of eggs, and season with pepper, salt, and vinegar.

The galls of several gall flies (*cynips*), which are juicy, like apples, and crowned with rudiments of leaves resembling the calyx of that fruit, are esteemed in the Levant for their aromatic flavor, and are sold in the markets of Constantinople.

Ælian speaks of an Indian king who set before his guests a quantity of roasted worms, of which he said Indians were very fond, for dessert. Some Greeks who tasted them are said to have pronounced their flavor most delicious. Humboldt mentions that the Arabs of Fezzan ate some kinds of worms.

Jackson, a traveler of the eighteenth century, says that, in 1799, locusts were generally served up in Barbary with other dishes, and were esteemed a great delicacy. They were preferred by the Moors to pigeon; and it was said that a person might eat a plate of about 200 or 300 without feeling any ill effect.

The Hottentots are said to rejoice at the appearance of a swarm of locusts, although the destructive insects devour all the verdure in the district. The natives eat them in such quantities that they soon grow perceptibly fatter. They also gather the eggs, and make of them a kind of brown or coffee-colored soup.

The Arabs, when there is a famine, grind locusts in their hand mills, or pound them in mortars, and mix with flour and water into a dough, which they bake as ordinary bread. But they do not only employ locusts during a scarcity of corn, but, at other times, eat them as a delicacy. They boil them for a good while in water, and afterwards stew them with butter into a kind of fricassee of good flavor.

Funeral Customs.

The music kept up at Irish wakes used to be for the purpose of driving away evil spirits.

The Mohammedans always, whether in their own country or one of adoption, bury without a coffin of any kind.

The primitive Russians placed a certificate of character in the dead person's hand, to be given to St. Peter at the gates of heaven.

The natives of Australia tie the hands of the corpse and pull out the finger nails—this for fear that the dead will scratch their way out of the grave and become vampires.

In India, up till within the past few years, the devoted wife ascended the funeral pyre of her dead husband, and was incinerated by the same flame that reduced her loved one to ashes.

During the time of the old Roman empire the dead bodies of all except suicides were burned. The Greeks sometimes buried their dead in the ground, but more generally cremated them in imitation of the Romans.

When a child dies in Greenland the natives bury a living dog with it—the dog to be used by the child as a guide to the other world. When questioned about their strange custom they say: “A dog can find his way anywhere.”

Measurement of Atoms.

William Thomson extended the methods of atomic measurement, and came to the conclusion that the distance between the centres of contiguous molecules is less than a five-millionth and greater than a billionth of a centimetre; or, to put it in language more suited to the ordinary mind, Thomson asks us to imagine a drop of water magnified up to the size of the earth, and then tells us that the coarseness of the graining of such a mass would be something between a heap of small shot and a heap of baseballs.

Curiosities of Magnetism.

Most well informed people are doubtless aware that the globe on which they live is a great ball of magnetism, but comparatively few have an adequate idea of the influence this property is continually exerting on all sides, that many common but inexplicable phenomena can be traced directly to this source. Statistics go to show that in the matter of steel rails, as many as thirteen will become crystallized and break where they go to make up a railroad track running east and west, before one of those on a north and south track is similarly affected. This is entirely due to the magnetism generated by friction, and the fact that the polarity of the magnetic current is in the former instance resisted in the headlong rush of the train, whereas in the latter case it is undisturbed.

Another strange effect of this peculiar and occult force is that exerted on the watches of train men. A timepiece carried by the conductor running a train twenty miles an hour, however accurate it may be, will, if the speed of the train is increased to, say, fifty miles, become useless until regulated. The magnetism generated by the flight of a train may be said to be in

the delicate parts of a watch, numbering all the way from 400 to 1,000 pieces, and peculiarly susceptible to this influence by reason of the hammering and polishing they have received, are not slow to feel the effect.

Mummy Eyes.

The mummy eyes, as they are called, are taken from the bodies of Bolivian mummies, but bear no resemblance to the human eye. They look like glass shells with gilt inside, and, in spite of the fact that they are solid, are delicate and easily broken. When exposed to dampness the gilt appearance is lost, and they resemble a piece of yellow crystal.

An English Word.

The word "boodle" is to be found in either of the dictionaries spelt "bodle." It has been used in its present sense over fifty years, and it is to be found in the "Thieves' Lexicon," published in 1858. "Boodle: counterfeit money. Boodle carrier: one who carries the counterfeit money and hands it out, one bill at a time, to those who pass it."

Precocity of Hindoo Children.

A tourist who is traveling in India writes home that he was astonished by the precocity of the Hindoo children. Many of them are skilful workmen at an age when other children are learning the alphabet. One of the most expert carvers in wood he saw was a boy of seven, and many of the handsomest and most costly rugs and carpets are woven by children not yet in their teens.

Couldn't Find It.

A German anatomist has dissected many a human body and declares that he has never found the soul. Astonishing! If there is a soul he surely would discover it. Did he find any life in the dead body? No. Of course; then there was none before the body died. Did he find any mind, any thought, any affection? No. Therefore there are no mind, no thought, no affection. The following reply has been given to the anatomist:

—A cat listened with admiration to the song of a nightingale. Ambitious to learn the secret of such charms and to acquire them himself, he caught the sweet singer, tore it to pieces, and found to his astonishment no music.—J. H. W. SLUCKENBERG, D. D.

The Ocean's Wealth.

Seldom or never has the enormous importance of the harvest of the sea been more forcibly represented than it was by Professor Huxley in the address which he delivered at the International Fisheries Exhibition some years ago. An acre of good fishing ground, he pointed out, will yield more food in a week than an acre of the best land will in a year. Still more vivid was his picture of the moving "mountain of cod," 120 to 130 feet in height, which for two months in the year moves westward and southward past the Norwegian coast. Every square mile of this colossal column of fish contains one hundred and twenty million fish, consuming every week, when on short rations, no fewer than eight hundred and forty million herrings. The whole catch of the Norwegian fisheries never exceeds in a year more than half a square mile of this "cod mountain," and one week's supply of the herrings needed to keep that area of cod from starving. London might be victualled with herring for a year on a day's consumption of the countless shoals of uncaught cod.

Washington's Death.

George Washington died the last hour of the day, the last day of the week, of the last month of the year, of the last year of the eighteenth century.

Curious Signs.

A notable sign on one of Boston's busiest streets bears the remarkable legend, "Cole and Wood, dealers in Wood and Coal," the members of this firm evidently having an unusually fine perception of the "poetical fitness of things."

In High Street, Clifton, is a sign "Milliner and Modest."

A New York lawyer named Doolittle once unwittingly entered into partnership with a barrister named Steele, but a singular lack of clients soon became painfully noticeable, and it was found advisable to dissolve, the name of the firm proving altogether too suggestive to prospective patrons.

U. Catchem and I. Cheatham, attorneys at law, was a sign that had to be taken down for a similar reason.

Help Yourself.

Fight your own battles. Hoe your own row. Ask no favors of any one, and you'll succeed a thousand times better than one who is always beseeching some one's influence and patronage. No one will ever help you as you can help yourself, because no one will be so heartily interested in your affairs. The first step will be such a long one, perhaps; but carving your own way up the mountain you make each one lead to another, and stand firm while you chop still another out. Men who have made fortunes are not those who have had \$5,000 given them to start with, but boys who have started fair with a well-earned dollar or two.

Composition of Coffee.

Coffee is the seed of the coffee plant, which is a shrub that will grow in any part of the world where the minimum yearly temperature never falls below 55 degs. Fahrenheit. One pound of unroasted coffee beans or seeds contains: Of water, 1 oz. 407 grs.; of sugar, 1 oz. 17 grs.; of fat, 1 oz. 402 grs.; of caseine (flesh forming matter) 2 oz. 35 grs.; of gum, 1 oz. 192 grs.; of woody matter, 5 oz. 262 grs.; of caffeine and caffeic acid (or stimulating principles), 400 grs.; of aromatic or odoriferous oil, about 2 grs.; and of mineral matters, about 1 oz. 32 1-2 grs. The caffeine of coffee is exactly the same, both chemically and physically, as theine, the stimulating principle of tea. Both substances are alike composed of 10 parts of hydrogen combined with 16 parts of carbon, 4 parts of nitrogen, 4 parts of oxygen, and 2 parts of water.—*Grocers' World.*

Beauty of the Coffee Plant.

Nothing can be more beautiful and interesting than studies of the annual blooming, budding, growth, and ripening of coffee, and its gathering and preparation for the market. The leaves, which are ovate in form, are about four inches long. They set opposite each other in pairs and are dark green in color. Similar in texture to the mamee leaf, they have the waxy surface of the Indian laurel. The foliage is perennial. Shooting out from the bases of these pairs of leaves, after the manner of our cherry blooms, are seen the coffee blossoms, almost precisely like a diminutive tuberose, in clusters of three to six, snow white, and with an indescribably delicate, subtle, and delicious odor. For two months in spring time a coffee plantation is simply one vast plain of white, a region of intoxicating odor, with the blue sky half shut from sight by myriads of honey-seeking butterflies, humming birds, and brilliant-winged songsters, fluttering and circling in apparent ecstasy of revelry and delight. For nearly six months new blossoms come as the old ones disappear. Blossom and ripening berries are continuous. As the breezes snow the dying blossoms upon the ground tiny green buttons take their place. They change to a pale pink; then to a bright cherry; finally to a reddish purple. Then they are ripe and ready for gathering.—EDGAR L. WAKEMAN.

Pertinent Queries.

Why do we always talk of putting on a coat and vest? Who puts on a coat before a vest? We also say putting on shoes and stockings. Who puts on the shoes before the stockings? We also put up signs telling people to wipe their feet when we mean their boots or shoes. And a father tells a boy he will warm his jacket when he means to warm his pantaloons.

Folk Lore of the Oak.

The oak is a tree celebrated in mythology and folk lore. Many of the events of the early Jewish history are connected with it, and the oak of Shechem, the oaks of Bashan, and other trees of the same kind seem to

attest the importance of this tree. It was even more important to the Druids, who venerated it and its parasite, the mistletoe. Mysterious properties were sometimes accorded to oak trees. In one part of England ague was cured by passing the sufferer under an oak branch that had taken root in the ground. Near certain cross roads in Hertfordshire stood an oak which was approached to effect a cure for the same malady. This was done by pegging a lock of hair into the tree and wrenching it from the head.

An old German law forbade any one from cutting down on oak tree. The oak and the hazel were said to be on bad terms, and could not agree. In England this prohibition seems formerly to have included other trees.—F. S. BASSETT.

The Paradoxes of Science.

The water which drowns us, a fluent stream, can be walked upon as ice. The bullet which, when fired from a musket, carries death, will be harmless if ground to dust before being fired. The crystalized part of the oil of roses, so graceful in its fragrance—a solid at ordinary temperatures, though readily volatile—is a compound substance, containing exactly the same elements, and in exactly the same proportions, as the gas with which we light our streets. The tea which we daily drink, with benefit and pleasure, produces palpitations, nervous tremblings, and even paralysis, if taken in excess; yet the peculiar organic agent called theine, to which tea owes its qualities, may be taken by itself (as theine, not as tea) without any appreciable effect.

The water which will allay our burning thirst augments it when congealed into snow; so that it is stated by explorers of the Arctic regions that the natives “prefer enduring the utmost extremity of thirst rather than attempt to remove it by eating snow.” Yet if the snow be melted it becomes drinkable water. Nevertheless, although, if melted before entering the mouth, it assuages thirst like other water, when melted in the mouth it has the opposite effect. To render this paradox more striking, we have only to remember that ice, which melts

more slowly in the mouth, is very efficient in allaying thirst.—*Blackwood's Magazine*.

Kite-Flying in Japan.

One of the most popular amusements is kite-flying. At certain seasons old and young, rich and poor, make unto themselves kites and hie them to the hills. You will sometimes see several thousand people gather together to watch the sport or to take part. The kites are often large and fly very high. Some have grotesque paintings, others Æolian harps, a few are of odd shapes. The lines are wound upon reels and are generally dusted with powdered glass, so that if you manage to foul your line with that of some one else it may cut his line and his kite be lost, while yours still soars. The more kites you cut loose the bigger feather in your cap. In this lively amusement Miss Yum-Yum takes her full share.

Oft Quoted Phrases.

Some of the commonest sayings we hear every day have been handed down to us, from father to son, for more than a thousand years; and even long before these proverbs are thought to have been in use among our forefathers in their old homeland in North Germany, before they conquered and settled the island they afterward called England. Many of them are common to the whole Aryan race.

As King Alfred, who lived in the ninth century, was a good and wise man, our ancestors in the middle ages attributed to him many of these wise sayings, and there is a tradition that this proverbial philosophy was delivered by him to his Witanagemot, or old English parliament.

AN OLD MANUSCRIPT.

There is a manuscript of the thirteenth century containing many of these proverbs, which has been printed just as it was written, in the style and spelling of 600 years ago. The specimens that follow will be recognized at once, in spite of their old fashioned English dress:

"Brend child fur dredeth."

"He is fre of hors that ner nade non."

"Wel fyht that wel flyth."

"God beginning maketh god endyng."

"Sottes bolt is son shote."

"Fer from eye, fer from herte."

"When the coppe [cup] is fullest thenne ber hir e feyrest."

"When the bale is hest [highest], thenne is the bote [boot remedy] nest [nighest]."

Coming down to the fourteenth century, we find many of our common proverbs in "Piers Plowman" and Chaucer. The author of "Piers Plowman" says that faith without work is

* * * "Ded as a dore nayle.

Wisdom and witte now is nought worth a carse."

This survives in our "not worth a curse," or "don't care a curse," where curse stands for cress. In Turner's book on the "Names of Herbes" (1548) both forms are in use, cresse and kerse. An old alliterative poem contains this line:—

"Anger gaynez [gains] thee not a cresse."

And Chaucer has:

* * * "he raught [recked] he not a kers."

In the "Canterbury Tales" one would naturally expect to find many of our common byewords, such as:

"Nordre will out, that se we day by day."

"Than is it wisdom, as it thinketh me,

To maken vertu of necessite."

"Hyt is not all golde that glareth."

"Upright as a bolt."

"Bet than never is late."

Which we have changed into "Better late than never."

"Besy as bees;" "Piping hot," etc.

To curry favor is a corruption of middle English—to curry favell—that is, to rub down a horse. Favell was a common name for horse in the fourteenth century.

Specimens of proverbs found in the fifteenth century literature are:

"I know not an A from the wynd-mylne, ne a B from a bole foot."—JACK UPLAND.

"We have a craw to pulle."—*Townly Mysteries*.

"Odyous of olde been comparisonis."—*Lyndgate's Poems*.

AFTER THE FIFTEENTH CENTURY

As we reach the sixteenth century many proverbs appear for the first time. Tyndale, the translator of the Bible, says that "if the porridge be burnt, or when a thing speedeth not well, we say: 'The bishop hath put his foot in the pot.'"

This is partly revived in our day:

"Put his foot in it."

Lyle's "Euphues:"

"As lyke as one pease is to another."

"Fainth hart neither winneth castell nor lady."

Trusser's "Five Hundredth Pointes of Good Husbandrie."

"Christmas comes but once a year."

"Who goeth a-borrowing goeth a-sorrowing."

"Heywood Proverbs," published in 1546

"No man ought to look a given horse in the mouth."

"Two heads are better than one."

"Beggars should be no choosers."

"Rome was not built in one day."

"New broom sweepth cleene."

"No fire without some smoke."

"Leape out of the frying pan into the fyre."

"I know on which side my bread is buttered."

"When I give you an inch you take an ell."

"She looketh as butter will not melt in her mouth."

"A penny for your thought."

"You can not see the wood for the trees."

"The grey mare is the better horse."

"You might have gone further and fared worse."

"Hit the nail on the head."

"Rule the roost" is a corruption of "rule the roast," a genuine English proverb. It is found in Gascoigne's "Steel Glas" (1576), but its appearance in literature is several centuries earlier.

"Forsooth, good sir, the lawyer leapeth in;
Nay, rather leapes both over hedge and ditch,
And rules the rost, but few men rule by right."

The literature of the seventeenth century abounds in our everyday proverbs.

"Abbott's Account of His Trials" (1627):

"A fool and his money is soon parted."

Mobbe's translation of "Life of Guzman" (1623):

"Make the best of a bad bargain."

"As merry as the day is long."

"Dead as a herring."

"Wycherley's Comedies" (1659-71):

* * * "damn with faint praises."—*Plain Dealer*.

"Dreams go by contraries."

"Forewarned is forearmed."—*The Gentleman Dancing Master*.

"Familiarity breeds contempt."

"Walls have ears."—*Love in a Wood*.

"Plain as a pike staffe."

"Fetch them over the coals."—*Merry Drollery*.

Congreve's Plays (1693-1700):

"Cut a diamond with a diamond."—*Old Bachelor*.

"Chip of the old block."—*Love for Love*.

* * * "turn my wife to grass."—*Way of the World*.

This is perhaps the origin of our grass widow.

Butler's "Hudibras" (1678):

* * * "ring the changes."

Jeremy Collier's "Short View of English Stage" (1698):

* * * "come off with flying colors."

"As long as there is life there is hope."

—E. A. ALLEN.

Colors for Mourning.

Deep blue, Bokhara mourning.

Pale brown, the withered leaves; used in Persia.

White, emblem of "white handed hope;" China.

Grayish brown, earth; Ethiopia and Abyssinia mourning.

Scarlet, mourning color occasionally worn by French kings.

Black expresses privation of light; worn throughout Europe.

Yellow, the sere and yellow leaf; Egypt and Burmah. In Brittany widows' caps among the peasantry are yellow.

Purple and violet, to express royalty; mourning for cardinals and kings of France. Violet, color for mourning in Turkey.

The Tartan Not an Ancient Scotch Dress.

"No patriotic Scotch lady need array herself in tartan under the impression that it was the ancient dress of her ancestors. The truth is that no Scotch prince (except the Chevalier) ever wore tartan in Holyrood before George IV. himself, and any of the Jameses would just as soon have thought of holding a court in a dressing gown. It was never in early times the dress of Scotland, or of the Scottish court, and it is noteworthy that you do not find it in the ancient family portraits in Scotland. Shoulder plaids were worn, but they were not tartans, and the clans were distinguished by badges in their bonnets."—*English Court Circular*.

Gloves in Early Times.

Gloves date back to a very remote period, the ancients not being strangers to their use, and by the eleventh century they were universally worn.

In a tomb in Egypt a pair of striped linen mittens were found that had been worn by a lady. Xenophon alludes to the Persians wearing gloves, and gives it as a proof of their effeminacy; and Homer describes Laertes at work in his garden wearing gloves to secure him from the thorns. The Romans were severely up-

braided by the philosophers for wearing gloves; but these reproaches had no effect in diminishing their use—they were too convenient and comfortable to be lashed out of being by the tongue of philosophy. They do not appear to have been worn in England until the beginning of the eleventh century, and were of German manufacture. In the course of time, a great deal of ornamentation was used on the gloves in England.

The effigies of Henry II. and Richard I. had gloves adorned with precious stones, and real gloves ornamented with jewels were found upon the hands of King John and Edward I., when their tombs were opened during the last century. Gloves were even ornamented with crests and armorial bearings. The ecclesiastical were always richly adorned. They were made of silk or linen, embroidered and jeweled. A pair preserved at New College, Oxford, are of red silk, with the sacred monogram surrounded by a glory, and embroidered in gold on the backs. Pope Boniface VIII. had gloves of white silk embroidered very beautifully and studded with pearls.

About the year 1600 leather gloves appeared. They were embroidered, adorned with pearls and gems, and trimmed with lace. Perfumed gloves, too, made their appearance and were very popular with the ladies. We are told that Queen Mary Tudor had a pair of "swete gloves" sent to her by a Mrs. Wheelers. The college tenants of Oxford had perfumed gloves presented to them, as well as distinguished guests. The custom went out soon after the reign of Charles I.

Marriage Customs.

In Siam all the guests must bring presents.

Presents are exchanged between the bride and bridegroom on the evening before an Armenian wedding.

Swedish brides used to receive from their friends a pig, sheep, or cow, and from the bridegroom a colt, dog, cat, or goose.

The custom of sticking coins on the bridegroom's forehead is common to several eastern races, among others to the Turcomans and Moors of West Barbary.

Among the early Germans money was given to the

bride's relatives on the wedding day, but this usage was not followed if the marriage happened to be an unequal one.

Every guest at a Norwegian wedding used to bring the bride a present. In many parts a keg of butter was the usual gift, and if the marriage took place in the winter, salted or frozen meat was offered.

With modern Arabians the bridegroom makes the bride presents, which are sent a day or two before the nuptials. As soon as the bride reaches the bridegroom's house she makes him presents of household furniture, a spear, and a tent.

In Persia the bridegroom is obliged to give a certain sum of money in addition to other presents. If he is in moderate circumstances he gives his bride two complete dresses, a ring, and a mirror. He also supplies the furniture, carpets, mats, culinary utensils, and other necessities for their home.

With the Celestials the family of the bridegroom make presents to the family of the bride of various articles a few days before the day fixed for the marriage. The presents generally consist of food, a cock and hen, the leg and foot of a pig, the leg of a goat, eight small cakes of bread, eight torches, three pairs of large red candles, a quantity of vermicelli, and several bunches of firecrackers.

Greeting Customs in Other Climes.

It is common in Arabia to put cheek to cheek.

The Hindoo falls in the dust before his superior.

The Chinaman dismounts when a great man goes by.

A Japanese removes his sandals, crosses his hands and cries out "Spare me!"

The Burmese pretend to smell of a person's face, pronounce it sweet and then ask for a "smell."

The Australian natives practice the singular custom when meeting of sticking out their tongues at each other.

A striking salutation of the South Sea Islanders is to fling a jar of water over the head of a friend.

The Arabs hug and kiss each other, making simul-

taneously a host of inquiries about each other's health and prospects.

The Turk crosses his hands upon his breast and makes a profound obeisance, thus manifesting his regard without coming in personal contact with its object.

About Thunderstorms.

Java has thunderstorms on the average of 97 days in the year.

England and the high Swiss mountains, 7; Norway, 4; Cairo, 3.

Sumatra, 86; Hindoostan, 56; Borneo, 54; and the Gold Coast, 52.

Rio de Janeiro, 51; Italy, 38; West Indies, 36, and South Guinea, 32.

Silesia, Bavaria, and Belgium, 21; Holland, 18; Saxony and Brandenburg, 17.

Buenos Ayres, Canada, and Austria, 23; Baden, Wurtemberg, and Hungary, 22.

France, Austria, and South Russia, 16; Spain and Portugal, 15; Sweden and Finland, 8.

In East Turkestan, as well as in the extreme north, there are almost no thunderstorms.

The northern limits of the thunderstorms are Cape Ogle, northern part of North America, Iceland, Semelji, and the coast of the Siberian ice sea.

A Female Athlete.

That was a lady to beware of that James Payne tells of in *The London Illustrated News*: "Miss Phœbe Boun of Matlock, never made an exhibition of herself in any way, but William Hutton, in one of his tours, speaks of her with wonder as well as praise. 'Her step, at 30, was very manly, and could cover forty miles a day.' She could lift a hundredweight with each hand, and, with the wind in her face, send her voice a mile. 'She could knit, cook, and spin, but hated them all with every accompaniment to the female character except modesty.' If any gentleman made a mistake as to this latter attribute, she knocked him down. She could hold the plow, drive the team and thatch the rick, but

her chief avocation was breaking in horses, without a saddle, at \$5.00 a week. She was an excellent shot and a great reader; fond of Shakespeare, and, doubtless, also, of the musical glasses, since she played the bass viol in Matlock church."

Weather Signs.

A rainbow in the morning gives the shepherd warning; that is, if the wind be easterly, because it shows that the rain cloud is approaching the observer.

A rainbow at night is the shepherd's delight. This is also a good sign, provided the wind be westerly, as it shows that the rain clouds are passing away.

Evening red and next morning gray are certain signs of a beautiful day.

When the glow worm lights her lamp, the air is always damp.

If the cock goes crowing to bed, he'll certainly rise with a watery head.

When you see gossamer flying, be ye sure the air is drying.

When black snails cross your path, black clouds much moisture hath.

When the peacock loudly bawls, soon we'll have both rain and squalls.

When ducks are driving through the burn (brook), that night the weather takes a turn.

If the moon shows like a silver shield, be not afraid to reap your field.

But if she rises haloed round, soon we'll tread on deluged ground.

When rooks fly sporting high in the air, it shows that windy storms are near.

If at the sun rising or setting the clouds appear of a lurid red color, extending nearly to the zenith, it is a sure sign of storms and gales of wind.—*Notes and Queries* (1856).

Time of the World's Harvests.

Burmah in the month of December.

Peru and South Africa in November.

East India and Upper Egypt in February and March. Algeria, Central Asia, Central China, Japan, Texas, and Florida in May.

Scotland, Sweden, Norway, and Northern Russia in September and October.

Australia, Argentina, Chili, and New Zealand are reaping their wheat in January.

The coast territories of Egypt, Cyprus, Syria, Asia Minor, Persia, and Cuba in April.

Belgium, Holland, Great Britain, Denmark, Poland, Hudson's Bay territories, Lower Canada, Columbia, and Manitoba in August.

Turkey, Greece, Italy, Spain, Portugal, Southern France in June.

Austria, Hungary, Danubian principalities, South Russia, south of England, Germany, Switzerland, France, Nebraska, Minnesota, Wisconsin, Iowa, Illinois, Indiana, Michigan, Ohio, New York, New England, and Upper Canada in July and August.

Odds and Ends of Curious Items.

One hundred and seventy-five million cells are in the lungs, which would cover a surface thirty times greater than the human body. The gold beaters of Berlin, at the Paris exposition, showed gold leaves so thin that it would require 282,000 to produce the thickness of a single inch, yet each leaf is so perfect and free from holes as to be impenetrable by the strongest electric light; if these leaves were bound in book form it would take 15,000 to fill the space of ten common book leaves. The hottest region on the earth is on the south-western coast of Persia, where Persia borders the gulf of the same name; for forty consecutive days in the months of July and August, the thermometer has been known not to fall lower than 100 degs., night or day. Seven million persons are employed in the cultivation of the vine in France. A bundle of spider webs, not larger than a buckshot and weighing less than one drachm, would, if straightened out and untangled, reach a distance of 350 miles. On dark nights a white light can be seen farther than any color; on bright nights red takes the first place.—*Current Literature.*

Speed and Power of Birds.

The vulture is said to fly at times at the rate of above 100 miles an hour.

The wild goose and the swallow, in their migrations, make 90 miles an hour.

The power exerted by the eagle in full flight is but a fraction of one horse power.

The common crow ordinarily lounges across country at the rate of 25 miles an hour, the speed of a railway train.

The carrier pigeon has flown long distances at rates of speed ranging from 60 up to 80 miles an hour, and for many hours together.

The power exerted by a pigeon flying is 2,200 feet per minute, 25 miles an hour nearly, at 1-200 of a horse power per pound, or 9 1-2 horse power for a flying machine of equally good form, weighing one ton, at 25 miles an hour, or about 50 horse power per ton weight at 50 miles.

The pelican has an expenditure of 1-11 horse power by 21 pounds of bird, and this is one horse power to 231 pounds, or about a horse power for the weight of a man, allowing ample margin for surplus power. The birds are found to have a surplus lifting power of about one-half.

The Weight of the Whale.

Nilsson remarks that the weight of the Greenland or right whale is 100 tons, or 220,000 pounds, equal to that of 88 elephants or 440 bears. The whalebone in such a whale may be taken at 3,360 pounds, and the oil at from 140 to 170 tons. The remains of the fossil whale which have been found on the coast of Ystad, in the Baltic, and even far inland in Wangapanse, Westergothland, betoken a whale which, although not more than 50 or 60 feet in length, must at least have had a body twenty-seven times larger and heavier than that of the common or right whale.

The Flight of Ducks and Geese.

There is authority for the statement that a canvas-back duck flies at an habitual rate of 80 miles per hour,

which is increased in emergency to 120. The mallard has a flight of 48 miles an hour; the black duck, pintail, widgeon, and wood duck cannot do much better. The bluewing and greenwing teals can do 100 miles an hour and take it easy. The redhead can fly all day at 90 miles per hour. The gadwall can do 90 miles. The flight of the wild goose is 100 miles per hour.

The Use of Letters.

It may not be generally known to the reading public how much each individual letter of the alphabet is used. D, h, n, o, c, and u are in third place as regards ordinary use; t, s, a, i, and r are in second place, being used a very little oftener; l and m are in fourth place, with f, g, y, v, p, and b close afterward; j and k are not common as compared to the rest; while z, q, and x are used least of all. The letter e is in first place, being used far oftener than any other.

To Give the Sack.

Two noblemen in the reign of Maximilian II. (1564-1576), one a German, the other a Spaniard, who had each rendered a great service to the emperor, asked the hand of his daughter, Helena, in marriage. Maximilian said that as he esteemed them both alike it was impossible to choose between them, and therefore their own prowess must decide it, but being unwilling to risk the loss of either by engaging them in deadly combat he ordered a large sack to be brought, and declared that he who should put his rival into it should have his fair Helena.

And this whimsical combat was actually performed in the presence of the imperial court, and lasted an hour. The unhappy Spanish nobleman was first overcome, and the German succeeded in enveloping him in the sack, took him upon his back, and laid him at the emperor's feet.

This comical combat is said to be the origin of the phrase, "give him the sack," so common in the literature of courting.—*Notes and Queries.*

Early Use of Soap.

More than 2,000 years ago the Gauls were combining the ashes of the beech tree with goat's fat and making soap. When Marius Claudius Marcellus was hastening southward over the Flaminian way, laden with spoils wrested from the hands of Viridomar, the Gallic king lying dead by the banks of the Po, his followers were bringing with them a knowledge of the method of making soap. The awful rain of burning ashes which fell upon Pompeii in 79 buried (with palaces and statues) the humble shop of a soapmaker, and in several other cities of Italy the business had even then a footing. In the eighth century there were many soap manufactories in Italy and Spain, and fifty years later the Phœnicians carried the business into France, and established the first factories in Marseilles. Prior to the invention of soap, fuller's earth was largely used for cleansing purposes, and the juice of certain plants served a similar purpose. The earth was spread upon cloth, stamped in with the feet, and subsequently removed by scouring. It was also used in baths, and as late even as the eighteenth century was employed by the Romans in that way.

The Organ.

The first invention of the organ has been ascribed to Ctesibius, of Alexandria, who lived B. C. 150. But the period when this instrument was introduced into the churches of western Europe is rather uncertain. Pope Vitalian is supposed to have been the first to adopt it, about the year 670. But the earliest account, to be relied on, of the introduction of the organ into the west of Europe is that about the year 755 the Greek Emperor Copronymus sent one as a present to Pepin, king of France. In the time of Charlemagne, however, organs became common in Europe. That prince had one built at Aix la Chapelle in 812, on a Greek model, which the learned Benedictine, Bedos de Celles, in his excellent work on the "Art of Constructing Organs, 1766," considered to have been the first that was furnished with bellows without the use of water. Before

the tenth century organs had become common in England, and exceeded, both in size and compass, those of the continent. In the fifteenth century half notes were introduced at Venice, and also pedals, or foot keys, which were invented by Bernhard, a German, to whose countrymen are due many of the improvements of the instrument in existence at the present time.

Remarkable Instances of Antipathy.

Amatus Lusitanus relates the case of a monk who would faint on seeing a rose, and never quitted his cell when that flower was blooming. Orfila, a less questionable authority, tells us of Vincent, the painter, who would swoon when there were roses in a room, even though he did not see them. Valtaid tells of an officer being thrown into convulsions by having a pink brought to his chamber. Orfila also relates the case of a lady of 46 years, a hale, hearty woman, who, if present when linseed was being prepared for any of its various uses, would have violent coughing fits, swelling of the face, and partial loss of reason for the next twenty-four hours.

Hinting at these peculiar antipathies and aversions, Montaigne remarks that there have been men who more feared an apple than a cannon ball. Zimmerman tells of a lady who could not bear to touch either silk or satin, and who would shudder and almost faint if by accident she happened to touch the velvet skin of a peach. Boyle records the case of a man who would faint when his room was being swept, and one who naturally abhorred honey.

Hippocrates mentions one Nicanor who would always swoon at hearing the sounds of a flute. A lunar eclipse caused Bacon to completely collapse, and the sight of a roast pig had the same effect upon Vaughelm, the famous German sportsman.

The editor of "Notes for the Curious" has a sister who will not stay in a room where a water melon is being sliced, and who, although she has long since grown out of all other fanciful whims, says that she has never been able to look upon that delicious product of the vine without feeling as though an emetic had

been taken. So, too, the writer knows a youngster, away up in the teens, who, in counting will not say "18," and thinks no more of saying 17, 19 than the average person would of saying 17, 18, 19. He says that the bare thought of the objectionable figures makes him feel the same in the stomach and gives the same sensations that swinging to a dizzy height does—*i. e.*, a sort of an "all-gone feeling."—*St. Louis Republic.*

Explosives.

Of the present most celebrated explosives in use, or proposed for service, what is known as blasting gelatine contains the largest percentage of nitro-glycerine, viz., eighty-two parts, with eight of gun cotton; then dualine, eighty parts nitro-glycerine and twenty of nitro-cellulose or gun cotton; dynamite, seventy-five parts of nitro-glycerine and twenty-five of infusorial earth; Atlas powder, seventy-five parts of nitro-glycerine, twenty-one of wood fibre, five of carbonate of magnesia, and two of nitrate of soda; tonite, fifty-two-and-a-half parts gun cotton, forty-seven-and-a-half of nitrate of baryta; rackarock, 77.7 parts of chlorate of potash and 22.3 of nitro-benzol; rendrock, again, is a composition of forty parts of nitro-glycerine, forty of nitrate of potash or soda, thirteen of cellulose, and seven of paraffin; giant powder, thirty-six parts nitro-glycerine, forty-nine nitrate of potash, or soda, eight of sulphur, and eight of resin or charcoal; mica powder, fifty-two parts nitro-glycerine and forty-eight of pulverized mica.

Long Distance Sounds.

The report of a cannon travels very far, because it communicates a vibration to the soil.

The noise produced by the great eruption of Coto-paxi, in 1744, was heard over 600 miles.

Franklin asserts that he heard the striking together of two stones in the water half a mile away.

In 1762 the report of the cannon fired in Mayence could be heard at Tinbeck, 146 miles away.

In the polar regions Sir John Franklin conversed with ease at a distance of more than a mile.

When in 1809 the cannon boomed in Heligoland, the

sound was heard at Hanover, a distance of 157 miles.

The cannonading at Florence was heard at Leghorn, fifty-six miles away, and that at Genoa over one hundred miles.

The greatest distance at which artificial sounds are known to have been heard was on December 4, 1832, when the cannon at Antwerp were heard in Erzgebirge, 370 miles distant.

Colladon, by experiments made at Lake Geneva, estimated that a bell of common size, one that could be heard a distance of three to five miles on land, could, if submerged in the sea, be heard over sixty miles.—*St. Louis Republic.*

The Chinese Puzzle.

Imagine a language devoid of grammar or syntax; unhampered by declensions, moods, tenses, or inflections of any kind; essentially monosyllabic; in which the slightest change of pitch in the voice completely modifies the sentence; subject to no rules of logic or construction; a language petrified into solid blocks and representing human thoughts as a mosaic represents a picture; a language in which every sentence is a puzzle even to the sons of the country; a language which once written can no longer be read, but must be scanned—and even then you have imagined but a few of the characteristic peculiarities of Chinese.

It has often been said, it is still said to-day, that the Chinese speak after the fashion of children, directly, straight to the point, with an energy of expression, a directness of purpose, and a natural logic devoid of the artificiality of occidental tongues. As an example of this childlike simplicity, which we may be pardoned for thinking peculiar, let us take the following sentence. A Chinaman says to us:—

“To have—one—(numerical particle)—widow—wife—
—he—to be—religion—friend—house—within—necessary
—to use—all—to have—although—forsooth—not—to
count—rich—noble—to arrive—bottom—to pass—to ob-
tain—day—product.”

We see at once that in his simple, straightforward way he means to say:—

“There lived a Christian widow who possessed all that she needed; though not rich, she had enough to live upon.”—*Harper's Magazine*.

A Good Word for the Pig.

We must all make our apologies to the pig, who has been grossly maligned in regard to his food. Instead of being ready to eat anything, he turns out to be the most fastidious of animals. Experiments have been made both in France and Sweden which show this to be the case, and in the latter country the record tells that, out of 575 plants, the goat eats 449 and refuses 126; the sheep, out of 494 plants, eats 387 and refuses 141; out of 528 plants, the cow eats 276 and refuses 218; out of 474 plants, the horse eats 262 and refuses 212; and the pig, out of 243 plants, eats 72 and refuses 171.—*Pall Mall Gazette*.

Deepest Lake in the World.

In the Cascade mountains, about seventy-five miles north-east of Jacksonville, Ore., the seeker for the curious will find the Great Sunken Lake, the deepest lake in the world. This lake rivals the famous Valley of Sinbad the Sailor. It is said to average 2,000 feet down to the water on all its sides. The depth of the water is unknown, and its surface is as smooth and unruffled as a mammoth sheet of glass, it being so far below the mountain rim as to be unaffected by the strongest winds. It is about fifteen miles in length and about four and a half wide.

For unknown ages it has lain still, silent, and mysterious, in the bosom of the great mountain range, like a gigantic trench scooped out by the hands of giant genii.

The Deepest Lake Known.

By far the deepest lake known in the world is Lake Baikal, in Siberia, which is every way comparable to the great Canadian lakes as regards size; for, while its area of over 9,000 square miles makes it about equal to Erie in superficial extent, its enormous depth of

between 4,000 and 4,500 feet makes the volume of its waters almost equal to that of Lake Superior. Although its surface is 1,350 feet above the sea level, its bottom is nearly 3,000 feet below it. The Caspian Lake, or sea, as it is usually called, has a depth in its southern basin of over 3,000 feet. Lake Maggiore is 3,000 feet deep, Lake Como nearly 2,000 feet, and Lago-di-Garda, another Italian lake, has a depth in certain places of 1,900 feet. Lake Constance is over 1,000 feet deep, and Huron and Michigan reach depths of 900 and 1,000 feet.

Magic in Numbers.

Very many superstitious and curious ideas have been and are still connected with numbers. Great hopes have been founded upon certain combinations of numbers in lotteries, in horoscopes, or in predictions regarding important events. Important undertakings have awaited favorable dates for their inception, and the lives of more than one leader of men have been more or less influenced by a regard for certain numerical combinations, supposed to have a dominating power in shaping a successful career.

There have been superstitious notions connected with nearly every one of the nine digital numbers.

The number 1 was held to be sacred because it represented the unity of the Godhead. This number is esteemed as very lucky by the Javanese, who allot but one day to each of the several operations of husbandry, leaving that portion of the crop that could not be gathered in one day.

The second digit acquired an especially evil reputation among the early Christians, because the second day hell was created, along with heaven and earth. The Cabalists said it typified the hypostatic union of Christ. It seems to have been a number unlucky in English dynasties. Harold II. was slain in battle; William II. and Edward II. were murdered; Ethelred II., Richard II., and James II. were forced to abdicate; and Henry II., Charles II., and George II. were unfortunate in many ways. The number seems to have been an unlucky one to the sovereigns of other European coun-

tries. The Charles II.'s of France, of Navarre, of Spain, of Anjou and of Savoy passed or ended their reigns unhappily.

The number 3 has an abundance of superstitions connected with it. It was the perfect number of the Pythagoreans, who said it represented the beginning, middle, and end. A greater importance was given to the number because it represented the Trinity, not only in the Christian religion, but in many others.

There was but little mystery attached to the numbers 4 and 5. In folk lore the four leaved clover is especially lucky. The four of clubs is an unlucky card, and it is named the devil's four post bed.

The Cabalists asserted that the number 6 was potent in mystical properties. The world was created in six days, the Jewish servant served six years, Job endured six tribulations, and hence the figure typified labor and suffering. The rabbis asserted that the letter vau, which represents six, was stamped on the manna, to remind the Jews that it fell on six days only.

The number 6 was an unlucky one at Rome. Tarquinius Sextus was a brutal tyrant, the church was divided under Urban the Sixth, and Alexander the Sixth was a monster of iniquity.

The number 7 has been invested with more mystery than all the other digits together, and to it were ascribed magic and mystical qualities possessed by no other number. Several learned treatises have been written on this number, and septenary combinations have been sought everywhere. In an old writer of two centuries ago we may read why, in his opinion, the number is peculiarly excellent. First, he says, "It is neither begotten nor begets;" secondly, "It is a harmonic number and contains all the harmonies;" thirdly, "It is a theological number, consisting of perfection;" fourthly, "It is composed of perfect numbers, and participates of their virtues."

He may find better reasons for the importance attached to this number. Much of it is doubtless due to its prominence in the Bible. The seven days of creation led to a septenary division of time to all ages. Several of the Jewish feasts lasted seven days. Elisha sent

Naaman to wash in the Jordan seven times, and Elijah sent his servant from Mount Carmel seven times to look for rain. For seven days seven priests with seven trumpets invested Jericho, and on the seventh day they encompassed it seven times. There were seven virtues, and seven mortal sins.

The ancients not only noted the importance of seven as an astronomical period, but also connected with the seven planets the seven metals then known. The soul of man was anciently supposed to be controlled by this double septenary combination. It was also an ancient belief that a change in the body of man occurs every seventh year.

The Koran enumerates seven heavens. There was an old Russian superstition to the same effect, and a ladder of seven rounds was placed in the grave to enable the defunct to ascend these seven grades.

Says an old writer, "Augustus Cæsar, as Gellius saith, was glad, and hoped that he was to live long, because he had passed his 63 years. For olde men seldom passe that year but they are in danger of their lives. Two years, the seventh and ninth, commonly bring great changes to a man's life, and great dangers; therefore 63, that containeth both these numbers multiplied together, containeth unknown dangers."

Leases, now granted for a period of ninety-nine years, were formerly given for 999.

There were nine earths, according to mediæval cosmogony; nine heavens, nine rivers of hell, nine orders of angels, etc. The number being perfection, since it represented divinity, was often used to signify a great quantity, as in the phrases, "A nine days' wonder," "A cat has nine lives," "Nine tailors make a man," etc.

In Scotland, a distempered cow was cured by washing her in nine surfs. To see nine magpies is extremely unlucky. Nine knots made in a black woollen thread served as a charm in the case of a sprain.

When a servant maid finds nine green peas in one pod she lays it on the window sill, and the first man that enters will be her "beau." Nine grains of wheat, laid on a four-leaved clover, enable one to see the fairies.—F. S. BASSETT.

The Genuine Basket Trick.

Let me give you a picture of an Indian juggler! One stands outside my hotel window as I write. He is performing his tricks in the dusty road without a table, cabinet, patent boxes, or any of the accompaniments of the regular prestidigitateur. His sole possessions consist of three small baskets, ranging in size from half a peck to a bushel, a couple of cloths, and a tripod made of three sticks, each two feet long, and held together by a string at the top. Three little wooden dolls with red cloths tied around their necks and each not over a foot long, are the gods which enable him to do wonderful things. He has a flute in his mouth and a little drum in his hand. He is black faced and black bearded, and his shirt sleeves are pulled up above his elbows. His only assistant is a little turbaned boy, who sits beside him, whom he will shortly put into a basket not more than two feet square, and with him will perform the noted basket trick of India.

This trick is one of the wonderful juggling tricks of the world. The boy's hands are tied and he is put into a net, which is tied over his head and which incloses his whole body so that he apparently cannot move. He is now crowded into this basket. The lid is put down and tight straps are buckled over it. The juggler now takes a sword and with a few passes of these little Hindoo doll babies over it and the muttering of incantations as a preliminary, thrusts the sword again and again into the basket. There is a crying as though some one was in terrible pain. It is the voice of a child and the sword comes out bloody. You hold your breath, and did you not know it to be a trick you would feel like pouncing upon the man. After a moment the basket becomes still, the juggler makes a few more passes, unbuckles the straps and shows you that there is nothing within it. He calls "Baba! baba!" and in the distance you hear the child's voice. How the boy got out of the basket or escaped being killed by the sword and where the blood came from I do not know. I only know it was a sleight-of-hand performance and wonderfully well done.—FRANK CARPENTER.

Game of the Four Elements.

The party being seated in a circle, the player who has been selected to begin the game takes a knotted handkerchief and throws it suddenly into another's lap, calling out at the same time either "Earth!" "Water!" "Air!" or "Fire!" If "Earth!" be called out, the player into whose lap the handkerchief has fallen must name some quadruped before the other can count ten; if "Water!" he must name a fish; if "Air!" a bird, and if "Fire!" he must remain silent. Should the player name a wrong animal, or speak when he ought to be silent, he must pay a forfeit and take a turn at throwing the handkerchief; but should he perform his task properly he must throw the handkerchief back to the first player. Those who have never joined in this simple game can have no idea of the absurd errors into which the different players fall when summoned unawares to name a particular kind of animal.

Easy Methods of Doing Things that Look Difficult and are Entertaining.

An interesting home-made method of natural decoration consists simply in taking a glass or a goblet and placing in the interior a little common salt and water. In a day or two a slight mist will be seen upon the glass, which hourly will increase, until in a very short time the glass will present a beautiful appearance, being enlarged to twice its thickness and covered with beautiful salt crystals, packed one upon another, like some peculiar fungus or animal growth. A dish should be placed beneath the glass, as the crystals will run over.

The color of the crystals may be changed by placing in the salt and water some common red ink or a spoonful of blueing; this will be absorbed and the white surface covered with exquisite tints.

No more simple method of producing inexpensive or beautiful ornaments can be imagined, and by using different shapes of vases and shades an endless variety of beautiful forms can be produced. The glass should be placed where there is plenty of warmth and sunlight.

Another scientific experiment which may interest some of the older as well as the younger members of the family may be made by suspending from the ceiling a thread which has previous been soaked in very salt water and then dried.

To this fasten a light ring, and announce that you are about to burn the thread without making the ring fall. The thread will burn, it is true, but the ashes it leaves are composed of crystals of salt, and their cohesion is strong enough to sustain the light weight of the ring attached to the thread.

Another form of the same experiment is to make a little hammock of muslin to be suspended by four threads, and after having soaked this in salted water and dried it as before directed, to place in it an empty egg shell.

Set the hammock on fire; the muslin will be consumed and the flame reach the threads which hold it without the egg falling from its frail support. With great care you may succeed in performing the experiment with a full egg in place of an empty shell, taking the precaution, however, to have it previously hard boiled, that you may escape an omelet in case of failure.

Another curious experiment is that of putting an egg into a bottle without breaking the shell. Soak the egg, which must be fresh, for several days in strong vinegar. The acid of the vinegar will eat the lime of the shell, so that while the egg looks the same it is really very soft.

Only a little care is required to press the egg into the bottle. When this is done fill it half full of lime water and let it stand. The shell will absorb the lime and become hard again, and after the lime water is poured off you have the curious spectacle of an egg the usual size in a small necked bottle, which will be a great puzzle to those who do not understand how it is done.

Poisons as Stimulants.

Every virulent poison known to botany or chemistry, says Dr. Felix L. Oswald, can be used for purposes of stimulation. The Yakoots of Northern Siberia fuddle with poisonous toadstools, the Syrian mountaineers with

arsenic, the miners of the Peruvian Andes with verdigris, the Chinese and Turks with opium, the Syrians with a decoction of hemp seed, the Malays with the acrid juice of the betel nut. In a few starving villages of Dalmatia, foxglove leaves (*digitalis*) are used for intoxication purpose. The great preference for alcohol for centuries—and even since the first dawn of historic tradition—may be explained by the fact that it is by far the most universally accessible of the virulent stimulants, rather than by any attractiveness of its taste, or by hereditary desires. Even the drunkard's children, contrary to common belief, are nauseated by the first taste of fermented or distilled liquors.

Physicians and Persian Women.

When a Persian lady is ill and requires the attention of a physician, she must be concealed by a screen, and he makes his inquiries without seeing her. She may be permitted to put out her hand and wrist in order that her pulse may be felt, but only when actually necessary. Among the lower classes in the villages a little more freedom is permitted in consulting a doctor, for they live a more communal life; and the physicians in the rural districts are itinerants, who on arriving at a village open an office under a broad plane tree by the side of a murmuring brook. Of course veiled, the women flock around him, and he prescribes heroic doses, sometimes adding a charm to be worn over the suffering member, consisting of an extract from the koran inside of an amulet. After dosing the village and carefully collecting every fee on the spot, the rustic Æsculapius prudently decamps to the next village. If the patient recovers, praise is given to God as well as to the doctor; if he or she dies, the result is laid to kismet, or fate, but at the same time it is well that the doctor should not be on hand, for human wrath is liable to overcome faith in the decrees of destiny—S. G. W. BENJAMIN.

Window Ventilation.

To obtain ventilation by a window, without a draft to strike a person, a direction to the following effect

has been constantly repeated by every hygienist and hygienic publication for a number of years past without a suspicion of its fallacy, apparently, on the part of any one of the public's instructors:—"Fit a strip of board into the window casing at the bottom, under the lower sash, so as to raise the sash two or three inches, and the thin spaces between the panes, where the sashes lap over each other, will be open above and below, affording egress and ingress to the air in vertical directions, while the board excludes a horizontal draft that would strike a person near the window."

The objection to this plan is that it is built exactly wrong side up, in defiance of the law of gravitation, and will not work. It contemplates the exit of the warm and rarefied air of the room downward through the colder air between the sashes, and expects the still colder and heavier air outside to climb upward through the lighter inclosed air and tumble over the top of the sash into the room. The amount of air exchanged between outside and inside in this way will be hardly perceptible, unless a strong breeze blows against the window.

The way to get ventilation through this interspace, and a truly excellent way, is to push up the lower sash to the top of the casing, and pull the upper sash down within a few inches of the sill, stopping the gap at the bottom with the board above mentioned. The outer air will then find a downward entrance and the lighter air within will escape upward.—*Sanitary Era*.

Oriental Dentistry.

I had slept little, as I was suffering greatly from a toothache. The sheik declared that there was a skilful dentist in the encampment, and, as the pain was almost unbearable, I made up my mind to put myself in his hands rather than endure it any longer. He was accordingly sent for. He was a tall muscular Arab. His instruments consisted of a short knife or razor and a kind of iron awl. He bade me sit on the ground, and then took my head firmly between his knees. After cutting away the gums he applied the awl to the roots of the tooth, and, striking the other end of it with all

his might, expected to see the tooth fly into the air. But it was a double one, and not to be removed by such means from the jaw. The awl slipped and made a severe wound in my palate. He insisted on a second trial, declaring that he could not but succeed. But the only result was that he broke off a large piece of the tooth, and I had suffered sufficient agony to decline a third experiment.—SIR HENRY LAYARD.

What the Owl Does.

It is well known that owls hunt by night, but it may be less a matter of common knowledge that, like other birds of prey, they return by the mouth the hard indigestible parts of the food in the form of elongated pellets. These are found in considerable quantities about the birds' haunts, and an examination of them reveals the fact that owls prey upon a number of predacious creatures, the destruction of which is directly beneficial to man. The evidence gained in this way is infallible; and to show to what extent owls assist in preserving the balance of nature, it may be mentioned that 700 pellets examined yielded the remains of 16 bats, 3 rats, 237 mice, 693 voles, 1,590 shrews, 22 birds. These truly remarkable results were obtained from the common barn owl; and the remains of the 22 birds were those of 19 sparrows, 1 greenfinch, and 2 swifts.

The Homing Faculty.

Many animals are endowed with senses which remain yet quite mysterious to our understanding, and all we know is that these senses exist. There is the homing faculty, which is well known to occur in many animals, such as the bee, many migratory animals, many fishes, the horse, dog, etc. It is known, for instance, that many honey hunters find their prey by catching bees and letting them free at different points. Each bee strikes home immediately, and so, to find the bee hive, one only needs to follow the bee line of two or three bees, as they point to one and the same spot, and come across each other at the very spot where the hive is to be found and is actually discovered.

Eels and fishes often go from one pond to another,

very distantly located, or from a pond to the sea, in a quite straight line, without any mistake. It would seem that this homing faculty pre-exists to all individual experience, since Humphrey Davy informs us that he has seen a young alligator, which had just got out of its egg, which had been broken by this observer, make immediately for the direction in which water was close by. Again, a falcon, sent from Teneriffe to the Duke of Lerme, in southern Spain, managed to escape, and sixteen hours later had returned, quite exhausted, to Teneriffe. A dog, carried from Mentone, in the south of France, to Vienna, came back to Mentone; and a donkey of Gibraltar, which was shipwrecked 200 miles away on the Spanish coast, also managed to get to his home in Gibraltar.

The Wireless Telegraph Suggested 240 Years Ago.

The Rev. Canon Jackson, of Leigh Delamere, Chippenham, writes as follows to the *Bath Chronicle*:—“Joseph Glanvill sometimes called ‘Sadducismus Triumphatus Glanvill,’ rector of Bath from 1666 to 1672, was a learned writer upon abstruse and mystical subjects, but in a style of which it is not always easy to catch the meaning. In one of his treatises, called ‘The Vanity of Dogmatizing,’ printed in 1661, chapter xxi., he is speaking of supposed impossibilities which may not be so.’ In the concluding sentence of the following passage he seems to have anticipated the electric telegraph:—‘But yet to advance another instance. That men should confer at very distant removes by an extemporary intercourse is a reputed impossibility: but yet there are some hints in natural operations that give us probability that ’tis fefasible, an may be compassed without unwarrantable assistance from dæmoniack correspondence. That a couple of needles equally touched by the same magnet, being set in two dials exactly proportioned to each other, and circumscribed by the letters of the alphabet, may effect this ‘magnale’ [*i. e.*, important result], hath considerable authorities to avouch it. The manner of it is thus represented. Let the friends that would communicate take each a dial: and having appointed a time for their sympathetic

conference, let one move his impregnate needle to any letter in the alphabet, and its affected fellow will precisely respect the same. So that would I know what my friend would acquaint me with, 'tis but observing the letters that are pointed at by my needle, and in their order transcribing them from their sympathized index as its motion directs; and I may be assured that my friend described the same with his; and that the words on my paper are his inditing. Now, though there will be some ill contrivance in a circumstance of this invention, in that the thus impregnate needles will not move to, but avert from, each other (as ingenious Dr. Browne hath observed), yet this cannot prejudice the main design of this way of secret conveyance: since it is but reading counter to the magnetic informer, and noting the letter which is most distant in the Abecedarian circle, from that which the needle turns to, and the case is not alter'd. Now, though this desirable effect possibly may not yet answer the expectations of inquisitive experiment, yet 'tis no despicable item, that by some other such way of magnetick efficiency, it may hereafter with success be attempted, when magical history shall be enlarged by riper inspections; and 'tis not unlikely but that present discoveries might be improved to the performance.'"

The Telephone Predicted.

In the works of Robert Hooke, published in 1664, is the following forecast of the telephone:—

"And as glasses have highly promoted our seeing, so 'tis not improbable but that there may be found many mechanical inventors to improve our senses of hearing, smelling, tasting, and touching. 'Tis not impossible to hear a whisper a furlong's distance, it having been already done, and perhaps the nature of the thing would not make it more impossible though that furlong should be ten times multiplied. And though some famous authors have affirmed it impossible to hear through the thinnest plate of Muscovy glass, yet I know a way by which it is easy enough to hear one speak through a wall a yard thick. It has not yet been thoroughly examined how far octocousticons may be improved, nor

what other ways there may be of quickening our hearing or conveying sound through other bodies than the air, for that is not the only medium. I can assure the reader that I have by the help of a distended wire, propagated the sound to a considerable distance in an instant, or with as seemingly quick a motion as that of light, at least incomparably swifter than that which at the same time was propagated through the air, and this not only in a straight line or direct, but one bended in many angles."

Flowers in Folk Lore.

The Syrians regarded the rose as an emblem of immortality. Chinese plant it over graves, and in the Tyrol it is said to produce sleep. Germans call the rose of Jericho the Christmas rose, and it is supposed to divine the events of the year, if steeped in water on Christmas eve. It is said in Persia that there is a certain charmed day in which the rose has a heart of gold. Another tradition relates that there is a silver table on a certain Mount Calassy, in India, and on this table lies a silver rose that contains two beautiful women who praise God without ceasing. In the centre of the rose is the triangle—the residence of God.

It is said that if a white rose blooms in autumn an early death is prognosticated, while an autumn blooming red rose signifies marriage. The red rose, it is also said, will not bloom over a grave. Rose leaves are sometimes thrown on the fire for good luck, and a rose bush may be made to bloom in autumn by pruning it on St. John's day. Here, as well as in France and Italy, it is believed that rosy cheeks will come to the lass who buries a drop of her blood under a rose bush. In Posen, young women assure the fidelity of their lovers by carrying a rosebud in the breast. Rose leaves are chosen for divination in Thuringia, the maiden having several lovers scattering a leaf named after each one on the water; the leaf that sinks last is the true lover.

ANEMONE, AMARANTH, ASPHODEL.

The anemone was regarded as the symbol of sickness in ancient Egypt. It was fabled to have sprung

from the tears wept by Venus over Adonis. The amaranth would, says Pliny, recover its color if sprinkled with water. It was a symbol of immortality, the word meaning "everlasting." The asphodel was its opposite, meaning "regret." The spirits of the dead were thought to subsist on this flower. The bachelor's button is so named because youths carried one in the pocket to divine their success in love. If the flower died, it was an ill omen. The flower basil is a test of purity. If it is put under the plate of an impure maiden in Voigtland, she will not touch it.

Our familiar buttercup was so named from an idea that its consumption increased the butter producing quality of the cow's milk. Cows never eat them, but they grow only in dry, rich pastures. The columbine was anciently called a "thankless flower," and was the emblem of forsaken lovers. The meek little daisy, opening its eye with the light of the planet Venus, has always been a favorite with the poets. Its star form caused it to be an object of superstition, and German maidens prognosticated their fortunes with it.

The forget-me-not is one of the flowers that in German lore guard treasures entombed in caverns. The Swiss regard with superstitious feeling the little edelweiss (our cat's foot or everlasting). Its Swiss name signifies noble purity.

LEGEND AND TRADITION

The common marigold is named in French *Soucis* (care). In Breton legend, if touched by the bare foot of a pure-hearted person on a certain morning, it gives power to understand the language of birds. The crocus signifies unrequited love. The poppy is a well known symbol of death. The snowdrop is sacred to the Virgin Mary. The primrose is an important flower in folk lore. The Germans name it "*Schlüssel blume*," or key flower. It is fabled to open the way to treasures.

The lily is traditionally the emblem of Diana and Lilith, Adam's second wife. To the people of India and Egypt it typified fertility, to the prophets it had a mysterious signification. It is potent against witchcraft in Germany, if gathered with prayer. Spanish super-

stition credits it with the power of restoring to the human shape any one who has been transformed to an animal. It is a remedy for venomous bites in England, and it was formerly thought that the number of flowers on the finest stem indicated the price of grain for the season.

The thistle, gathered in silence, was formerly a valued charm. It was sacred to Thor, and was one of the many plants that protected dwellings from lightning. In England, the milk thistle is "Our Lady's thistle," and the plant is well known as the national emblem of Scotland. Lastly, there is the modest violet, type of humility. Mohammedans are fond of it, as their founder revered it as a type of his religion. It was the badge of mediæval minstrels, and a golden violet was the prize in the poetical contests at Toulouse.—F. S. BASSETT in *Globe-Democrat*.

Value of Ozone.

Ozone is a form or phase of oxygen, supposed now by men of science to be developed by plant life, especially in the act of blossoming. The prevalence of epidemics is believed to coincide with the absence of ozone, or its decrease to a minimum. Open winters are dangerous in the north, because vegetation decays, with neither freezing nor ozone to counteract the effect. The Tennessee Board of Health has discussed the question thoroughly, and finds pine forests not to aid in producing ozone. A sharp thunder storm, on the contrary, increases it remarkably. It is urged by Professor Mecham of Philadelphia, that the flowering of plants has much to do with health. The keeping of house plants of a free blooming sort, if clean and healthy, is desirable.

Tooth Present.

In Iceland, that country of gentle, primitive customs, from time immemorial it has been the fashion to present to lad or lassie, when the first baby tooth appeared, a lamb to be his or her very own, cared for and tended as no other pet could be, and never to be parted with.

There comes to us in a pretty story concerning the ways and manners of that sturdy, truth loving, and

warm hearted people an account of such an offering to the bailiff's son. A winsome, soft eyed creature was Botna, the queen of the lamb flock. The pet grew apace, as did the frolicsome owner, and when he was ten years old, a hardy shepherd lad, Botna had become old, toothless, and lame. She could no longer go away to pasture with the herd, or eat her fill of grass, even in the pleasant midsummer weather. Her faithful young master was, however, mindful of Botna's needs. He had not forgotten that every year she had given him a little lamb, and in her old age a corner was given to her in the family living room, where she could see familiar faces and hear the voices of her best friends. Many times a day she was fed from a bottle, and was never taken out for fresh air unless the day was mild and the air balmy. Fortunate Botna!

Fijian Houses.

The ordinary Fijian house looks, outside, like a great oblong hay stack, standing on a mound raised some few feet above the surrounding level, with a long ridge pole extending beyond the roof at either gable, its ends sometimes ornamented with shells. The hay stack has a doorway or two, with a mat suspended in it. Houses with greater pretensions, however, have the walls prettily latticed with reeds, and distinct from the roof, which is elaborately thatched, with great projecting eaves. Inside, immense posts, usually of vesi wood (*Azelia bijuga*), and a very ingenious framework, support the roof. The interior decorations of sinnet (cocoanut fibre), always in rectilinear patterns—for they do not affect curves—are sometimes pretty. The black, squared lintels of the doors are the stems of tree ferns. On a great shelf overhead is stored the family lau, a convenient Fijian word equivalent to the Italian roba. Here it comprises their fishing gear, huge rolls of tappa or native cloth, mats, immense pottery vessels and the like.

English and French Manners.

Manners always represent an ideal of some kind. The English way of behavior seems to stand for dignity, the French for grace. Manners in both countries are

more the representation of self in outward form than any evidence of real consideration for the person to whom they are addressed. The Englishman wishes to convey the idea that he himself has dignity, that he is a gentleman; the Frenchman is anxious to show that he is a witty and accomplished man of the world. * * * The virtues of English behaviour are chiefly of a negative kind, and those of French behaviour positive. An Englishman is pleasant because he is not noisy, not troublesome, not obtrusive, not contradictory, and because he has the tact to avoid conversational pitfalls and precipices. The Frenchman is agreeable because he is lively, is amusing, is amiable, is successful in the battle against dullness, and will take trouble to make conversation interesting.—HAMERTON.

The Bluebeard Story.

The story of Bluebeard originated in France. In the original romance the Chevalier Raoul has a blue beard, from which he gets his name. The incidents are substantially the same as we know them in the familiar nursery tale. "The historic original of Chevalier Raoul would appear to be one Giles de Laval, Lord of Raiz, who was made marshal of France in 1429, and fought in defence of his country when invaded by the English; but his cruelty and wickedness seem to have eclipsed his bravery, and he is remembered chiefly for his crimes. He is said to have taken pleasure, among other atrocities, in corrupting young persons of both sexes and afterwards in murdering them for the sake of their blood, which he used in his diabolical incantations. Out of this fact, in itself probably half mythical, the main features of the tale of Bluebeard have probably grown."

The Rosetta Stone.

The key to the interpretation of Egyptian hieroglyphics was first given through the means of the Rosetta stone, which was discovered in 1799, by M. Boussard, a French officer of engineers during the French occupation of Egypt, in an excavation made at Fort St. Julian, near Rosetta, on the Bolbitic branch of the Nile, about four miles above the mouth. The "stone" is a trilin-

gual inscription in hieroglyphic, Roman, and Greek. It is a black basalt, about 3 feet 7 inches in length and 2 feet 6 inches in width. It contains in its present state about one-third of the hieroglyphics, and nearly all the Roman and Greek parts, the upper part and portion of the side having been broken away.

The contents are a decree in honor of Ptolemy Epiphanes by the priests of Egypt, assembled in a synod at Memphis, on account of his remission of arrears of taxes and dues owed by the sacerdotal body. It was set up B. C. 195, and it is the only one of the numerous examples ordered to be placed which has been brought to light. The stone was delivered up to the British on the capitulation of Alexander, and was taken to England in 1802 and placed in the British Museum.

How People Have Become Lions.

Probably not one in a hundred of the people who to-day talk of wonders—living or otherwise—as “lions” know or remember if they ever heard, the origin of the phrase, which was this:—Within the recollection of some of us a show of lions was one of the attractions of a visit to the Tower of London, and so famous was this show in times past, when traveling menageries were nonexistent, that it became the bounden duty of every “country cousin” to go and see the wonderful sight of a real live lion in London; hence the proverbial expression.—*London Globe*.

The Swiftest Running Animal.

In a recent number of *The Sun* I saw a statement that the greyhound is probably the swiftest quadruped. But there is an animal on the Colorado plains which is much swifter. It is the small red prairie fox, commonly known as the “swift.” A good greyhound will pull down two or three from a bunch of antelopes, but the swift escapes readily from him. In the chase the fox will stop still and wait until the hound is near him, and then easily distance him, and repeat the same manœuvre. It does not jump, like a hound, but runs with a peculiar

gliding motion. Its legs are of medium length, and muscular.

On one occasion one escaped from a box trap, by the side of which I was standing. Near me was a shepherd dog, who was a good enough runner to pick up a jack rabbit occasionally. The dog jumped for the fox as the latter came out of the trap, yet at a distance of 150 feet the fox stopped still and waited for the dog.

In regard to jack rabbits, they are not so swift as generally supposed. Their progress is by tremendous jumps. I have measured twenty-four feet in the snow, in a straight line between successive footprints, and the animal was going up hill, too. But in these flights they lose time, and the hound, wolf, and fox, whose feet strike the ground more constantly, will readily overtake them.

These facts are from my own experience, and may be relied upon.—WALTER L. WILDER.

The First Lightning Rod.

Everybody believes that Franklin was the inventor and constructor of the first lightning rod. In this one particular everybody is mistaken. The first lightning catcher was not invented by the great philosopher, but by a poor monk of Seuttenberg, Bohemia, who put up the first lightning rod on the palace of the curator of Preditz, Moravia, June 15, 1754. The name of the inventive monk was Prohop Dilwisch. The apparatus was composed of a pole surmounted by an iron rod, supporting twelve curved branches, and terminating in as many metallic boxes filled with iron ore, and enclosed by a wooden box-like cover, traversed by twenty-seven iron pointed rods, the bases of which found a resting place in the ore box. The entire system of wires was united to the earth by a large chain. The enemies of Dilwisch, jealous of his success, excited peasants of the locality against him, and, under the pretext that his lightning rod was the cause of the excessive dry weather, had the rod taken down and the inventor imprisoned. Years afterwards M. Melsen used the multiple pointed rod as an invention of his own.

A Tree That Yields Milk.

The cow tree, that botanical curiosity of South America, grows on the broad, barren plateaus of Venezuela, where it would be next to impossible to find fluid sufficient to slack one's thirst were it not for this wise provision of nature.

The sap of the cow tree, as its name implies, resembles milk, both in look and taste. A slight balsamic taste has been reported by some naturalists who have drank of the strange liquid; otherwise it was said to "have the flavor of rich cream, and to be very wholesome and nourishing."

The tree itself frequently attains a height of 100 to 125 feet, it being not unusual to see a trunk of this species seventy to eighty feet, perfectly smooth and without a limb. A hole bored into or a wound made in the bark of this wonderful tree is almost immediately filled with a lacteal-like fluid, which continues to flow for some days, or until it coagulates at the mouth of the wound and forms a waxy mass, which stops further flow.

Humboldt, the first to give a scientific description of the baobad tree of Africa, was the first to tell of the wonders of the cow tree, as it was called in his time.—*St. Louis Republic.*

Tributes Paid to Women.

Woman is the masterpiece.—CONFUCIUS.

Women teach us repose, civility, and dignity.—VOLTAIRE.

Shakespeare has no heroes, he has only heroines.—RUSKIN.

All that I am my mother made me.—JOHN QUINCY ADAMS.

If woman lost Eden, such as she alone can restore it.—WHITTIER.

Woman is the most perfect when the most womanly.—GLADSTONE.

Woman is last at the cross and earliest at the grave.—E. S. BARRETT.

A handsome woman is a jewel; a good woman is a treasure.—SANIDI.

There is a woman at the beginning of all great things.
—DAMARTINE.

The sweetest thing in life is the unclouded welcome of a wife.—N. P. WILLIS.

Women are a new race, re-created since the world received Christianity.—BEECHER.

Heaven has nothing more tender than a woman's heart when it is the abode of pity.—LUTHER.

For where is any author in the world who teaches such beauty as a woman's eyes?—SHAKESPEARE.

Woman is born for love, and it is impossible to turn her from seeking it.—MARGARET FULLER OSSOLI.

When Woman Mails a Letter.

Femininity in the post-office is an amusing study. In the matter of dropping a simple, ordinary, white, every day letter, for instance, she affords an insight into the character of the average woman.

The looker-on had nothing else to do the other day than to watch this little operation for five minutes. Out of thirty young women who went to cast their epistles in the slot, twenty-two, by exact calculation, withdrew the letter before quite letting go of it to scan both sides of the note to be "very" sure the letter was securely sealed, properly addressed, stamped, and to be certain no one could look through the envelope to read its contents. Out of these twenty-two ladies three had forgotten to put a stamp on their letter, and two had to add something to the address on the envelope, while another carried off with her the letter she had intended to mail.—*Boston Record*.

Note How Your Friend Laughs.

It is a well known and easily demonstrated scientific fact that different people sound different vowels when laughing, from which fact a close observer has drawn the following conclusions: People who laugh in A (pronounced as ah) are frank, honest, and fond of noise and excitement, though they are often of a versatile and fickle disposition. Laughter in E (pronounced as ay) is peculiar to phlegmatic and melancholy persons.

Those who laugh in I (pronounced as ee) are children or simple-minded, obliging, affectionate, timid, and undecided people. To laugh in O indicates generosity and daring. Avoid if possible all those who laugh in U, as they are wholly devoid of principle.

How Big an Orang Outang Is.

The North Borneo orang outang would seem to be a good deal bigger than the Sarawak one, of which Wallace says that of a good many shot by him the largest stood 4 feet 2 inches only. Hornaday's largest was 4 feet 4 inches. In North Borneo the smallest full grown male I have measured was 4 feet 4 inches; 4 feet 9 inches seems to be a common size. A Mr. Adams shot one on the Suanlamba said to be 4 feet 8 inches, and the one Mr. Dunlop shot near the club stood as much as 4 feet 10 inches, the largest on record. Mr. Alber shot one on the Kinabatangan which measured from tip to tip of its fingers 86 inches across its outspread arms.—*North Borneo Herald.*

God's Acre.

The old Teutonic and Saxon term, "God's Acre," as applied to the last resting place of the human body, Longfellow made the theme of one of his most touching and beautiful poems; it is an eminently suggestive term. The acre or field of God contains the seed hidden in the ground for a while, to ripen into a glorious harvest; and, just as we write the labels in the spring time for seed we put in the ground, that we may remember what beautiful flower is to spring from the little gray atom, so we put a stone at the head of the grave of our dead. The name "cemetery" also signifies merely the place where one may lie, slumbering for awhile, till the dawn shall come and the trumpet sound.

The Touracos.

There has been recently some interest aroused in those very remarkable birds, the touracos, on account of the curious fact that the red pigment in their wing feathers can be, partially, at least, washed out with pure

water. This is generally believed to be a unique instance of the kind, but it does not appear to be so. A correspondent states that another animal—a mammal this time—shares with the touracos the peculiarity of being tinted with colors that “run.” This animal is a Brazilian tree porcupine, with bright yellow spines, which are hidden by a dense coat of fur. The porcupine is, unlike the common Indian form, a tree-dwelling creature, with a comparatively long prehensile tail. The yellow pigment of the spines can be extracted by water, which then becomes a pale lemon yellow hue. But as the porcupine frequents trees, and as it is covered with long hair, it does not seem probable that in a state of nature the warm rain of the tropics would ever bleach the spines, as it is said to bleach the feathers of the touraco.

Origin of Names of Fabrics.

Muslin is named from Mosul, in Asia.

Taffeta and tabby from a street in Bagdad.

Drugget is derived from a city of Ireland, Drogheda.

Cambric from Cambrai. Gauze has its name from Gaza.

Baize from Bajac; dimity from Damietta, and jeans from Jean.

Damask is from the city of Damascus. Satins from Zaytown, in China.

Velvet is from the Italian, vellute, woolly. (Latin, vellus—a hide or pelt.)

Serge derives its name from Xerga, a Spanish name for a peculiar woollen blanket.

Shawl is the Sanscrit sala (floor), for shawls were first used as carpets and tapestry.

Bandanna is from an Indian word to bind or tie, because it is tied in knots before dyeing.

Alpaca is from an animal in Peru, of the llama species, from whose wool the fabric is woven.

Diaper is not from D’Ypres, as it is sometimes stated, but from the Greek diaspron, figured.

Buckram takes its name from Fostat a city of the Middle Ages, from which the modern Cairo is descended.

Calico from Calicut, a town in India, formerly celebrated for its cotton cloth, and where calico was also printed.

Blanket is called after Thomas Blanket, a famous clothier, connected with the introduction of woollens into England about 1340.

How to Split Paper.

According to *Popular Science News*, there are two ways of splitting a piece of paper. One is to lay the sheet of paper on a piece of glass, soak it thoroughly with water, and then press it smoothly over the glass. With a little care the upper half of the sheet can be peeled off, leaving the under half on the glass. Let this dry and it will come off the glass easily; of course the glass must be perfectly clean. The second way is a better one, but it requires some good practice. Paste a piece of cloth or strong paper on each side of the sheet to be split. When it has thoroughly dried, pull the two pieces of cloth apart suddenly and violently. The paste can then be softened with water, and the two halves of the sheet easily taken off the cloths.

Variety in Domestic Life.

The evenings of great numbers of families are monotonous humdrum. They involve the assemblage of the same people, the same surroundings, the same paterfamilias yawning over his paper, the same querulous mamma overladen with family cares. Fresh people with fresh thoughts, fresh atmosphere, anything to stir up and agitate the pool of domestic stagnation, are sadly needed and sadly scarce. There needs to be also a constant succession of such fresh people to bring about these results. The world is full of men and women, and in a better regulated life it would be the business after the day's work was done to entertain each other, and give each other fresh life. As it is now, hundreds if not thousands of our households are little better than cells for the incarceration of each family. Thousands are thus worn out prematurely from utter lack of domestic recreation. There might be written over the

graves of hundreds of thousands, "Bored to death by the stagnation of domestic life."

The "Corsican Brothers."

The romantic drama of the "Corsican Brothers" was suggested to the elder Alexander Dumas by what Louis Blanc, whose mother was a Corsican, told him of the mysterious spiritual sympathy existing between him and his younger brother Auguste. They were so closely allied in temperament that one had always been able to determine, however widely separated, what had happened to the other. Louis knew, in England, when Auguste was suddenly taken ill in France; Auguste knew in Spain if Louis were in danger in Italy. They had repeated experiences of this sort, and, in every instance, their vivid impression, their inmost revelation, flashing through space, was confirmed. The Blancs were great admirers of Dumas' play, and frequently went to see it performed.—*New York Commercial Advertiser.*

An Elephant's Sagacity.

The stories illustrating the sagacity of the elephant are innumerable; but few are more remarkable than the following one recorded by a writer in a Bombay paper upon the authority of an artillery officer, who was a witness of the incident:—The battering train was going to the siege of Seringapatam, when an artilleryman, who was seated on the tumbril of one of the guns, by some accident fell almost directly under the hind wheel. The elephant stationed behind the gun, perceiving the man's danger, instantly, without any order from its keeper, lifted up the wheel with its trunk, and kept it suspended till the carriage had passed clear of him.

The Mile in all Countries.

Not only the mile of the separate countries differs greatly in the number of feet and yards comprised, but those of the same countries vary in different provinces. Thus the English mile differs from the statute mile, and the French have three sorts of leagues.

The English mile consists of 5,280 feet, 1,760 yards, or 8 furlongs.

The Russian "verst" is about three-quarters of an English mile.

The Scotch and Irish mile is about one and a quarter English.

The Dutch, Spanish, and Polish mile is three and a half English.

The German mile is four times as long as the English.

The Swedish, Danish, and Hungarian mile is from five to six and a half English miles.

The French common league is three English miles.

The English marine league is three English miles.—
St. Louis Republic.

How to Enjoy Life.

To enjoy life does not mean going or staying. If you can watch a tree growing, a flower blooming, or the blue sky deepening; if you can listen to a goose squawking along a dusty lane, to a pullet cackling over a first egg, to a sleepy child crooning herself to sleep with a little tune; if you can watch a cow licking her calf, a young mother suckling her babe, and take a big interest in all these things, feeling in the marrow of you their meaning, and that they are a true part of life's sweetness and simplicity, why then I think you may truly answer "Yes, oh yes," when one questions you, "Do you enjoy life, good sir?"

It is not a good habit to be bored of things, to cultivate ennui. Every day the sun comes up and shines, and hearts beat and people are born, and some die and some marry and some hate and more love, so who are you and what are you to strut around like a fool of a turkey gobbler the week before Thanksgiving, and say you are bored and life is too dull for your palate? After all you fill no more space than a fool takes on the sidewalk or under the green grass; so be careful how you venture to draw about you a circle of exclusiveness. Be careful how you fall into the way of thinking the earth was made for you. Do not insist, as many selfish people do, on going through the world with

an air cushion upon which you may sit in luxurious ease, while there are only stony benches for the rest of poor mortality—CATHARINE COLE.

What Makes Wrinkles.

The general impression about wrinkles is that they are caused by worry, but the truth is that most of them come from laughing. To know how to laugh is just as important as to know when to do it. If you laugh with the sides of your face the skin will work loose in time, and wrinkles will form in exact accordance with the kind of laugh you have. The man who always wears a smirk will have a series of semicircular wrinkles covering his cheeks. A gambler, who is accustomed to suppressing his feelings, generally has a deep line running from each side of his nose to the upper corner of his mouth, which in time extends to the chin, forming the shape of a half moon. A cadaverous person is usually marked with two wrinkles, one on the jaw and the other under the eye, meeting at right angles at the cheek bones. The scholar's wrinkle forms on his brow, while a schemer's wrinkles come around his eyes, and look like spokes of a wheel.

Samoan Mats.

Among the curious customs of the Samoan people is that of making heirlooms of mats. By some simple process of reasoning the mat has come to be identified with the family, as the hearthstone is traditionally sacred among the Saxon race. Mr. Cooper writes:

If there is one thing about which the Samoans boast, it is their mats, and they are really fine specimens of art; in fact, the people esteem them more highly than any article of European manufacture, and the older they are the more they are regarded.

Some of them have names known all over the group. The oldest is called Moe-e-Fui-Fui, or "The mat that slept among the creepers." It got this title from its having been hidden away for years among the creeping convolvulus that grows wild along the seashore. It is known to be 200 years old, as the names of its owners during that long time can be traced.

The possession of one of these old mats gives the owner great power; in fact, it is a title deed to rank and property. It is no matter if the mats are tattered and worn out; their antiquity is their value, and for some of the most cherished of them \$500 would be scornfully refused.

Foundlings in Russia.

According to official statements relating to the Russian foundling hospitals at St. Petersburg and Moscow about 1,000,000 newly born children have been given over to them during the last hundred years, most of them illegitimate. Of this large number nearly 800,000 have died in the first months or first year of their existence. The well known authority on statistics, Alexander Von Oettingen, who in his "Moral Statistics" has treated of the state of things in these Russian hospitals, satirically calls it "Chronischer Kindermord auf Staatskosten" ("chronic infanticide at the cost of the state"). It is now asserted that the Russian government intends to carry out a radical reorganization of both hospitals. Probably, says our St. Petersburg correspondent, a number of smaller foundling hospitals will be established in the provinces to take the place of the two large central hospitals, which now receive about 30,000 infants annually.—*London News*.

The Age for Consumption.

Consumption is rare in childhood, but increases rapidly after the age of 15, and is most common between the ages of 25 and 30. Those who escape it till the latter age are less and less prone to it as they advance in years, and may escape it entirely, even though they may have a hereditary predisposition to it.

How Camphor is Made.

Golden Days tells that camphor is made in Japan in this way: After a tree is felled to the earth it is cut into chips, which are laid in a tub or a large iron pot partly filled with water and placed over a slow fire. Through holes in the bottom of the tub steam slowly

risers, and heating the chips generates oil and camphor. Of course the tub with the chips has a closely fitting cover. From this cover a bamboo pipe leads to a succession of other tubs with the bamboo connections and the last of these tubs is divided into two compartments, one above the other, the dividing floor being perforated with small holes to allow the water and oil to pass to the lower compartment. The upper compartment is supplied with a straw layer, which catches and holds the camphor in crystal in deposit as it passes to the cooling process. The camphor is then separated from the straw, packed in wooden tubs, and is ready for market. The oil is used by the natives for illuminating and other purposes.

To Destroy Insects on Animals.

A wash made of the water in which potatoes have been boiled is a certain means of destroying insects on animals. The first application is generally effectual, but it had better be repeated a few times in order to destroy the eggs. The same means may be used against the parasites in which mange originates, and probably would remove plant lice also. This insecticidal property of the potato is supposed to be owing to the solanine, which is one of its constituents.

The Man in the Iron Mask.

Some writers have denied the existence of such a person as the "Man in the Iron Mask," but late investigations have established it beyond question. The register kept by Dujunca, chief turnkey of the Bastile, proves that the prisoner was committed on Thursday, September 18, 1698, having been brought thither from the island of St. Marguerite by Saint-Mars, who exchanged in that year the governorship of the state prison there for that of the Bastile. The removal was made with extraordinary precaution and secrecy. The prisoner was carried in a close litter, which preceded Saint-Mars, and was accompanied by a mounted guard. His face was covered with a black velvet mask fastened with steel springs, which he was forbidden to remove

on pain of instant death. He was not allowed to speak to any one except the governor, who watched him with jealous care, and always kept a pair of pistols at hand to destroy him in case he made an effort to reveal himself. When in the Bastile, he was attended at meals and at his toilet by Saint-Mars himself, who removed personally and examined or destroyed the linen which he had worn, lest he might make known his secret by means of some mark on it. At mass he was forbidden to speak or show himself, and the Invalides, who stood by with loaded muskets, had orders to shoot him if he made the attempt. He was buried in the cemetery of St. Paul. After his death everything which had been used or worn by him was burned. It has never been definitely settled who he was.—*Boston Budget*.

Rainfalls.

It is said that 610 inches of rain fell in one year at Cherrapongee, tropical Asia. Two hundred and fifty-four inches of rainfall has been recorded in one year at Mahabuleswher, in the western Ghauts of India. At Vera Cruz, Mexico, 278 inches of rain have fallen. In Matoula Gaudeloupe, West Indies, 292 inches have fallen. At San Louis de Maranham, Brazil, 280 inches have been recorded. At Sierra Leone, tropical Africa, 312 inches have been noted. The annual rainfall in the British Islands, among the mountains, is 41 inches; on the plains, 25 inches; 45 inches of rain falls on the west side of England, 27 on the east side. Eighty-two inches of rain falls on parts of the west side of the Scandinavian mountains, and only 21 inches at Stockholm, on the east side. The amount of rainfall at Boston is 39 inches; Hanover, N. H., 38 inches; New York, 36 inches.

Good Points of a Horse.

Plenty of breadth and fullness between the eyes.

A short, straight back and a straight rump.

The eye should be full, and in color a hazel is good.

A small thin ear well thrown forward, and a straight elegant face.

A square muzzle, with large nostrils to let in plenty of air to the lungs.

The withers should be high and the shoulders well set back and broad, but not too deep in the chest.

For the under side of the head a good horse should be well cut under the jaw, with jaw-bones broad and wide apart under the muzzles.

The fore leg should be short. A pretty straight hind leg with the hock low down, the pastern joint of good length and a medium broad foot.—*Fort Worth Gazette.*

A Hospitable Horse.

A remarkable degree of intelligence and kindness to a stable companion is shown by a horse in Boston. One of the mounted police officers leaves his horse in the stable connected with the station on Blue Hill Avenue, near Dudley Street, while he answers to the roll call at noon and again at six o'clock. The officer fastens his horse to the post forming one corner at the head of another horse's stall, and as soon as the animal is tied, the other picks up a mouthful of hay, forces it through the iron grating about his stall, and waits until his guest has eaten it. Then he repeats the operation and continues his hospitality until the officer returns for his horse. He began to do this without any suggestion from the men, and he does it twice a day, much to the satisfaction of his visitor. His performance has attracted considerable attention in the neighborhood, and his politeness has won him many friends.—*Boston Letter.*

For Hill Climbers.

Dr. J. Bucheister has made a most interesting calculation on the "work done" by mountaineers in ascending heights. Supposing a mountaineer weighing 168 pounds is making the ascent of a summit 7,000 feet high from the point of starting, he has to expend an amount of physical force found by multiplying his weight by the height to be ascended. In the case assumed, a weight 168 pounds, multiplied by a height of 7,000 feet, equals 1,176,000 foot pounds; or, in other words, 1,176,000 pounds have to be lifted one foot.

This is work performed merely by the muscles of the legs, but besides this, the contractions of the muscles of the heart have to be taken into account. Its function consists, as is well known, in propelling the blood collecting in the heart on the one hand into the arteries, and on the other into the lungs. This is effected at an initial velocity of one and one-half foot per second, which represents in the case of an adult a work of four foot pounds for each contraction of the heart. The pulsations of an adult are, on an average, seventy-two per minute, but in ascending heights, owing to the additional exertion, their number is increased to an extraordinary extent.

Assuming, for the sake of simplicity in calculation, only 100 beats of the pulse per minute, this would give 400 foot pounds per minute, 24,000 foot pounds per hour, and 120,000 foot pounds for the five hours supposed to be required in ascending a height of 7,000 feet. The work performed by the muscles in breathing, by the expansion and contraction of the chest, may also be estimated at 4 foot pounds. Assuming, further, that the number of breathings per minute is, on the average, only 25, although, as a matter of fact, it will be found to be higher in a mountain ascent lasting five hours, we have to add further work of 30,000 foot pounds.

The total work performed during five hours by a mountaineer consequently amounts to 1,326,000 foot pounds.—*Iron.*

A Humane Age.

A commercial and manufacturing age is not necessarily one of greed and selfishness. This is pre-eminently such an epoch, and the "finer humanities" have more practical recognition now than in former periods of the world's history. Philanthropic enterprises as well as philanthropic societies abound. The condition of the destitute poor excites more notice than formerly. The reform of prisons, their discipline, and their sanitary aspects, is becoming general. The mitigation of the rigors of criminal codes is a feature of the times. The nearly complete sweeping away of the disabilities of women is significant. The laws for the protection of

minors are in the same line. War is being measurably relieved from its barbarities. Institutions of exceptional iniquity are disappearing. Schoolroom abuses are getting rarer. The public will not tolerate outrages on the insane and on paupers under public care. Provisions for safety at sea are multiplying, and fire escapes in exposed buildings is compulsory. All around there is evidence of a keen and effective recognition of the claims of humanity, and it is a pleasure to note it.

Japanese Dwarf Trees.

In one corner of the Paris Exposition was a remarkable exhibit from Tokio, consisting of plants two feet in height or less, and growing in porcelain vases. These were miniature and perfectly proportioned trees of various species, some of them, according to the labels, being 100 and 150 years old. These dwarfs are the results of careful culture and training. At an early age they are planted in small pots, and the upward growth is interrupted continually, and is forced to grow horizontally, spirally, and even downwards, being secured in these unnatural positions by strings and sticks which become very numerous in course of time.

These plants and the care of them are handed down from father to son. Among these curious plants on exhibition in Paris may be mentioned an 80-year-old maple which is 20 inches high; a 10-year-old, 12 inches, and a group of retinosporas 80 years old and 8 to 12 inches high. If allowed to grow freely, they would have attained a height of about 10 feet. Some of the pines were 150 years old, and the oldest was but 24 inches high.

The Mean Height of Land.

The mean height of land above sea-level, according to Mr. John Maury, the geographer and engineer, is 2,250 feet, and the mean depth of the ocean is 12,480 feet. Only 2 per cent of the sea is included inside a depth of 500 fathoms, while 77 per cent lies between 500 and 3,000 fathoms. If the land were filled into the hollows the sea would roll over the earth's crust to a uniform depth of two miles.

Uses of Common Salt.

Among the many uses of common salt may be mentioned two which admit of frequent application. Salt put in water which surrounds the ordinary glue pot causes a hotter glue to be obtained than where simple water is used. Salt in the water where mason work is being done in cold weather prevents disintegration by frost.

Deathbed Utterances.

Rabelais calmly remarked, "Drop the curtain, the farce is played out."

The last words attributed to "Buckshot" Foster were "No home rule."

The unhappy Charles I. expired with the word "Remember" on his lips.

"We shall soon meet again," were the last words of Louis XIV. to Mme. de Maintenon.

Wolcot, the poet's, last words were, when asked by his friend Taylor if he could do anything for him on earth: "Give me back my youth."

"God be praised," exclaimed Wolfe, the hero of Quebec, on learning that the French were giving way in every direction: "I die happy."

The last words of Lord Tenterden, the famous English judge, were, "And now, gentlemen of the jury, you will consider your verdict."

"I heard say the executioner was very good, and I have a little neck," said Anne Boleyn, putting her hands about it and laughing heartily.

"I pray thee, see me up safe, but for my coming down I can shift for myself," remarked Sir Thomas More, observing the weakness of the scaffold.

Boileau, the poet, in the same breath hailed a friend and bade him farewell, saying, "Good day and adieu; it will be a very long adieu," and instantly expired.

Montcalm, mortally wounded and endeavoring to rally his men, replied, when told that his end was approaching, "So much the better; I shall not live to see the surrender of Quebec."

Edmund Kean made his final exit in the middle of the greatest scene of his greatest play. "Get me off,

Charles," he gasped, "I'm dying!" His son led him off, and all was over.

"Come and lie down," entreated Dickens' sister-in-law, when it became evident that a fit was upon him. "Yes, on the ground," he said very distinctly, as he slid from her arm and fell to the floor.

De Lagny, the great mathematician, was asked the square of twelve when he was no longer able to recognize his friends about his bed, and mechanically answered: "One hundred and forty-four."

Phelps, who had a superstitious horror of the word "farewell," while acting Wolsey, and actually uttering the ominous words: "Farewell! a long farewell to all my greatness!" broke down, and the curtain slowly dropped upon him for the last time.

Mozart wrote his requiem under the conviction that the monument he was erecting to his genius would prove a monument to his own remains. When life was ebbing fast he called for the score; and as he mused over it he said: "Did I not tell you truly that it was for myself that I composed this death chant?"

Wrongly Named.

Titmouse is a bird.

Baffin's bay is not a bay.

Shrewmouse is no mouse.

Cat gut should be sheep gut.

Sealing wax contains no wax.

Slave means noble or illustrious.

Blind worms have eyes and can see.

Irish stew is a dish unknown in Ireland.

Dutch clocks are of German manufacture.

Rice paper is not made of rice or the rice plant.

Cleopatra's needle should be named after Thotmes III.

Kid gloves are not made of kid, but of lamb skin or sheep skin.

German silver is not silver at all, nor of German origin, but has been used in China for centuries.

The Old Home.

An old home acquires power over the heart with course of time; it comes by degrees to touch the imag-

ination with a sense of life inherent in itself. Its timbers are not dead wood. As the vibrations of the music constrain the fibres of the violin till, year by year, it gives forth a fuller and deeper tone, so the vibrations of life, as generations go by, shape the walls of a home into a responsive accord with the human experience that goes on within them. Birth and death, joy and sorrow, hope and disappointment—all that men endure and enjoy, give to it a constantly increasing sanctity and a power to affect the hearts of those who dwell within it. Memory awakens imagination. Each generation has set its lamp upon the home in some change, some improvement. The lapse of years alone makes it venerable, but if a succession of kindly, humane, and loving men and women have dwelt in it, it becomes the memorial happiness and an incentive to excellence. The older it is the sweeter and richer garden does it become of human charities and affections.—*Scribner's*.

Consumption of Coffee.

Coffee is more generally consumed in Brazil than in any other part of the world. The coffee fields of Brazil cover 2,000,000 acres, with 800,000,000 trees, each tree averaging about one pound per annum. The industry there employs 800,000 hands. The consumption of coffee in Brazil averages yearly 14 pounds per inhabitant; in Belgium and Holland, 11 pounds; in the United States, 7 pounds; in Germany, 5 pounds; and in Great Britain very little more than half a pound. The English drink five times as much tea as coffee, while we drink eight times as much coffee as tea. Down to 1690 the only source of coffee supply was Arabia, but the berry is now cultivated throughout most regions of the tropical world. Java and Ceylon are the principal centres of production after Brazil, and the total output of the world has been estimated to amount to not less than 1,000,000,000 pounds.

How Savages Make Fire.

It is rather difficult for us to imagine people who know nothing about fire, and, as a matter of fact, there

are no people now on the face of the earth, no matter how barbarous, who do not know how to make fire. We make it easily enough by striking a match, but years ago our ancestors were compelled to resort to flint, steel, and tinder.

The forest-dwelling peoples of the further East have an odd instrument for making fire. Near the coast every man carries a bit of crockery in the box of bamboo slung at his waist, a chip off a plate, and a handful of dry fungus. Holding this tinder under his thumb upon the fragment of earthenware, he strikes the side of the box sharply and it takes fire.

But this method can only be used by tribes which have such communication with the foreigner as supplies them with European goods. The inland peoples used a more singular process. They carried a short cylinder of lead, hollowed roughly to a cup-like form at one end, which fits a joint of bamboo. Placing this cylinder in the palm of the left hand, they fill the cup with tinder, adjust the bamboo over it, strike it sharply, remove the covering as quickly, and the tinder is alight.

To Light a Lamp with a Snowball.

When a small piece of potassium, the size of half a grain of corn, is dropped into a tumblerful of water, some of the oxygen of the water leaves its hydrogen, owing to the intense heat which the chemical action produces, and combines with the metallic potassium, causing a violet bluish flame. When the piece of potassium is placed on the wick of a coal oil or alcohol lamp, the flame produced by touching the potassium with a bit of snow or ice or a drop of water will inflame it.

Swift Fish.

It is understood that for short distances the salmon is the swiftest of fish. It has been calculated that its speed, at high pressure, or under chase, is from twenty to twenty-five miles an hour. For long distances the shark is believed to be the most rapid swimmer. Goldsmith, referring to it in his "Natural History," says: "He outstrips the swiftest ships (in those days), plays

round them, darts out before them, returns, seems to gaze at the passengers, and all this while does not seem to exhibit the smallest effort to proceed." It is calculated that sharks are capable of keeping up a speed of from seventeen to twenty miles an hour. The whale, when hard pressed, can make about fifteen miles an hour, though its usual speed seldom exceeds five.

Mineral Wealth of Siberia.

It is one of the finest undeveloped countries in the world, and it is really difficult to exaggerate the enormous wealth of this gigantic region. The soil is of almost inexhaustible wealth, and the crops magnificent. There is almost no limit to the production of the land. The Russians themselves have but an imperfect idea of the immensity of their natural wealth, and other people outside Russia cannot realize it at all. Siberia, so far from being a region of desolation and of death, is a northern Australia, with larger rivers, more extensive forests, and mineral wealth not inferior to that of the inland continent.

In a few years Siberia will be bridged from end to end with railways, and in this matter the Russian government is showing a large and wise policy. The magnificent water communications—for it is irrigated from end to end with some of the largest rivers in the world, navigable for thousands of miles through fertile and richly wooded lands, destined to be the home of millions of colonists—and a canal is now being made between the Obi and the Yenisei, which will enable goods to be conveyed by water the whole way from Tiumen to beyond Lake Baikal. At Tiumen there is a railway which passes through the Ural mountains to Ekaterineburg and Perm, through the heart of the richest mining district in Western Siberia.

The Power of Explosives.

The power of various explosives has been calculated to be equivalent to the following pressures, the figures giving tons per square inch: emmensite, a new explosive, for which important advantages are claimed in

addition to great power, 283; nitro-glycerine, 264; explosive gelatine, 253; forcite, 250; oxomite, 249; panclostite, 203; gun cotton, 198; dynamite, 144; atlas, 133; rackarock, 117; roburite, 24; blasting gunpowder, 23.

A Spider and a Beetle.

A big spider was placed on a rock in the centre of an aquarium in a recent experiment, and a larva of a water beetle put near. The beetle promptly seized the spider and pulled it into the water, but after a sharp struggle the spider broke away and escaped. The beetle soon afterward renewed the attack, and fastened itself on the spider by its pincers. The spider also got a good hold, and the duel resulted in the death of both. It is said that if two of the larvæ are placed in the same aquarium they will fight until one or the other is dead, and the victor will decapitate the dead one.

General Flag Notes.

To "strike the flag" is to lower the national colors in token of submission.

Dipping the flag is lowering it slightly and then hoisting it again, to salute a vessel or fort.

A "flag of truce" is a white flag displayed to an enemy to indicate a desire for a parley or consultation.

The black flag is a sign of piracy. The yellow flag shows a vessel to be at quarantine, or is the sign of a contagious disease.

A flag at half-mast means mourning. Fishing and other vessels return with a flag at half-mast to announce the loss or death of some of the men.

If the president of the United States goes afloat, the American flag is carried in the bows of his barge, or hoisted at the main of the vessel on board of which he is.

Flags are used as the symbol of rank and command, the officers using them being called flag officers. Such flags are square, to distinguish them from other banners.

The red flag is a sign of defiance, and is often used by revolutionists. In the American service it is a mark of danger, and shows a vessel to be receiving or discharging her powder.

The white flag is a sign of peace. After a battle parties from both sides often go out to the field to rescue the wounded or bury the dead under the protection of a white flag.—*Journal of Education.*

Introduction of Envelopes.

Before Sir Rowland Hill introduced the penny post, envelopes were little used, as a double charge was made for a paper inclosed in another, however thin each might be; even the smallest clipping from a newspaper necessitated an extra fee. The use of envelopes became common after May 6, 1840, when stamped and adhesive envelopes were introduced. The first envelope-making machine was invented by Edwin Hill, brother of Rowland Hill; and De La Rue's machine for folding envelopes was patented March 17, 1845. The invention of envelopes has been attributed to S. K. Brewer, a bookseller and stationer of Brighton, about 1830. He had some small sheets of paper on which it was difficult to write the address; he invented for these a small envelope, and had metal plates made for cutting them to the required shape and size.—*New York Telegram.*

Browning's Religious Belief.

A correspondent of *The Nonconformist* sends the following letter, written by Browning in 1876 to a lady, who, believing herself to be dying, wrote to thank him for the help she had derived from his poems, mentioning particularly "Rabbi ben Ezra" and "Abt Vogler," and giving expression to the deep satisfaction of her mind that one so highly gifted with genius should hold, as Browning held, to the great truths of our religion, and to a belief in the glorious unfolding and crowning of life in the world beyond the grave:—"19 Warwick Crescent, W., May 11, 1876. Dear Friend.—It would ill become me to waste a word on my own feelings except inasmuch as they can be common to us both in such a situation as you describe yours to be—and which, by sympathy, I can make mine by the anticipation of a few years at most. It is a great thing—the greatest—that a human being should have passed the

probation of life, and sum up its experience in a witness to the power and love of God. I dare congratulate you. All the help I can offer, in my poor degree, is the assurance that I see ever more reason to hold by the same hope—and that by no means in ignorance of what has been advanced to the contrary; and for your sake I would wish it to be true that I had so much of ‘genius’ as to permit the testimony of an especially privileged insight to come in aid of the ordinary argument. For I know I myself have been aware of the communication of something more subtle than a ratiocinative process, when the convictions of ‘genius’ have thrilled my soul to its depths, as when Napoleon, shutting up the New Testament, said of Christ—‘Do you know that I am an understander of men?—Well, He was no man!’ (‘*Savez-vous que je me connais en hommes. Eh bien, celui-là ne fut pas un homme*’). Or as when Charles Lamb, in a gay fancy with some friends as to how he and they would feel if the greatest of the dead were to appear suddenly in flesh and blood once more—on the final suggestion, ‘And if Christ entered this room!’ changed his manner at once, and stuttered out—as his manner was when moved, ‘You see—if Shakespeare entered, we should all rise; if *He* appeared, we must kneel.’ Or, not to multiply instances—as when Dante wrote what I will transcribe from my wife’s Testament—wherein I recorded it fourteen years ago—‘Thus I believe, thus I affirm, thus I am certain it is, that from this life I shall pass to another better, there, where that Lady lives, of whom my soul was enamored.’ Dear Friend, I may have wearied you in spite of your good will. God bless you, sustain and receive you! Reciprocate this blessing with yours affectionately,

“ROBERT BROWNING.”

Rules for Getting Rich.

The best merchant is he whose business talent is of the highest order, and improved to the highest pitch.

Of all quarrels, the most senseless, the most bootless, the most worrying, is a quarrel with your circumstances.

Every man has three characters—that which he ex-

hibits, that which he has, and that which he thinks he has.

Half of the heavy hearts and broken spirits and sleepless eyes among our merchants might be spared were they only willing to conform their appearance to their substance.

Many merchants object too much, consult too long, advertise too little, and seldom drive business home to the full period, but content themselves with a mediocrity of success.

Some men seem to take failure quite comfortably; they stop and go on again, without changing their style of living or lowering their heads. That is a feat that no honest business man can admire.

In business there are many who cannot rise, many who cannot help descending, many who of necessity fail, many who earn their bread, and many who only waste it when once in their own hands.

Great merit or great failings will make you respected or despised, but trifles, little attentions, mere nothings, either done or neglected, will make you either liked or disliked in the general run of the world.

The true merchant is not the man who best understands his business and contrives to bargain others out of their reasonable profits, but he who best understands his business and never takes advantage of any man's ignorance or any man's necessity.

"Leading articles" in commerce, like leading articles in journalism, are meant to make a character for the whole. But it is questionable whether a merchant is justified in taking such modes of attracting the attention of the public unless he has actual advantages to offer.

Nature's Change Artist.

A novel flower has been found at the isthmus of Tehuantepec. This floral chameleon has a faculty of changing its color during the day. In the morning it is white, when the sun is at its zenith it is red, and at night it is blue. The red, white, and blue flower grows on a tree about the size of a guava tree, and only at noon does it give out any perfume.

Strange Burial Customs.

The Thibetians cut in pieces the bodies of their dead and threw them into the lakes to feed the fish.

The ancient Bactrians suffered the bodies of their departed relatives to be eaten by dogs specially kept for the purpose.

The early Norseman used to place the Viking in his ship and "send him flaming out to sea" with all his belongings.

The Ethiopians disposed of the dead either by throwing them into the river or by preserving them in their houses in statues of gold or baked clay.

The Babylonians embalmed their dead in honey, and discountenanced cremation, which they believed to be nothing less than a sacrilege to the sun.

The Guanches, the aboriginal inhabitants of the Canary Islands, rudely embalmed their corpses, drying the bodies in the air and covering them with varnish.

The palæolithic cave dwellers of France and Belgium buried their dead in natural grottos and crevices of the rocks similar to those in which they lived.

The Peruvians appear to have preserved the bodies of their incas after the Egyptian fashion, and in early times mummies seem to have had an abiding place in Mexico.

The Greeks of old were enjoined by law to burn the dead, and the Romans, who in the time of the republic had interred their dead, adopted the Grecian usage in the days of Sulla.

The Parsees lay their dead on da khamas, or "towers of silence," where the vultures clean the bones, which in a month are removed and deposited in deep wells containing the dust of many generations.

On the Himalayan slopes the Sikkim burn the bodies of the dead and scatter the ashes to the four winds, while the tribes of Oonalaska and Nootka sound bury them on the hill tops and expect every wayfarer to throw a stone on the grave.

Herodotus tells us of favori'e horses and slaves being sacrificed at the holocaust of the dead chief, and in many countries the wives had the privilege of dying

with their husbands, a custom which has continued in the Hindu Sutti down to the present generation.

The Burmese, before burying the body of a gentleman, enclose it in a varnished coffin, and, after divers hymns and processions, place it on a pyre of precious woods, which is ignited and allowed to burn until nearly consumed, when the body is taken from the flames and buried.

The Cheyenne Indian hangs the dead body of his friend among the foliage of his native forests, a prey to the vulture and the sport of every storm; or else, swathing it with willow branches, places it with the feet southward in some cottonwood tree together with a plentiful supply of food, arms, and tobacco, to be consumed on its voyage to the happy hunting grounds.

The Chinese bury their dead in the fairest spots in the land. They are extraordinarily devoted to the dead, and the labor contract of every Coolie emigrant specially stipulates that in case of death his body shall be carried back to China that his dust may mingle with that of his forefathers, and join their spirits in the flowery kingdom. Otherwise, he believes that his soul will wander amid strangers unknown and astray.—*Once a Week*.

Deaths of the Apostles.

It is generally believed that only one of Christ's apostles, John, escaped martyrdom. Matthew is supposed to have been slain with a sword in Ethiopia. James, son of Zebedee, was beheaded at Jerusalem. James, the brother of our Lord, was thrown from a pinnacle of the Temple and then beaten to death with a fuller's club. Philip was hanged up against a pillar of Hieropolis, a city of Phrygia. Bartholomew was flayed alive at Albanapolis, in Armenia. Andrew suffered martyrdom on a cross at Patræ, in Achaia. Thomas was run through the body with a lance at Coromandel, in the East Indies. Thaddeus was shot to death with arrows. Simon Zelotes was crucified in Persia. Peter was crucified, head downward it is said, during the Neronian persecution. Matthias was

first stoned and then beheaded, and Paul was beheaded at Rome by the tyrant Nero. Judas Iscariot, after the betrayal of our Lord, hanged himself.

The Sahara's March.

Sand dunes from the Sahara desert have been seriously encroaching upon the oases in the southern part of Tunis, and awhile ago the French government sent E. Blanc to see what could be done to prevent the desert from further advances upon the oases. He reported that, in his opinion, the whole southern part of Tunis is in process of gradual desiccation. The desert is slowly extending its boundaries to the north. Far within the present limits of the desert Mr. Blanc found numerous ruins of buildings erected during the Roman occupancy, showing that, at the dawn of the Christian era, fertility reigned where now the sterility of the desert exists.

As yet Mr. Blanc is unable to suggest any practical measures for saving the oases from gradual extinction. His orders were to see if steps could be taken with advantage, similar to those employed in France to prevent the sand dunes along the Gulf of Gascogne from encroaching upon the cultivable lands. His answer is in the negative. The great difficulty is the lack of water, and he doubts if a sufficient quantity can be secured by means of artesian wells.

A Few English Names.

Cowper is pronounced Cooper.
 Talbot is pronounced Tolbut.
 Thames is pronounced Tems.
 Bulwer is pronounced Buller.
 Holburn is pronounced Hobun.
 Wemyss is pronounced Weems.
 Knolloys is pronounced Knowles.
 Cockburn is pronounced Coburn.
 Brougham is pronounced Broom.
 Norwich is pronounced Norridge.
 St. Leger is pronounced Sillinger.
 Hawarden is pronounced Harden.
 Colquhoun is pronounced Cohoon.

Cirencester is pronounced Sissister.
Grosvenor is pronounced Grovenor.
Salisbury is pronounced Sawlsbury.
Beauchamp is pronounced Beecham.
Cholmondely is pronounced Chumly.
Marylebone is pronounced Marrabun.
Abergavenny is pronounced Abergenny.
Marjoribanks is pronounced Marchbanks.
Bolingbroke is pronounced Bullingbrook.

Improvised Cards.

That is a pretty anecdote of Appeles, who, visiting Protogenes at Rome, and finding him "not at home," left, instead of a visiting card, a tiny sketch dashed off on canvas. In like manner, Frank Flores, the Dutch painter, having journeyed to Leyden to make the acquaintance of the painter Aartgen, who chanced to be absent, seized a lump of charcoal and drew on the wall a figure of St. Luke. On his return, Aartgen declared that no one but Flores could have been the author of such a design, and immediately started for Antwerp to repay the visit. A similar incident crops up in the lives of other artists, while poets have jotted down stanzas in "The Visitor's Book."—*All The Year Round*.

Odds and Ends.

From ten to twelve ounces a day is the quantity of meat required for a healthy adult who takes an ordinary amount of work and exercise.

On account of the height and sheer descent of the surrounding mountains the sun does not rise on Mirror Lake, Yosemite Valley, until 11:30 in the morning.

White mahogany is exceedingly rare, but sparingly introduced as borders for tables and delicate framework of upholstered suits. It has a soft enamel-like gloss, and is very costly.

It is estimated that getting born costs \$225,000,000 annually; getting married, \$300,000,000; getting buried, \$75,000,000.

A lady's maid, seeing her mistress struggling with a stamp that would not stick, took the stamp, rubbed it on the mucilage on the flap of the envelope and put

it in its place. It was an ingenious way out of a common difficulty well worth remembering.

Here is a unique specimen of a medical certificate of death. It was tendered by a native apothecary at a recent inquest in India: "I think she died or lost her life for want of food or on account of starvation, and perhaps for other things of her comfortables, and most probably she died by drowning."

When a Corean marries he is careful to present his wife with a wild goose, even if he is obliged to hire the bird specially for the occasion; for, once upon a time, a wild goose whose mate was killed returned year after year to the same spot to mourn her loss, and the Corean bridegroom wishes his bride to understand the virtue of constancy.

At the beginning of the nineteenth century, in England, more than 200 offences were punishable with death; now, aside from naval and military laws, there are only four crimes with the death penalty—setting fire to Government dockyards or arsenals, treason, murder, and piracy with violence.

Bulls of a German Professor.

The prize medal for absent-mindedness during lectures must be awarded to a German professor named Johannes Amer, who recently died in Vienna. One of his pupils had a list of his remarkable sayings, among them the following: "Julius Cæsar, disguised as a slave, swam naked across the Tiber." "Alexander the Great was born in the absence of his parents." "The Swiss are a mountainous nation, but in Scotland the climate does not begin till October." "Hogs were invented in Asia Minor." "Thus arose a general war on page 94." "The third Punic war would have been out much sooner had it commenced a little earlier." "Covered with countless wounds Cæsar fell dead near the statue of Pompey; with one hand he drew his toga over his face while with the other he called for help."

The Victoria Regia Lily.

It is just sixty-three years ago that Schomburgh, the botanist, was making his way up the river Berbice, in

British Guiana, when, at a turn in the stream, he found himself in view of an extensive backwater. At the further end were seen some objects lying upon the water, of which in the distance the exact nature could not be distinguished, but which, to the botanist's eye, seemed vegetable. Animating his boatmen to their utmost exertion, and seizing an oar himself, the boat was soon flying over the calm lagoon, and on a sudden, looking up, the traveler found himself in the presence of that miracle of vegetation, the *Victoria Regia* Lily. All round him lay on the water great leaves six feet wide and as many long, green, salver shaped, with a rim some five inches deep turning up all round and showing the vivid crimson of the under side. Among these glorious leaves floated the lilies, fifteen inches in diameter, and emitting from their hundred-petalled blossoms, waxen white or tinged with pink, a faint sweet scent.

Curious Weather Happenings.

In 1568 the Antiura reapers found all wheat heads to be as red as blood.

Wurtemberg, Germany, had a shower of brimstone and ashes in 1634.

In 1588 bread put in the oven at Nuremberg, Germany, was taken out covered with a bloody sweat.

A monk, writing in 1251, tells of a loaf being cut out of which blood flowed as freely as from a fresh wound.

In 1361 Burgundy experienced the novelty of a shower of blood red rain, which ensanguined everything it touched.

Many of the old writers record a three day shower of blood red rain in the island of Rhodes and throughout southern Italy in 1236.

In 1226 a snow fell in Syria which presently melted and flowed in carmine rivers of blood, or some fluid much resembling it in every particular.

At Rome, in 1222, it rained dust, mixed with blood, for three days, and when the heavy clouds drifted away it looked as if the sun was swimming in a sea of fire.

In 1348 some chasms in the earth sent forth poison-

ous fluids, as red as carmine ink, at Villach, in Austria. Ponderous hailstones fell in Germany the same year, some of them weighing from twenty to seventy pounds.

In 1695 Limerick and Tipperary, Ireland, had many showers of a soft, fatty substance resembling butter. It was of a dark, yellow color, and always fell at night. The people gathered it and used it as an ointment, reporting many astonishing cures.

An igneous vapor or sulphurous fire broke from the earth at Cannery, Asia, in 1348, and utterly consumed men, beasts, houses and trees, so infecting the air that a great plague followed. Young serpents and millions of venomous insects fell from the clouds.

A Gigantic Skeleton.

The following paragraph from the *Dublin Freeman's Journal* of August, 1812, seems to show that men of gigantic stature were not unknown in Ireland in pre-historic times. "It is not a little surprising, considering our veneration for Irish antiquities, that no notice should be taken of the skeleton recently disinterred at Leixlip. This extraordinary monument of gigantic human stature was found by two laborers in Leixlip churchyard on Friday, the 10th ult., when making a kind of sewer, near the Salmon leap, for conveying water, by Mr. Haigh's orders. It appears to have belonged to a man of not less than ten feet in height. It is believed to be the same mentioned by Keating—Phelim O'Tool, buried in Leixlip churchyard, near the Salmon leap, 1,252 years ago. In the same place was found to be a large finger ring of pure gold. There was no inscription or characters of any kind upon it, a circumstance to be lamented, as it might throw a clear light upon this interesting subject. Our correspondent saw one of the teeth, which was as large as an ordinary forefinger."

Valuation of Silver and Gold.

In 1600 gold was worth ten times as much as its paler brother.

In 1725 gold was thirteen times more valuable than silver, just as it was 500 B. C.

In the year 500 A. D. silver was 18 to 1; in 1100 it was 8 to 1, and in 1400 it was 11 to 1.

In 1876 the ratio of silver to gold was 20 to 1, and in 1866 it was at the highest ever known, since which time it has gradually declined.

At the beginning of the present century gold had risen in value to a higher point than at any time since 500 A. D., being fifteen times more valuable than silver.

In the days of the patriarch Abraham silver was 8 to 1; B. C. 1000 it was 12 to 1; B. C. 500 it was 13 to 1, and at the commencement of the Christian era it was 9 to 1.

In 1454 gold was only six times more valuable than the precious white metal, silver, and within the next hundred years two pounds of silver could be exchanged evenly for one of gold.

The Human Family.

The human family living on earth to-day amounts to about 1,450,000,000 souls, not less, but probably more. They are distributed all over the earth's surface, there being no considerable spot where man has not found a foothold. In Asia, the supposed cradle of the human race, there are now about 800,000,000 of people, densely crowded, on an average of 120 to every square mile. In Europe there are 320,000,000, averaging 100 to each square mile, and not so crowded, but everywhere dense and in many places over-populated. In Africa there are approximately, 210,000,000, and in the Americas, North, Central, and South, 110,000,000, and, of course, relatively thinly scattered. In the islands, large and small, there are probably 10,000,000. The extremes of the whites and blacks are as five to three; the remaining 700,000,000 intermediate brown and tawny color. Of the entire race 500,000,000 are well clothed—that is, they wear garments of some kind to cover nakedness; 250,000,000 habitually go naked, and 700,000,000 only cover the middle parts of the body; 500,000,000 live in houses, 700,000,000 in huts and caves, and 250,000,000 virtually have no place to lay their heads.—*St. Louis Republic.*

A First Principle of Bridge Building.

If one plank would hold up 100 pounds on the centre, then the two planks placed side by side would hold up 200 pounds, while, placing the planks one on top of the other, and nailing them firmly together, they would hold up 400 pounds. In this way we see that, in order to increase the strength of the bridge or beam faster than we increase the amount of material, the increased amount of material should go into the depth of the beam and not into the width of it. This is one of the first principles in the resistance of material, that the strength of a beam varies directly as the width—that is, if we make the beam twice as wide, it will hold twice as much; and that the strength varies as the square of the depth—that is, if we make it twice as deep, it will hold up four times as much. If we make it three times as deep, it will hold up nine times as much of a load. So that you can readily understand that, in order to increase the strength of the bridge or beam without increasing the material in the same proportion, the increased amount of material should be put into the depth and not into the width.—PROFESSOR C. D. JAMESON.

Some Facts Worthy of Note.

That the word "villain" at first meant simply a villager.

That the word "rivals" once meant neighbors who lived on the banks of a river.

That the word "simpleton" was originally applied to persons of honest candor—straightforward and simple, as opposed to duplicity of character.

That the word "brat," which is now a low word of contempt, was once used in sacred verse—"Oh, Abraham's brats; oh, broode of blessed seede!"

That the word "knave" in its origin signified a young man, and on the German court cards is merely the page or knight attending the king or queen.

That the words "pagan" and "heathen" come from words signifying a countryman, because it was in the rural districts that the worship of the ancient deities was longest continued.

That the word "idiot" originally meant only a private person, or one who was not engaged in public business; then it came to be applied to an outsider, one who was ill-formed on and indifferent to state affairs; and, lastly, to the most hopeless of all the mentally afflicted.

Rules for Old Age.

Dr. Richardson's "Rules for Old Age" are as follows:—When old age has really commenced, its march toward final decay is best delayed by attention to those rules of conservation by which life is sustained with the least friction and the least waste. The prime rules for this purpose are:—To subsist on light but nutritious diet, with milk as the standard food, but varied according to season. To take food, in moderate quantity, four times in the day, including a light meal before going to bed. To clothe warmly but lightly, so that the body may, in all seasons, maintain its equal temperature. To keep the body in fair exercise, and the mind active and cheerful. To maintain an interest in what is going on in the world, and to take part in reasonable labors and pleasures, as though old age was not present. To take plenty of sleep during sleeping hours. To spend nine hours in bed at least, and to take care during cold weather that the temperature of the bedroom is maintained at 60 degs. Fahr. To avoid passion, excitement, and luxury.

An Ancient Man of Strength.

The first theatre manager of Berlin, Johann Karl von Eckenberg, was the so-called "man of strength," who showed himself nearly 200 years ago, first as juggler, then as athlete. Of his life little is known except as in his career as theatre manager, as he was the founder of the first Berlin theatre. He was extensively written of, and an article under the title of "An Athlete of the Eighteenth Century," published some years ago and recently unearthed, gives an interesting account of his prowess, as follows:—

By an athlete of the eighteenth century we do not

mean the Prince Frederick August of Saxony, king of Poland, commonly called August the Strong, who could knock off the head of an ox with one stroke of his sword, and besides distinguished himself in all kinds of respectable performances of strength, but another Hercules who would have wrapped the strong August around his little finger, if such a thing would have been permitted. This man was the athlete Johann Karl von Eckenberg, who in the twenties and thirties of the last century showed his productions of strength in public. He was the most stately of all gymnasts, and was born in the town of Harzgerode, and out of respect to his native town he called himself for a time, on his bill posters, Sampson Hercules Harzmann.

It borders on the fabulous what his contemporaries related of his remarkable exhibitions of strength. He broke an anchor rope as if it were ordinary thread, iron nails and bolts he turned playfully between his fingers into screws, a cannon pipe he carried around as if it were a baby. His teeth were as strong as iron. He bit into a piece of oak wood; then a strong cart horse was harnessed up to it. In spite of the horse being urged on it was unable to pull the stick out of the juggler's mouth or to pull the athlete from the place where he stood. A bench made of wood, sixteen feet long, he grasped with his teeth by one end and carried it around, while a trumpeter blowing his instrument sat on the other end.

His arm was more powerful than his teeth. He spread out his hands, on each one was placed a bottle of wine, then a rope was attached to each wrist and to each rope there were three men from the audience who pulled with all their might, so as to make it impossible for this Hercules to convey the wine to his mouth. All their zeal was without avail, as the arms of the gymnast bent themselves irresistibly and brought the jug to his mouth without spilling a drop of wine.

He generally saved his grandest performance of strength until the close of the exhibition. He ascended a scaffold of beams under which was a platform of thick planks fastened on strong chains. A trumpeter

mounted on a horse, clad as a herald, rode upon the platform and played his tune. The Hercules then took a place on the point of the scaffolding, held a glass of wine in one hand and with the other, by means of the chains, lifted the heavy platform, the horse, and the trumpeter high up from the floor, and for a little while held the whole weight, the trumpeter shrilly blowing a tune, while the athlete drank the glass of wine, at the same time giving a toast to the magistrate and the citizens of the city in which he happened to be staying.

When Herr von Eckenberg became older, his power gradually left him; therefore he gave up the herculean business and became chief theatre manager of Berlin, where he for some time possessed two show booths, which, however, did not bring him as large an income as did his exhibition of strength. But when he had this large income he did not know how to save. He had a competitor, Peter Hilferdinø, who had a show booth with privileges and at the same time was a practical joker and clown under the name of Pantalón de Bisognosi. Provoking quarrels with this man embittered the life of the "man of strength." His numerous creditors seized both his booths with all belongings, completely impoverishing the celebrated Hercules, who died in the year 1754.—*From the German.*

Fire Made by Friction.

The friction methods in use in different parts of the world are various. One of the simplest is with the stick and groove—a blunt pointed stick being run along a groove of its own making in a piece of wood lying on the ground. In Tahiti Mr. Darwin saw a native produce fire in a few seconds, but only succeeded himself after much labor. This device is employed in New Zealand, the Sandwich Islands, Tonga, Samoa, and the Radack Islands. Instead of rubbing the movable stick backward and forward, other tribes make it rotate rapidly in a round hole in the stationary piece of wood in the manner referred to, thus making, as happily designated, a fire drill. This device has been observed in Australia, Kamschatka, Sumatra and the Carolines, among the Yeddahs of Ceylon, throughout a great part

of South Africa, among the Esquimaux and Indian tribes of North America, in the West Indies, in Central America, and as far south as the Straits of Magellan. It was also employed by the ancient Mexicans, and Mr. Taylor gives a quaint picture of the operation from Mexican MS., in which a man, half kneeling on the ground, is causing the stick to rotate between the palms of his own hands. This simple method of rotation seems to be generally in use, but various devices have been resorted to for the purpose of diminishing the labor and hastening the result.

The Guacho of the Pampas takes "an elastic stick about eighteen inches long, presses one end to his breast and the other in the hole in a piece of wood, and then rapidly turns the curved part like a carpenter's centre bit." In other cases the rotation is affected by means of a cord or thong wound round the drill and pulled alternately by this end and that.

A further advance was made by some North American Indians, who appear to have applied the principle of the bow drill, and the still more ingenious pump drill was used by the Iroquois Indians. For a full description of these instruments we must refer the reader to Mr. Taylor's valuable chapter in his "Researches." These methods of producing fire are but rarely used in Europe, and only in connection with superstitious observances.

A Peculiar Duel.

A very peculiar preliminary to a death sentence that deserves to be put on record was that in vogue in Franconia in the fifteenth century—that is, in the days of the ordeal, in which heaven itself was supposed to take a hand in the distribution of justice. In case a woman had been made to suffer in reputation by a man, she was at liberty to challenge him to combat, which took place in the following way:

A regular ring was formed for spectators, and chairs were placed for the judges. In the middle of the ring was a hole about three feet deep, in which the man, armed only with a club, had to defend himself against the woman, who was armed with a stone weighing a pound tied up in a handkerchief and attached to a

slender willowy stick. The lady had a space measuring ten feet in diameter in which to evolute and to attack.

The rules were as follows:

If the man in attempting to strike the woman touched the ground with arm or hand he made one error. If he made three such, or if the woman succeeded in disarming him, he was declared defeated, and was then delivered over to the executioner to be put to death, which was by being buried in the same hole in which he had vainly attempted to defend himself. But if the man succeeded in thwarting the attacks of the woman or in disarming her, he was declared the victor, and the woman herself was then the victim, and was sentenced to death and buried alive.—*New York World*.

Nutmegs.

The nutmeg is the innermost kernel of the fruit of a small tree that grows about thirty feet high. It is a native of the East Indies, but it is cultivated in other tropical lands. It has a small yellow flower. The fruit is small and peach-like, but with a smooth surface, and turns yellow when ripe. The exterior, a thick fleshy husk, dries up and cracks, disclosing the nut. The outer covering of this nut is what we know as mace. It is red at first, but turns to a light brown when dried. Next comes a hard shining shell, and inside that is the nutmeg. The tree bears about the eighth or ninth year from the seed. The mace is taken off and dried in the sun for one day, and for eight days in the shade, then dampened with sea water and pressed in bags. The remainder of the nut is very thoroughly dried, when the shell is broken and the nutmegs are assorted, the best ones being exported. They are first pickled in lime water, then left to sweat, and finally packed for shipment. The Penang nutmegs, the best, are about an inch long, pale brown, corrugated on the surface, with red streaks in the gray interior.—*Good Housekeeping*.

Wonderful Human Mechanism.

Science, says Sir James Paget, will supply the natural man with wonders uncounted. The author had once

heard Mlle. Janotha play a presto by Mendelssohn. She played 5,595 notes in four minutes and three seconds. Every one of these notes involved certain movements of a finger, at least two, and many of them involved an additional movement laterally as well as those up and down. They also involved repeated movements of the wrists, elbows, and arms, altogether probably not less than one movement for each note.

Therefore, there were three distinct movements for each note, as there were twenty-four notes per second, and each of these notes involved three distinct musical movements that amounted to seventy-two movements in each second. Moreover, each of those notes was determined by the will to a chosen place, with a certain force at a certain time, and with a certain duration. Therefore there were four distinct qualities in each of the seventy-two movements in each second. Such were the transmissions outward. And all those were conditional on consciousness of the position of each hand and each finger before it was moved, and by moving it of the sound and the force of each touch. Therefore, there were three conscious sensations for every note.

There were seventy-two transmissions per second, one hundred and forty-four to and fro, and those with constant change of quality. And then, added to that, all the time the memory was remembering each note in its due time and place, and was exercised in the comparison of it with others that came before. So that it would be fair to say that there were not less than two hundred transmissions of nerve force to and from the brain outward and inward every second, and during the whole of that time judgment was being exercised as to whether the music was being played better or worse than before, and the mind was conscious of some of the motions which the music was intended to inspire.—*Popular Science Monthly*.

Curiosities of Suicide.

Suicide is most frequent in large cities.

The Stoics lauded suicide as a praiseworthy action, and the Roman law did not look upon it as a venial crime.

The tendency to suicide is more prevalent among the educated and wealthy than among the poorer and middle classes.

Physicians prefer poisons or drugs, religious monomaniacs crucifixion, and the sexes differ somewhat in their choice.

Women are said in England to seek death according to the following order: Hanging, abstinence, precipitation, drowning, cutting, poison.

Superstitions of the Sea.

Mariners do not like to have a corpse on board.

It is unlucky to point with the finger at a ship when at sea.

The nails and hair must not be cut at sea except during a storm.

Rats are supposed to leave a vessel only when it is going to sink.

It is unlucky to sneeze on the left side at the moment of embarking.

A knife stuck in the mast, the killing of a pig, or whistling is each believed to bring wind.

The stormy petrel is supposed to herald bad weather, and the great auk to tell when land is near.

The cat is generally disliked by sailors, but a cat will not be thrown overboard, as this would bring on a storm.

Cornwall, England, sailors will not walk at night along portions of the shore where there have been wrecks, as they believe that the souls of the drowned inhabit those localities.

“Bulls.”

The following fine specimens may be entered in competition for a prize, English against Irish “bulls.” The first is from *The Morning Chronicle*, June 19, 1884: “To investigate the question, however, would lead us too deeply into the dry and troubled waters of moral philosophy.” I do not remember in what paper the following appeared, but the date was Jan. 7, 1839, when there had been a tremendous hurricane: “Several chimneys fell, burying the inmates in the ruins.” “A row

of cottages fell, but fortunately the inmates were all out."

These two came out in one of the Sheffield papers: "At first sight, the econoneering addresses sound thoroughly protectionist." "The house (*i. e.*, the attendance at the theatre) was not so good as we had hoped to have seen it, but there were more persons present than we expected to have seen"—(which is rather like Joe Miller's pig jobber, who, being asked what sort of market he had made, replied: "Not so good as I expected, and I thought I shouldn't"). A third is from a leading article in the same paper on the Czar of Russia: "At any rate, if the Czar did show any heat, it is probable that he would go to sleep upon it." I once heard an American revivalist, in his loudest tones, rave and roar about the "icebergs of damnation."—*The Spectator*.

The Cologne Cathedral.

This superb edifice holds the first rank among German cathedrals, and is one of the most magnificent buildings in the world. It was, according to the common belief, begun in 1248, and progressed slowly till the sixteenth century, when work upon it was for a time abandoned. It fell more and more into decay until Frederick William IV. began its restoration. It was consecrated 600 years after its foundation. Work upon this edifice has been vigorously prosecuted within the last few years, and it is now completed. Externally, its double range of stupendous flying buttresses, and intervening piers bristling with a forest of purpled pinnacles, strike the beholder with awe and astonishment.

Past Literary Women.

Jane Porter died at the age of 74.
 Miss Mitford died at the age of 69.
 Mrs. Marcet attained the age of 89.
 George Sand smoked in her old age.
 Mrs. Barbauld died at the age of 82.
 Mrs. Radcliffe died at the age of 59.
 Hannah Moore died at the age of 88.
 Miss Harriet Lee died at the age of 95.

Miss Edgeworth died at the age of 82.
Mrs. Somerville reached the age of 92.
Caroline Herschel reached the age of 98.

Pounds Sterling.

In England money is characterized by the word "sterling," because in the time of Richard Cœur de Lion money coined in the east part of Germany became, on account of its purity, in especial request in England, and was called Easterling money, as all the inhabitants of that part of Germany were called Easterlings. Soon after that time some of those people, who were skilled in coining, were sent for and went to London to bring the coin to perfection. That was the foundation of the practice of designating English amounts "sterling."

Tara's Hall.

"The Harp that once through Tara's Hall" commemorates one of the most terrible and far-reaching curses that was ever pronounced. The curse was laid in 554, or 1349 years ago, and Irish politics has felt the influence of it ever since. It was done in the reign of Dermid, who was lapsing back to active sympathy with the Druids, and who, unlike his predecessors since St. Patrick's constitution had been instituted, violated with impunity the immunities that instrument had patented to the clergy. At last he committed a most flagrant act by seizing a prisoner at the altar of Temple Ruadan, county of Tipperary, dragging him from the protection of the sacred precincts and putting the victim to death.

St. Ruadan, the patron priest, was exasperated, and gathering his immediate clergymen journeyed to Tara. Marching slowly three times around the royal rath or king's palace with awful solemnity, they excommunicated the aggressive monarch, and chanted a malediction against the rath so terrible that when, two years after, Dermid was slain by Black Hugh of Ulster, the place was deserted, and has never been occupied since. It is said that his favorite bard clung to the halls for years, and that so thoroughly ostracized was the place that his skeleton was found beside his faithful but

broken harp by a wandering bard who visited the spot years after having fled from it in terror.—*St. Louis Globe-Democrat.*

A Brave Man's Magnanimity.

The gallant devotion of Stanley's little band of Arab heroes, who, two hundred strong, beat back vast hordes of cunning and devilish cannibals, along a thousand miles of river, or while carrying his big canoes overland around the Congo cataracts, making roads over mountains and through jungles, dashing forth in search of food, forms a tale as pathetic and beautiful as it is amazing. One incident, however, must be told, if only for the light it throws on Stanley's character. He had much trouble with his men on account of their inherent propensity to steal, the results of which brought upon the expedition much actual disaster. At last Stanley doomed the next man caught stealing to death. His grief and distress were unbounded when the next thief, detected in a case of peculiar flagrancy, was found to be Uledi, the bravest, truest, noblest of his dusky followers. Uledi had saved a hundred lives, his own among the number. He had performed acts of the most brilliant daring, always successful, always faithful, always kind. Must Uledi die? He called all his men around him in a council. He explained to them the gravity of Uledi's crime. He reminded them of his stern decree, but said he was not hard enough to enforce it against Uledi. His arm was not strong enough to lift the gun that would kill Uledi, and he would not bid one of them to do what he could not do himself. But some punishment, and a hard one, must be meted out. What should it be? The council must decide. They took a vote. Uledi must be flogged. When the decision was reached, Stanley standing, Uledi crouching at his feet, and the solemn circle drawn closely around them, one man whose life Uledi had saved under circumstances of frightful peril, stood forth and said: "Give me half the blows, master." Then another said, in the faintest accents, while tears fell from his eyes. "Will the master give his slave leave to speak?" "Yes," said Stanley. The Arab came forward and

knelt by Uledi's side. His words came slowly, and now and then a sob broke them. "The master is wise," he said. "He knows all that has been, for he writes them in a book. I am black, and know not. Nor can I remember what is past. What we saw yesterday is to-day forgotten. But the master forgets nothing. He puts it all in that book. Each day something is written. Let your slave fetch the book, master, and turn its leaves. Maybe you will find some words there about Uledi. Maybe there is something that tells how he saved Zaidi from the white waters of the cataract; how he saved many men—how many, I forget, Bin Ali, Mabruki, Koni Kusi—others, too, how he is worthier than any three of us, how he always listens when the master speaks, and flies forth at his word. Look, master at the book. Then, if the blows must be struck, Shumari will take half and I the other half. The master will do what is right. Saywa has spoken." And Saywa's speech deserves to live for ever. Stanley threw away his whip. "Uledi is free," he said. "Shumari and Saywa are pardoned."—*Christian at Work.*

Queer Beliefs.

The Fijian cannibal's emotions have reference for the greater part to food, so he worships the god Matawaloo, who has eight stomachs and is always eating.

The Tongans have a very curious dogma to account for a day and night being twenty-four hours long. It used to be less; the sun used to go down too quick. So one day a man caught it with a noose, and it had to go slower thereafter.

The ancient Peruvians believed that the sun once came down to the earth and laid two eggs and then went back again. From these two eggs men sprung.

The American Indians had a dogma that the sun was the one supreme god, and the moon was his wife. One tribe inhabiting a fearfully hot district worshipped the moon alone, saying that they had no use for the sun.

In the days of Columbus scientific dogmas asserted: If a ship should reach India she could never get back again, because the rotundity of the globe would present

a kind of mountain, up which it would be impossible to sail even with the most favorable wind.

Mosquitoes.

The bill of a mosquito is a complex institution. It has a blunt fork at the head, and is apparently grooved. Working through the groove, and projecting from the angle of the fork, is a lance of perfect form sharpened with a fine bevel. Beside it the most perfect lance looks like a hand saw. On either side of the lance two saws are arranged, with the points fine and sharp and the teeth well refined and keen. The backs of these saws play against the lance. When the mosquito alights with his peculiar hum, it thrusts its keen lance, and then enlarges the aperture with the two saws, which play beside the lance until the forked bill with its capillary arrangement for pumping blood can be inserted. The sawing process is what grates upon the nerves of the victim and causes him to strike wildly at the sawyer.—*Journal of Health.*

Customs of the Esquimaux.

Like Indians, the Esquimaux often kill the old. Often the old are tired of life and beg to be despatched. If food is scarce they are turned out to starve, whether they like it or not. The superfluous women are also disposed of in this way. Barbarism shows itself in their treatment of the dead. The body of a favorite wife or child is sometimes protected through the winter and decently buried in the spring, but as a general rule corpses are dragged a short distance from the village and abandoned to the dogs.

The savages have no idea of the marriage relation. Women are treated as chattels. The number of wives a man may have is regulated not by his possessions, as among our Mormons, but by his ability to manage women. One infers from this that polygamy is not carried on to any great extent.

Flowers in Religious Ceremonies.

The universal admiration for flowers and plants has, no doubt, inspired their use in religious ceremonials.

When the Spaniards conquered Mexico they found in the lake surrounding the capital city floating gardens, the products of which were designed altogether for temple use. In both Greece and Rome profuse employment was made of flowers in triumphal processions, and so highly esteemed were these products of the garden that a special feast, the Floralia, was established in honor of the flowers, a survival of this heathen festival being seen in various points in England, where on Ascension day the walls are dressed in floral wreaths. At Weymouth on the 1st of May, flowers are thrown into the sea. So in India the Singahales seemed to have used flowers to an almost incredible extent, and one of their old chronicles tells us how the Ruanwelle dagoba—270 feet high—was festooned with garlands from pedestal to pinnacle, till it had the appearance of one uniform bouquet. "We are further told that in the fifteenth century a certain king offered no less than 6,480,320 sweet smelling flowers at the shrine of the tooth; and among the regulations of the temple at Dambedenia in the thirteenth century, one prescribes that 'every day an offering of 100,000 blossoms, and each day a different kind of flower,' should be presented. This is a striking instance, but only one of many."—*Folk Lore of Plants*.

How they were Made.

Among exclamations in common use "Hello!" and "Hurrah!" have curious origins attributed to them. It is said by the author of the "Queen's English" that the people of Carnwood forest, Leicestershire, when they desire to hail a person at a distance call out not "hello!" but "halloup!" This, he imagines, is a survival of the times when one cried to another: "A loup! a loup!" or as we would now say: "Wolf! wolf!" "Hurrah!" again, according to M. Littré, is derived from the Slavonic huraj, "to Paradise," which signifies that all soldiers who fell fighting valiantly went straight to heaven. "Prithee" is obviously a corruption of "I pray thee," while "marry" was originally a method of swearing by the Virgin Mary.—*All the Year Round*

Founding Words.

The first vessel of schooner rig is said to have been built in Gloucester about the year 1713. When she went off the stocks into the water a bystander cried out: "Oh, how she scoons!" The builder instantly replied: "A scooner let her be;" and from that time vessels thus rigged have gone by that name. The word *scoon* is popularly used in some parts of New England to denote the act of making stones skip along the surface of the water. The Scottish *scon* means the same thing. The word appears to have been originally written *scooner*.

Wheat and Whence it Came.

Wheat, which is now the bread corn of twelve European nations, and is fast supplanting corn in America and several inferior grains in India, was no doubt widely grown in the prehistoric world. The Chinese cultivated it 2700 B. C. as a gift direct from heaven; the Egyptians attributed its origin to Isis, and the Greeks to Ceres. A classic account of the distribution of wheat over the primeval world shows that Ceres, having taught her favorite Triptolemus agriculture and the art of bread-making, gave him her chariot, a celestial vehicle which he used in useful travels for the purpose of distributing corn to all nations.

Ancient monuments show that the cultivation of wheat had been established in Egypt before the invasion of the shepherds, and there is evidence that more productive varieties of wheat have taken the place of one, at least, of the ancient sorts. Innumerable varieties exist of common wheat. Colonel Le Couteur of Jersey cultivated 150 varieties. Mr. Darwin mentioned a French gentleman who had collected 322 varieties, and the great firm of French seed merchants, Vilmorin-Andrieux et Cie., cultivate about twice as many in their trial grounds near Paris.

Three small grained varieties of common wheat were cultivated by the first lake dwellers of Switzerland (time of Trojan war), and as well as by the less ancient lake dwellers of western Switzerland and of Italy, by the people of Hungary in the stone age, and

by the Egyptians on the evidence of a brick of a pyramid in which a grain was imbedded, and to which the date of 3359 B. C. has been assigned. The existence of names for wheat in the most ancient languages confirms this evidence of the antiquity of its culture in all the more temperate parts of Europe, Asia, and Africa, but it seems improbable that wheat has ever been found growing persistently in a wild state, although the fact has often been asserted by poets, travelers, and historians.

In the *Odyssey*, for example, we are told that wheat grew in Sicily without the aid of man, but a blind poet could not have seen this himself, and a botanical fact can hardly be accepted from a writer whose own existence has been contested. Diodorus repeats the tradition that Osiris found wheat and barley growing promiscuously in Palestine, but neither this nor other discoveries of persistent wild wheat seems to us to be credible, seeing that wheat does not appear to be endowed with a power of persistency except under culture.—*Edinburgh Review*.

St. Peter's.

The largest and grandest temple of worship in the world is the St. Peter's cathedral at Rome. It stands on the site of Nero's circus, in the north-west part of the city, and is built in form of a Latin cross. The total length of the interior is 612 1-2 feet; transept, 446 1-2 feet; height of nave, 152 1-2 feet; diameter of cupola, 193 feet; height of dome from pavement to top of cross, 448 feet. The great bell alone, without the hammer or clapper, weighs 18,600 pounds, or over nine and a quarter tons. The foundation was laid in 1450 A. D. Forty-three popes lived and died during the time the work was in progress. It was dedicated in the year 1826, but not entirely finished until the year 1880. The cost, in round numbers, is set down at \$70,000,000.

Distribution of Seeds.

Mr. Darwin found that the small portions of earth attaching to the feet of migrating birds contained seed.

Nine grains of earth on the leg of the woodcock contained a seed of the toad rush. From six and a half ounces of earth rolled into a ball and adhering to the leg of a wounded partridge he raised eighty-two separate plants of five species. Migrating birds often frequent the edges of ponds ere their departure, and in six and three-quarter ounces of such mud he raised under glass 537 plants. Seeds furnished with crowns, hooks, or prickles, readily stick to the plumage of birds, which all such birds, and especially such wanderers as the albatross, might carry long distances.

Applying these facts to the case of the Azores, Mr. Wallace found that most of the Azorean flora are well adapted to be carried by the methods just suggested—45 of the 439 flowering plants belonging to genera that have either pappus or winged seeds, 65 to such as have minute seeds, 30 to those with fleshy fruits which are greedily eaten by birds, some have hispid seeds, and 84 are glumaceous plants well suited to conveyance by winds and currents. The only trees and shrubs of this isolated group are bearers of small berries, such as the Portugal laurel, myrtle, laurustinus, and elder, while those with heavy berries, which could not be conveyed by the means suggested—oaks, chestnuts, hazels, apples, beeches, alders, firs—are absent, common as they are in Europe. The character of the flora is that of the south-western peninsula of Europe, and, if we assume that one-half of its species is indigenous, the other introduced by European settlers, there is still a rich and varied flora which Mr. Wallace thinks has recently been carried over 900 miles of ocean by the means just indicated.

There is probably no better example of ocean migration than that offered by the Azores, and it is believed and that 900 miles do not form the limit of the distance that the phenomena in question are still in progress, to which this same ocean carriage of plants extends.—*Edinburgh Review*.

A Rival of the Virginia Natural Bridge.

High up in the crest of the mountains on the Birmingham, Sheffield, and Tennessee River railroad there is

to be found one of Nature's wonders. It is a natural bridge, as complete, as perfect, as symmetrical, and, in some essentials, more remarkable than the great natural bridge of Virginia.

The bridge lies between the stations of Lynn and Delmar. It is about fifty-eight miles from Sheffield and twenty-nine miles from Jasper. Its length from abutment to abutment is 175 feet. Its width is 25 feet, and the thickness ranges from 4 to 6 feet. It is of pure sandstone, and has no doubt stood the climate changes of ages. Leaning over the bridge you see in the ravine which it spans, some sixty feet below, the shimmer and sparkle of many springs of clear, limpid water, which bubble from the sandstone soil, and joining flow down the ravine. A singular feature is a subdivision or smaller bridge, constructed on the same pattern, perhaps even more perfect lines, which leads from one side of the bridge proper.—*Tuscumbia North Alabamian*.

A Safe Name.

In the year 1664, on the 5th day of December, the English ship *Menai* was crossing the Straits and capsized in a gale. Of the eighty-one passengers on board but one was saved. His name was Hugh Williams. On the same day, in the year 1785, a pleasure schooner was wrecked on the Isle of Man. There were sixty persons in the boat, among them one Hugh Williams and his family. Of the three score none but old Hugh Williams survived the shock. On the 5th day of August, 1820, a picnicing party on the Thames was run down by a coal barge. There were twenty-five of the picnickers, mostly children under 12 years of age. Little Hugh Williams, a visitor from Liverpool, only 5 years old, was the only one that returned to tell the tale. Now comes the most singular part of this singular story: On the 19th of August, in the year of our Lord 1889, a Leeds coal barge, with nine men, foundered. Two of them, both Hugh Williams, an uncle and nephew, were rescued by some fishermen, and were the only men of the crew who lived to tell of the calamity. These are facts which can be substantiated.—*Leeds Mercury*.

Odd Items.

The longest item of news ever telegraphed to a newspaper was the entire New Testament as revised, which was sent from New York to the *Chicago Tribune* for May 22, 1882. That issue of the *Tribune* comprised twenty pages, sixteen of which were taken up by the New Testament.

Burls, used in making veneers with remarkable eccentricities of grain, are excrescences that grow upon various trees, such as the walnut, rosewood, mahogany, oak, and ash. They weigh from 1,000 to 6,000 pounds, and the largest and best come from Persia and Circassia, and cost in the rough from fifteen to forty cents a pound.

There are in London 65 theatres and about 500 music halls, providing entertainment for 325,000 people every night, or 100,000,000 in the course of a year.

The multiplication of 987,654,321 by 45 gives 44,444,444,445. Reversing the order and multiplying 123,456,789 by 45 a result equally odd is obtained—5,555,555,505.

"Paradise," by Tintoretto, is the largest painting in the world. It is eighty-four feet wide, thirty-three and a half feet high, and is now in the Doge's palace, Venice.

A recent discussion about the height of trees in the forests of Victoria brings from the government botanist the statement that he has seen one 525 feet high. The chief inspector of forests measured a fallen one that was 485 feet long.

The following is the entire list of wedding anniversaries: First anniversary, iron; fifth, wooden; tenth, tin; fifteenth, crystal; twentieth, china; twenty-fifth, silver; thirtieth, cotton; thirty-fifth, linen; fortieth, woollen; forty-fifth, silk; fiftieth, golden; seventy-fifth, diamond.

Here is a way to tell how fast you are traveling in a railway car: Every time the car passes over a rail joint there is a distinct click. Count the number of these clicks in twenty seconds and you have the number of miles the train is going per hour. This is a simple matter of arithmetic, as the length of the rails is uniform.

Shaving was introduced among the Romans about B. C.

300. Pliny, says Scipio Africanus, was the first Roman who shaved every day. Subsequently the first day of shaving was regarded by the Romans as the entrance upon manhood, and celebrated with great festivities.

Ancient Marriage Customs.

According to *The Cleveland Commercial Gazette*, the Hebrews had a beautiful and elevated idea of the marriage relation; the Greeks had not. Sparta cared nothing for the sanctity of marriage, and it was considered customary and reputable for men to give their wives over to their friends. Aristotle speaks of men buying wives from one another. Homer refers to the fact that the father was the owner of the child until she was beyond his control, and was paid for her in cattle, and this was called cattle finding. A Trojan ally, who was slain by Agamemnon, had given 100 cattle to obtain a wife, and then promised 1,000 head of sheep and goats besides. If the wife proved unfaithful, the husband could demand back the price. Under the Roman law a dower had to go with the wife.

Affinity and consanguinity were formerly in some countries greater objections to marriage than now. Gregory forbade the marriage of cousins. The Church of England does not forbid such marriages. Some of our states do and some do not. The romantic Cleopatra was a daughter of a brother and sister, and she wedded her younger brother, according to the custom of the Ptolemies. Many authorities claim that marriage to cousins is not detrimental where there have not been such marriages in the family before.

The marriage ceremony has differed in all ages. Among the ancient Hebrews marriage began with the betrothal, but no formality was required. By His teaching Christ became a legislator on this subject, and ennobled the relation more than it had ever been in the world's history.

Terms Used by Dressmakers.

Some of the phrases used in dressmaking are perfect Greek to the unknowing, so I add a short list of the words and their meanings. An apron is any sort

of a draped skirt; a tablier is a flat undraped skirt front; a full back means a straight back to the skirt gathered in two or more rows at the top; a panel is a straight piece for the front or sides, set in between a trimming of some kind to convey the idea of an inlay; a Spanish flounce is one reaching from the knees down, and gathered to form an erect ruffle. Knife plaits are very narrow side plaits, and accordion plaits are still narrower and pressed in shape by machinery; kilt plaits are those turned one way, and box plaits have a fold to the right side and one to the left; double and triple box plaits have two or three folds on either side; a "kilt" means a skirt entirely of kilt plaits. A "drop" skirt is one of the dress material made up independent of the lining, and then hung or dropped over it from the same belt. A border is any trimming put on the edge or just above it. Armure silk has a bird's-eye or diaper weave; faille Française has a soft cord, moiré has water waves over its surface, tricotine is sometimes called armure surah from its lines of bird's-eye weaving; surah has almost invisible cords and is very soft.—*Ladies' Home Journal*.

The Phonograph Foretold.

In the realm of imagination a very curious forecast may be found in Cyrano de Bergerac's "Voyage to the Moon," the book from which Swift did not disdain to borrow ideas. Cyrano's imaginary traveler tells of a wonderful book presented to him by a lunar inhabitant, a book with neither leaves nor letters, a book made wholly for the ears and not the eyes, "so that when anybody has a mind to read it he winds up that machine with a great many little springs, then he turns the hand to the chapter which he desires, and straight as from the mouth of man, or a musical instrument, proceed all the distinct and different sounds which all the lunar grandees make use of for expressing their thoughts instead of language."

In No. 254 of *The Tattler* Sir Richard Steele pretends to have come in possession of an unpublished manuscript by Sir John Mandeville, which gives some account, in his usual veracious manner, "of the freezing and thawing of several short speeches in Nova

Zembla." "I need not inform my readers," adds Sir Richard, "that the author of 'Hudibras' alludes to this strange quality in that cold climate, when, speaking of abstracted notions, clothed in a visible shape, he adds that simile:

" 'Like words congealed in northern air.' "

Mandeville's pretended story tells how the weather was so cold that he and his companions on shipboard found themselves deprived of the benefit of speech—their words froze in the air before they could reach the ears of the person to whom they were spoken. This distressing state of affairs lasted for three weeks. At length a thaw set in. "Our cabin was immediately filled with a dry, clattering sound, which I afterward found to be the crackling of consonants that broke above our heads, and were often mixed with a gentle hissing, which I imputed to the letters that comes so frequently in the English language.

"I soon after felt a breeze of whispers rushing by my ear, for those being of a soft and gentle substance immediately liquefied in the warm wind that blew across our cabin. These were soon followed by syllables and short words, and at length by entire sentences, that melted sooner or later, as they were more or less congealed; so that we now heard everything that had been spoken during the whole three weeks that we had been silent—if I may use that expression. My reader will easily imagine how the whole crew was amazed to hear every man talking and see no man opening his mouth."

Big Trees of California.

The "big trees" are among the most sublime of the natural wonders of the world. One who has never seen them can have no conception of their immensity. The largest of them are over 30 feet in diameter 10 feet from the ground, and the tallest are over 300 feet high. The principal ones in the Yosemite park have distinctive titles or names.

"The Fallen Monarch" was one of the grandest in the grove. As it now lies prostrate upon the earth, its diameter averages over twenty feet for more than a

hundred feet of its length. The top and part of the butt end have been destroyed by fire. How long the tree has lain there is unknown; it may have been there for more than a thousand years. The wood of the "big trees" is a species of cedar, and it is well nigh imperishable in atmospheric influences. Fire, however, has been the great destroying element in those wonderful relics of the past.

You climb to the crest of the "Fallen Monarch" by the aid of a ladder of some ten rungs. You can have no just conception of the immensity of the tree until you walk along its mighty back for over a hundred feet.

Near by are some more wonders. I give your readers some idea of some of them. "The General Grant" tree is not far off, a huge and grim specimen, looking as stern as the great warrior ever appeared. There is one known as "The Grizzly Giant," a monster 27 feet in diameter, 9 feet from the ground. At the height of just 100 feet the first limb comes out; that limb is 6 feet in diameter. This tree gives you a deep sense of awe as you gaze on its sublime yet grizzly aspect.

Within close walking distance is "The Telescope Tree." This is about 100 feet high, the top of it above that height having been destroyed by fire. This tree is a hollow tube. From the base you look up through this tube into the deep skies above. You can ride on horseback into the opening below.

Not far away is another hollow monster prostrate on the earth. You can ride in at the lower entrance, and go 100 feet, and out at a knot hole.

The most conspicuous and most celebrated of the trees is one that stands directly astride of the broad avenue made for driving through the park. The avenue, a highway, makes directly towards this tree, and an opening for the road bed is cut directly through the heart of the very tree itself. You drive right in under the archway of solid wood, and the driver stops, the great stage and four horses all covered by the sheltering tree; and there is, furthermore, ten feet of solid wall on either side of the wheels of the coach. The

tree is about thirty feet in diameter at the height of the stage top.—*Atlanta American*.

Proverbs of the Scotch.

- A hunger and a burst.
- A gi'en piece is soon eaten.
- A begun turn is half ended.
- After a storm comes a calm.
- A friend's dinner soon dished.
- A black hen lays a white egg.
- Ane ne'er tines by doing gude.
- A hasty man never wanted wae.
- A gude cause makes a strong arm.
- A green Yule makes a fat kirk-yard.
- An ill shearer never got a gude heuk.
- A bit is often better gi'en than eaten.
- A fidging mare should be well girded.
- A greedy e'e ne'er gat a gude pennyworth.
- A man's weel or wae as he thinks himself sae.
- An ilka day braw makes a Sabbath day daw.
- Ane cannot wive and thrive baith in ae year.
- A handfu' o' trade is worth a gowpen o' gowd.
- A gi'en horse shouldna be looked i' the mouth.
- Affront your friend in daffin' and tine him in earnest.
- An inch o' gude fortune is worth a fathom o' forecast.
- A kiss and a drink of water mak but a poor breakfast.
- Ane may lo'e haggis, that wadna hae the bag thrown in his teeth.
- An ill wife and a new kindled candle should hae their heads hadden down.

How they were Named.

January is of Latin origin, from the word *Januarius*, named by the ancient Romans in honor of their so-called "god," *Janus*, to whom the season of the year was sacred.

February comes from the Latin word *Februarius*, derived from *februm*, which, in the Sabine language, meant a "purgative;" hence comes the noun *Februara*, which

signified the Roman festival of lustration and expiation.

March is named in honor of Mars, the Roman god of war.

April derived its name from the Latin, *Aprilis*, and that from *Aperire*, which means to open.

May is a name, the origin of which comes from the Romans, in honor of *Maia*, the mother of Mercury and daughter of *Atlas*.

June is a name that all will readily think of when they read the history of the goddess *Juno*. In this month, she seemed, from all accounts, to be greatly worshipped.

July is in honor of the great Roman, *Caius Julius Cæsar*, who was born at this season of the year.

August was named in honor of the great Roman emperor, *Augustus Cæsar*.

September was the seventh month of the Roman year, as they commenced with March, and consequently derived its name from the Latin word *septem*, meaning seven.

October being the eighth month of the year, derives its name from *octo*, meaning eight.

November is from *novem*, meaning nine.

December is from the Latin word *decem*, ten, it being the tenth month of the Roman year.

Humming Birds.

Humming birds are confined to the American continent, including the West Indies. Although nearly tropical in their distribution, some few hardy species extend upwards on the slopes of the Great Andes to the very regions of eternal snow. There is now no doubt that they are insect eaters, although they also use very largely the nectar flowers. There are nearly 400 species of these "jewels of ornithology" known to the naturalist. Mr. Gosse, in writing of the *Vervain* humming bird, which is found in Jamaica, says:—"I have sometimes watched, with much delight, the evolutions of this little species at the *moringa* tree. When only one is present, he pursues the round of the blossoms soberly enough, sucking as he goes, and now and

anon sitting quietly on a twig. But if two are about the tree, one will fly off, and suspending himself in the air a few yards distant, the other presently shoots off to him, and then, without touching each other, they mount upwards, with a strong rustling of wings, perhaps for 500 feet. Then they separate, and each shoots diagonally towards the ground, like a ball from a rifle, and, wheeling round, comes up to the blossoms again, and sucks and sucks as if it had not moved away at all."

Quarrying Onyx.

Mexican onyx is a form of stalagmite and its colors are formed of oxides of metals in the earth over the caves through which calcareous water passes. Gold is represented by purple, silver by yellow, iron by red, copper by green, and arsenic and zinc by white. Volcanic eruptions and earthquakes have almost destroyed the caves in which onyx exists, and the native Indians who mine it have to cut through masses of ruins. Blocks of the material are quarried in a primitive way, in order not to shatter the substance. Deep round holes are drilled by hand on a line. In each hole is inserted a snug fitting piece of wood, which has been grooved from end to end. Hot water is poured into the grooves at night. This swells the wood, and the block is split along the line without damage. The natives then saw the block into slabs and polish the surface by hand. Each piece is transparent, and when placed between the eyes and a strong light presents a remarkably beautiful effect in form and color.

Astrology.

There are four general departments in astrology—nativities, or the art of foretelling from a study of the map of the heavens at the moment of birth the general character and destiny of the questioner; mundane matters, or foretelling by the map of the heavens at certain stated times the fate of nations and races, such as wars, pestilences, floods, and conflagrations; weather prophesying, or predicting from the mutual aspects of the sun, moon, and planets, what the weather will be

at certain times and places; and horary astrology, the art of predicting from a map of the heavens at the time of anxiety or question the result of any business or other matter of interest to the questioner.

It is a fundamental doctrine in astrology that the sun, moon, and planets each exercise a distinct, peculiar, and immediate influence upon man. This influence culminates at birth, and the ruling planet (which is called "the lord of the nativity") at that time exercises such power over the child as to stamp its character upon the entire life.

This astral influence extends not only to the whole life in general, but likewise to all its particulars of feelings, thoughts, and actions in minutiae. This astral influence determines man's physical appearance, intellectual peculiarities, moral character, length of years, rank, fortune, and friends—in short, determines his life.

To "cast a nativity," it was necessary for the astrologer to know the exact instant of birth. Then he drew a horoscope—that is, made a map of the heavens at that instant, as accurately as his knowledge of astronomy would permit, and studied the aspect of the planets.

The zodiac is divided into twelve signs of 30 degs. each, and from the conjunction of the planets in these signs and from the various positions of other planets they augured good or ill for the babe.

Much, of course, depended upon the skill of the astrologer, and a great deal upon his knowledge of human nature.

It is safe to say that rich people generally got good aspects. But there are certain rules which all astrologers have always claimed to be infallible.

The moon rules the first four years of life, and during this period all other indications must be interpreted with the fair "goddess of the night" as the dominator of the activities and results.

Her subjects—that is, those born when the moon is in the ascendant—are pale and serene; and, while full in form and gentle in disposition, they are apt to be lazy, or at least rather inefficient. They are frequently noticeable for their large languid eyes and receding chin.

The moon has much to do with one's natural pro-

pensities, and so her position in the zodiac and her aspect with the other powers should be fully and accurately determined and carefully studied.

Good aspect with Saturn promises legacies, gains and honors through the favor or death of old people; bad aspects with Saturn, on the contrary, presage injuries or loss from the same kind of people.

The moon in favorable aspect with Jupiter promises wealth; with Mars, success in all contests, competitions, constructions, or manual operations which require courage, skill and responsibility; with Venus, many and devoted friends among the opposite sex; with Mercury, great good fortune through one's own superior mental attainments and talent.

Evil aspect with Mars presages boldness, rashness and discomfort from defeat by stronger opposing forces; and with Mercury, it announces dishonesty and untruthfulness.

Strange to say, the sun, which is the most glorious of all the heavenly bodies, is less noticed in the horoscope than the moon.

The astrologer gives as a reason for this apparent neglect that the sun, although the source of all life and power, dispenses his influence through his lieutenants—the planets.

It is also noticeable that Uranus and Neptune have no place in ancient astrology, and very little in the modern art. The reason is that these two planets were unknown until modern times. It is dreadful to think how much malign influence these two planets may have exerted in past ages, and no one a whit wiser.

A Lake near Mount Kilmanjaro.

“We were now in a place where it was next to impossible to get about. It was the wildest piece of lava country I ever attempted to cross. We had stumbled into a nest of small extinct craters, between which the lava had been tumultuously heaved and tossed about in the process of cooling. Up and down we scrambled, wondering as we reached the bottom of each crater, what new revelations of ruggedness would be presented. At length we found ourselves standing on the rim of a

crater, in the bottom of which nestled a lovely little lake, fringed with *Borassus* palms.

"After some search we found a pathway down, and formed camp on the margin of the lake. We found its waters cool and marvelously clear, and swarming with fish so tame that they could almost be caught by the hand. They were of the perch family with greenish scales on back, and silvery belly, the largest ones caught weighing eight pounds. We distributed fish-hooks to the men as far as we had them; the others made rude hooks of bent wire. They tied these to pieces of string, baited with meat, and scattering themselves along the shores, with this rude tackle, wooed the finny strangers so successfully that, in a half-hour after forming camp, they must have caught not less than a ton of fish, or twenty pounds apiece. In a little while our camp was like a fish-market—an African Billingsgate. It was the biggest bonanza our fish-loving porters had struck for many a day. How they revelled in their abundance of 'sumaki' on that memorable afternoon!

"But the most interesting discovery of all was yet to be made. I was sitting on the overhanging branch of a tree having rare sport with the fish. I could drop my line down into the clear depths beneath my swinging feet, and see every motion of the finny beauties as in the tank of an aquarium. The rush for the bait; the consternation of the successful fellow as he felt the prick of the hook and found himself a captive; the frantic struggle, the strong steady pull for liberty as I paid him out the line; the bringing him gradually to the goal—all was visible as through a pane of glass.

"What a fisherman's paradise—but look! Heavens! what is that monstrous object, walking on the smooth gravelly bottom, twenty feet below the surface? What is it? Almost beneath my perch a huge, flat-bodied, reddish-colored, animal strolled leisurely along the floor of the lake. The men have seen it too and excitedly shout, 'Kiboko, bwana, kiboko!'

"Ah; to be sure, 'Kiboko' (a hippopotamus), what else could it be; yet so distorted and flattened by the water as to present a truly startling appearance. Later in the day we discovered a school of about twenty of

these hippo's, of which we shot two, and experienced much pleasure in watching the huge amphibians walk along the bottom of the little crater lake, now and then rising to the surface to breathe. Our discovery was not important, perhaps, in a geographical sense; but of all the marvelous natural phenomena seen by the writer, in the course of extensive wanderings in four continents, commend me to this little gem of a crater lake on the borders of Masai-land, and to its school of hippopotami to be seen strolling about at the bottom of its limpid depths, as cows in a meadow."—THOMAS STEVENS!

Queer Origins of Words.

"Oh, dear!" is equivalent to *O dio mio*, "Oh, my God!"

"Thimble" is "thumb bell" and "nostril" is strictly a "nose drill."

"Varlet" is the same word as "valet" and each is an offshoot of the feudal "vassal."

"Slav" is not the slave of the old etymologists, but in reality a man of noble lineage.

"Rotten Row," the famous London street, recalls *la route du roi* (the king's passageway).

"Dandelion" is *dent de lion* (the lion's tooth), and "vinegar" was once *vin aigre* (sour wine).

Madame is "my lady," and sir has been extracted from the Latin "senior" through the French.

"Biscuit" keeps alive the Latin *bis coctus* (twice cooked) and a "verdict" is simply a *vere dictum* (true saying).

Kings in the earliest days were merely the "fathers of families," and the word is derived from the same source as "kin."

A "villain," before the stigma of disgrace was attached to him, was a laborer on the villa of a Roman country gentleman.

An earl was an "elder" in the primitive society, while pope is the same as "papa," and czar and kaiser are both "Cæsars."

Queen at first meant "wife" or "mother," and a survival of its early signification exists in "quean," used now only in a bad sense.

Quelquechose we have jumbled into "kickshaws," and our "gewgaws" represent the *jouxjoux*, or playthings of former French children.

"Jimminy" is a reminiscence of the classical adjuration, *O gemini*, used by the Romans when they called upon the twins Castor and Pollux to help them.

Redingote is "riding coat," borrowed by the French from our language and returned to us in a new guise with the dressmaker's stamp of approval.

"Huzzy" was once a respectable housewife; a "knave" was simply a boy, the German *knabe* of today, and a "caitiff" was in the first place merely a captive.

Similarly "slop" shop has nothing to do with slops, as some amateur etymologists have asserted, but means clothing shop, the word coming from the Icelandic *slopper*, a coat.

"Roamers" are people who go to Rome to see the pope, and "saunterers" was the appellation bestowed on the religious enthusiasts who made the pilgrimage to the *sainte terre*—the Holy Land.

Lord is the Anglo-Saxon *hlaford* (loaf distributor). The Latin term for "lord" (*dominus*) has given us "domine," the old term for preacher, and the same root is found in "dame" and "tame."

A "country" dance is a *contra* (opposite) dance, and the frequently mistaken etymology of this word calls to mind the fact that a "tuberose" has nothing of the rose about it, being simply a tuberous plant.

When a man says he does not care a "curse" he means that he does not care a cress, the lingual *metathesis* here being similar to that which makes "gooseberries" out of gorseberries, "axe" out of ask, and "wapse" out of wasp.

Indexing Extraordinary.

A work on the "Origin of the Human Reason," by St. George Mivart, has been subjected to some very absurd indexing. *The London Daily News* gives a sample as follows:

Mr. Mivart had referred on page 136 of his book to some articulate utterances of a certain parrot which

sounded remarkably like replies to questions. This anecdote gives the indexer his great opportunity. He indexes this twice under A, and thereafter under twelve other letters with variations of perfectly fascinating ingenuity thus:

- Absurd tale about a cockatoo, 136.
- Anecdote, absurd one, about a cockatoo, 136.
- Bathos and a cockatoo, 136.
- Cockatoo, absurd tale concerning one, 136.
- Discourse held with a cockatoo, 136.
- Incredibly absurd tale of a cockatoo, 136.
- Invalid cockatoo, absurd tale about, 136.
- Mr. R—— and tale about a cockatoo, 136.
- Preposterous tale about a cockatoo, 136.
- Questions answered by a cockatoo, 136.
- R——, Mr., and tale about a cockatoo, 136.
- Rational cockatoo as asserted, 136.
- Tale about a rational cockatoo, as asserted, 136.
- Very absurd tale about a cockatoo, 136.
- Wonderfully foolish tale about a cockatoo, 136.

This is all the more astonishing as the book is a very dull one.

Our Tell Tale Eyes.

Black (dark brown) are a sign of passionate ardor in love.

Dark blue, or violet, denote great affection and purity, but not much intellectuality.

Clear, light blue, with calm, steadfast glance, denote cheerfulness, good temper, constancy.

Pale blue, or steel colored, with shifting motion of eyelids and pupils, denote deceitfulness and selfishness.

Russet brown without yellow denote an affectionate disposition, sweet and gentle. The darker the brown, the more ardent the passion.

Blue, with greenish tints, are not so strongly indicative of these traits, but a slight propensity to greenish tints in eyes of any color is a sign of wisdom and courage.

Grey, or greenish grey, with orange and blue shades and ever varying tints, are the most intellectual, and are indicative of the impulsive, impressionable tempera-

ment—the mixture of the sanguine and bilious, which produces poetic and artistic natures.

Light brown or yellow denote inconstancy; green, deceit or coquetry. Eyes of no particular color (only some feeble shades of blue or grey, dull, expressionless, dead looking), belong to the lymphatic temperament, and denote a listless, feeble disposition, and a cold, selfish nature.

Big Results from Small Hints.

Mezzotinto owed its invention to the simple accident of the gun barrel of a sentry becoming rusted with dew.

The swaying to and fro of a chandelier in a cathedral suggested to Galileo the application of the pendulum.

An alchemist, while seeking to discover a mixture of earths that would make the most durable crucibles, one day found that he had made porcelain.

A watchmaker's apprentice discovered the power of lenses, as applied to the telescope. While holding spectacle glasses between his thumb and finger, he was startled at the suddenly enlarged appearance of a neighboring church spire.

The process of whitening sugar was discovered in a curious way. A hen that had gone through a clay puddle went with her muddy feet into a sugar house. She left her tracks on a pile of sugar. It was noticed that wherever her tracks were the sugar was whitened. Experiments were instituted, and the result was that wet clay came to be used in refining sugar.

The composition of which printing rollers are made was discovered by a Salopian printer. Not being able to find the pelt ball, he inked the type with a piece of soft glue, which had fallen out of a glue pot. It was such an excellent substitute that, after mixing molasses with the glue, to give the mass proper consistency, the old pelt ball was entirely discarded.

The art of etching upon glass was discovered by a Nuremberg glass cutter. By accident a few drops of aqua fortis fell upon his spectacles. He noticed that the glass became corroded and softened where the acid had touched it. He drew figures upon glass with

the varnish, applied the corroding fluid, and then cut away the glass around the drawing. When the varnish was removed the figure appeared raised from a dark ground.

English and Mahomedan Marriage Laws.

I must say that I think that the Mahomedan law concerning marriage and the rights of women is more reasonable than the English law. Marriage, according to English law, is indissoluble, unless there be exposed in open court a scandal of such a nature as to ruin the husband or wife for life in public estimation. There is no sound reason why the parties to a contract should not be allowed to agree to break it. The common tie of affection in children, and the long habit of living together, which in itself is sufficient to produce affection, is a sufficient check on any frequent resort to divorce when the woman has passed the best years of her life and could not easily find a new home. The best proof of this is that the Mahomedan law sanctions such divorce, yet it happens in very rare cases. Marriage is dissoluble by the Mahomedan law, if both the parties agree, but the natural check has been supplemented by a reasonable artificial one, that is, if the proposal for divorce emanate from the husband, he has to pay the wife her "Mahir"—a sum of money fixed at the time of marriage, and sufficient to protect her from penury in case of divorce. If the proposal emanate from the wife she must forego her "Mahir." Again, by the Mahomedan law, the wife is absolute owner of her own property, she can enter into contracts and buy and sell on her own account. The law of England is not so liberal.—From the "Diary of Nawáb Mehdi Hassan, Chief Justice of Hyderabad."

Lost Peruvian Arts.

"Copper was most extensively used in ornamenting the person and for household utensils, but its principal use was for battle axes, idols and tools. I found a copper chisel in a mound near Callao which proved to be tempered to the hardness of steel. It was tested on

a railroad rail of iron and could have cut it in two. The tempering of copper is a lost art, however, and was known to the Incas only. Humboldt analyzed one of these chisels and found it to contain 94 per cent copper and 6 per cent silica. Despite the discovery of these component parts all experiments have failed to reproduce a similar hardness. It is strange that the Incas knew nothing of iron, as it abounds all over Peru. Glass was likewise unknown to them. They used quartz crystal in surgery, as the trephined skulls I have found showed traces of that material. They made looking glasses by polishing stone containing pyrites of iron. Lead was used for sinkers on their fish nets and for personal adornment. Their cloths, made of vicuna wool (an animal of the llama family running wild and hunted), is exquisitely fine and of a yellow color. Their prints represented animals and everything pertaining to nature. In the graves I found also the mummies of children, birds, weasels, rats, llamas and the dog original with the Incas. The children and animals bore evidence of having been buried alive."

Mr. Kiefer told me he had dug up 2,000 graves and handled 5,000 skulls. Everything he found had been buried at least three hundred and sixty-five years, but exactly how long no one could tell.—*New York Herald*.

Origin of Mathematical Signs.

The radical sign was derived from the initial letter of the word "radix."

The sign of equality was first used in 1557 by a sharp mathematician, who substituted it to avoid repeating "equal to."

The multiplication sign was obtained by changing the plus sign into the letter X. This was done because multiplication is but a shorter form of addition.

Division was formerly indicated by placing the dividend above a horizontal line and the divisor below. In order to save space in printing the dividend was placed to the left and the divisor to the right, with a simple dot in place of each.

The sign of subtraction was derived from the word "minus." The word was first contracted into m n s,

with a horizontal line above to indicate the contraction, then at last the letters were omitted altogether, leaving the short line —.

The sign of addition is derived from the initial letter of the word "plus." In making the capital letter it was made more and more carelessly until the top part of the p was placed near the centre, hence the plus sign was finally reached.

A Singular Canal.

The most remarkable canal in the world is the one between Worsley and St. Helen's in the north of England. It is sixteen miles long and underground from end to end. In Lancashire the coal mines are very extensive, half the country being undermined, and many years ago the Duke of Bridgewater's managers thought they could save money by transporting the coal underground instead of on the surface. So the canal was constructed and the mines connected and drained at the same time. Ordinary canal boats are used, but the power is furnished by men. On the roof of the tunnel arch are cross pieces, and the men who do the work of propulsion lie on their backs on the coal and push with their feet against the cross bars on the roof.

Paths of Tornadoes.

Professor J. P. Finlay gives the width of the path of destruction in tornadoes, as determined from the records of eighty-eight years, at from 10 to 10,560 feet, the average being 1369 feet. The length of the tornado varies from 300 yards to about 200 miles, the average being 24.79 miles. The velocity of progression of the tornado cloud varies from 7 to 100 miles an hour, the average being 44.11 miles. These extremes may often occur in different portions of the track of a single tornado. The shortest time occupied by the tornado cloud in passing a given point varies from "an instant" to about twenty minutes, the average being seventy-four seconds.

Amen.

What does the word "amen" signify? It is a Hebrew word signifying "yes," "truly." In Jewish syna-

gogues the amen is pronounced by the congregation at the conclusion of the benediction. Among the early Christians the prayer offered by the presbyter was concluded by the word amen, uttered by the congregation. Justin Martyr is the earliest of the fathers who alludes to the use of the response? According to Tertullian, none but the faithful were permitted to join in the response. A somewhat noisy and irreverent practice prevailed in the celebration of the Lord's supper until the sixth century, after which it was discontinued. "Upon the reception both of the bread and of the wine, each person uttered a loud 'amen;' and at the close of the consecration by the priest, all joined in shouting a loud 'amen.'" The same custom was observed at baptism, when the sponsors and witnesses responded vehemently. In the Greek church the amen was pronounced after the name of each person of the Trinity; and at the close of the baptismal formula the people responded. At the conclusion of prayer it signifies (according to the English Church catechism) so be it; after the repetition of the creed, so it is.

How Some Animals Eat.

The sturgeon is toothless and draws in its food by suction.

Spiders chew their food with horny jaws, which are sharp enough to give quite a nip.

The jelly fish absorbs its food by wrapping itself around the object which it seeks to make its own.

The tapeworm has neither mouth nor stomach, but just lays along and absorbs the already digested food through its skin.

The butterfly pumps nectar into itself through a tube, and bees and flies suck up their food with a long tongue or proboscis.

The woodpecker has a three barbed tongue like a Fijian's spear, with which it draws out the worm which it has excited by its tapping.

The starfish fastens itself to the body it wishes to feed on, turns its stomach inside out, and enwraps its prey with this useful organ.

The cuttlefish, which among other strange things al-

ways walks with its head downward, does not chew its food at all, but masticates with its gizzard.

Lobsters masticate their food with their horny jaws, but they have also sets of teeth in their stomachs, where they complete the work of chewing.

The caterpillar feeds with two saw-edged jaws, working transversely, and uses them to such good advantage that he eats three or four times his own weight every day.

The king or horseshoe crab chews its food with its legs. This is an actual fact, the little animal grinding its morsels between its thighs before it passes them over to its mouth.

The sea urchin has five teeth in five jaws—one in each jaw—all the five immediately surrounding the stomach. The jaws have a peculiar centralized motion, all turning inward and downward, so that they also act as feeders.

The carp's teeth are set back on the pharynx, so that it may be literally said to masticate its food in its throat. The carp, too, is about the only cud-chewing fish, the coarsely swallowed food being forced up to these throat teeth for complete mastication.

The ray, or skate, has a mouth set transversely across its head, the jaws working with a rolling motion like two hands set back to back. In the jaws are three rows of flat teeth set like a mosaic pavement, and between these rolling jaws the fish crushes oysters and other mollusks like so many nuts.

The Races of Mankind.

M. de Quatrefages, the leading French ethnologist, in presenting the second part of his "Introduction to the Study of the Human Races" to the Academy of Sciences, has given an interesting summary of his general conclusions with regard to the origin and distribution of mankind. Neglecting the minor differences, he estimates that there are no fewer than seventy-two distinct races in the human species. All these descend or branch off from three fundamental types—the black, the yellow, and the white—which had their origin at the great central mass of northern Asia, which is thus

the cradle of mankind. Representatives of these different types and the races which sprung from them are still to be found there. The whites, according to M. de Quatrefages, appear to have originated on the west of the central mass, the yellow on the north, and the blacks on the south. The whites extended westward and northward, giving birth to three secondary types, the Finnish, the Semitic, and the Aryan, if we except the Allophytes, which form a separate group.

The area of distribution is continuous, as is that of the yellows, because of the extensive land surface of the Eurasian continent. The yellows spread eastward and crossed into America. The whites or yellows checked and blended with each other, producing many varieties of men. The blacks, or negro type, which originated on the south of the central mass, were forced by the nature of the continent, and probably by the attacks of the whites and yellows, to go south into Africa and east into the Indian Archipelago or Melanesia.—*London Times*.

Who can Read Franklin's Cipher?

Benjamin Franklin wrote from Passy, in 1781, a letter to M. Dumas. He said:—"I have just received a 14, 5, 3, 10, 28, 2, 76, 203, 66, 11, 12, 273, 50, 14, joining 76, 5, 42, 45, 16, 15, 424, 235, 19, 20, 69, 580, 11, 150, 27, 56, 35, 104, 652, 20, 675, 85, 79, 50, 63, 44, 22, 219, 17, 60, 29, 147, 136, 41, but this is not likely to afford 202, 55, 580, 10, 227, 613, 176, 373, 309, 4, 108, 40, 19, 97, 309, 17, 35, 90, 201, 100, 677." This has never been deciphered. The state department at Washington has no key to it. I submit it for the consideration of the whole world.—ELLIOTT SANDFORD in *New York World*.

A Tiny Volume.

The smallest book ever printed since type was invented is, perhaps, the microscopic edition of Dante's "Divine Comedy," which was exhibited at the Paris exposition of 1882. The volume of 500 pages was somewhat less than half-an-inch square. Two sheets of paper sufficed to contain all the 14,323 verses. The type in this little book was cast in 1834, but no complete book

had hitherto been turned out, the difficulties for composers and revisers being so arduous that no one would continue the work for any length of time.

Origin of Hackney Coachstands, 1634.

“I cannot omit to mention any new thing that comes up amongst us, tho’ never so trivial: Here is one Captain Baily; he hath been a sea captain, but now lives upon the land, about this city, where he tries experiments. He hath erected according to his ability some four hackney coaches, put his men in a livery, and appointed them to stand at the May-Pole in the Strand, giving them instruction at what rates to carry men into several parts of the town, where all day they may be had. Other hackney-men seeing this way, they flocked to the same place, and perform their journeys at the same rate; so that sometimes there is twenty of them together, which disperse up and down, that they and others are to be had everywhere as watermen are to be had by the waterside. Everybody is much pleased with it, for, whereas before, coaches could not be had but at great rates, now a man may have one much cheaper.”—“Strafford’s Letters and Despatches,” vol. i, p. 227.

The letter from which the above abstract is made, is dated April 1st, 1634.

The First London ’Bus.

It was in 1829 that the enterprising undertaker (Shillibeer) sent out the first London ’bus, which, according to a now defunct Dublin newspaper, *Saunders’ Newsletter*, “excited considerable notice, from the novel form of the carriage and the elegant manner in which it is fitted out. We apprehend it would be almost impossible to make it overturn, owing to the great width. It is drawn by three beautiful bays abreast, after the French fashion. It is a handsome machine.” It then describes how “the new vehicle, called *the omnibus*, commenced running this morning from Paddington to the City.” It started from the Yorkshire Stingo, and carried 22 passengers inside at a charge of a shilling

or sixpence according to distance. To carry 11 passengers on each side it must have been nearly double the length of the present form of vehicle, and of the size and appearance of one of the large three-horse Metropolitan Railway 'buses. An odd feature of the arrangement was that the day's newspaper was supplied for the convenience of the passengers! There must have been some fixed limit for the time of perusal, otherwise the gentleman who had it "in hand" might have continued his studies during the whole journey.—*Cornhill Magazine*.

Some Noted Dunces.

Isaac Newton gravitated in his school days always toward the bottom of his class.

Dr. Chalmers was expelled from the parish school of Anstruther as a dunce for whom there was no hope.

Adam Clark, who rose to be one of the most famous Methodist ministers, was pronounced by his father "a grievous dunce."

Sir David Wilkie, when at school, was one of the idlest and most eccentric of boys. He himself declares that he could draw before he could read, and paint before he could spell.

Charles J. Mathews, the distinguished actor, while relating the story of his life, tells of his education at Merchant Taylors' School. "I was a dunce," he says; "it is a fact; there is no disguising the truth."

Henry Ward Beecher, as we learn from his biography, was a dull boy. On Sunday it was usual in his father's family for the children to learn the catechism, but at this exercise Henry always broke down.

Walter Scott, while at Edinburgh University, gave little evidence of that genius which was to make him famous. "Dunce he is, and dunce he will remain," said Professor Dalzell of him who became the most distinguished of his students.

Charles Darwin, in his autobiography, tells us that he "had much zeal for subjects which interested him," which possibly could be said for the dullest boy that ever vexed a teacher's heart. It was the collective

opinion of Darwin's masters that a duller boy had never been within the school walls.

Robert Chambers, whose name will ever be held in esteem as a pioneer of cheap literature, for six weeks filled a situation in Mitchell Street, Leith. "From that place," he says, "I was discharged for no other reason that I can think of but that my employer thought me too stupid to be likely ever to do him any good."

Dr. Samuel Smiles, in his life of George Moore, tells us that at school the great philanthropist was considered dull. He was much fonder of bathing than of reading. Mr. Fisher, one of Moore's first employers, said he had had many a stupid blockhead from Cumberland, but George Moore was the greatest blockhead of them all.

Mr. Haggard was a pupil of Ipswich School, and as a boy he is described as a tall, lank youth, with a thick crop of unkempt hair, sharp features, prominent nose, and eyes which had rather a wild look about them. In his classes he never took a high place, and both his schoolmates and his masters looked on him as a rather stupid boy.

A Strange Country.

Australia is a country in which nature has established conditions unknown elsewhere, and where civilization must adapt itself to surroundings which it finds novel and strange. It is a country full of absurdities in animal, vegetable, and human life. Its native race, in point of intelligence and development of resources, is far below even the cave dwellers and the people of the stone age of Europe. Its animals perpetuate types which disappeared from every other part of the globe some millions of years ago. Its trees and plants are representative of species found elsewhere only in chalk and coal measures.

Hardly anything here has the character and quality of its relations in other lands. Although the trees and flowers are chiefly those of the temperate zone, the birds are, for the most part, of the tropics and flash the gorgeous colors of the parrot and the cockatoo through the dull foliage of the sad toned eucalyptus. The birds

have no song, and such notes as they possess seem like weird echoes from a period when reptiles were assuming wings and filling the tree tops with a strange jargon, before heard only in the swamps and fens. The flowers have no scent, while the leaves of every tree are full of odor. The trees cast no shade, since every leaf is set at edge against the sun, and shed, not their leaves, but their bark, which, stripping off in long scales, exposes the naked wood beneath, and adds to the ghostly effect which the forest already holds in the pallid hues of its foliage.—*Boston Journal*.

Will We Lose Our Teeth?

It will be a great thing to be a dentist about the year 3000 A. D. The scientists tell us that as man becomes more human he will lose his beastly adornments. First, the hair, next the eyesight and sense of smell, and, according to Professor Cope, at last he will become entirely toothless. Cooked food is said to be the cause of the jaw becoming weaker and smaller each generation. There is now no room left for the wisdom teeth, or the upper incisors; the wisdom teeth are retarded, often cause great pain and decay early. The second incisors put out at the sides of the gums, causing "tusks."

The same suppression has been observed in the outer pair of superior incisors. This is owing not only to a reduction in the size of the jaw, but to prolonged delay in the appearance of the teeth. In the same way men and the man-like apes have fewer teeth than the lower monkey. When this difference in dentition has been established, man may claim to be a new species apart from low savages as well as from high apes.—*St. Louis Republic*.

Race Track Superstitions.

Of all tips that which is known at the track as the nigger tip is the best.

The man who having bet detects himself singing before a race is doomed to lose. His only safeguard is hedging.

Money carried for three days in a man's shoe or a

woman's stocking is invested with absolute confidence in its winning powers.

Some men never back a horse except at odds of six to five or nine to five. They assert that they always win at those prices and lose at others.

Few betting men have the courage to wager their money after having seen a cross-eyed person. Such an occurrence is a hoodoo of the worst sort.

The appearance of a gray horse never fails to cause anxious search for the red haired girl. The combination will always be regarded as invincible.

When an accident occurs at the starting post, and a jockey finds it necessary to dismount, there is a great scramble among the superstitious to bet on his horse.

Many persons have an odd fancy for backing horses according to certain numbers on the program, but the reasoning and deductions of no two men are the same.

Sticking a pin through the program from back to front is a popular method of picking winners, and it is about as good a way as any in these degenerate times.

Personal contact with a hunchback brings good luck. Women have been seen to leave their seats in the grand stand and rush down to the lawn for the purpose of touching a hump on a dwarf's back.

Women who bet have their favorite messenger boys and will allow no others to place their commissions. "Oh, where is my lucky boy?" is the anxious inquiry that is heard over and over again. If the lucky boy fails to turn up there is no bet.

A speculator in doubt resorts to innumerable devices in his search for tips. If only two horses go to the post he probably flips a dime, heads for one, tails for the other, to decide which is the winner. If there are ten starters he writes their respective numbers on small bits of paper, shakes them in his two hands, presses the palms close together, opens them and blows the numbers away. The last one to leave his hand is the winner.—*Horse and Stable*.

The World's Most Powerful Tribunal.

The highest court of the United States holds a unique place in our form of government, and one not found

in any other governmental system. It wields a power greater than is exercised by any other judicial tribunal in the world. In no country of Europe or the east has any court authority to make or unmake the supreme law of the land, to limit the prerogatives of the sovereign, to control the powers of the legislature, to shape the form of government.

These functions are exercised by the supreme court of the United States. It holds a power above that of the chief magistrate of the nation, superior to that of congress, higher than that of any state, and equalled only by that which made or can amend the constitution. It can enlarge or limit the prerogatives of the president or the powers of congress. It can change the relations between the state and the nation. It can extend or restrict either the central power or state sovereignty. In short, it can make or unmake the constitutional law of the country. It can introduce radical changes into our form of government. Not only can the supreme court wield these vast powers, it has long done so, and may long continue to do so.—EATON S. DRONE in *Forum*.

Proving their Sanity.

According to a somewhat dubious tradition, the Greek dramatist, Sophocles, at the age of ninety, was accused of imbecility by his son Jophon. He rebutted the calumny by reciting before his judges, the Phratores, the magnificent passage in his tragedy of *Œdipus Coloneus*, which describes the arrival of Œdipus in the sacred forest of Colonna. Having thus vindicated his genius, he retired amid applause. In the seventeenth century, says Lelanne, the Abbe Cotin, having sold his property in return for a life annuity, was denounced by his relatives as out of his mind. In self-defence the Abbe invited the commissioners *de lunatico inquirendo* to come and hear him preach. They went, they listened, and decided in his favor.—*All the Year Round*.

What is Beauty?

A beautiful face, according to Rogers, was one that was arch and full of mirth.

Byron's beauty, the stock-in-trade beauty of his time and school, had glossy hair clustering over a bright, smooth brow, eyebrows like aerial bows, glowing cheeks and constant blushes—a sort of beautiful milk maid, of whom one would tire in a week.

Spenser is very explicit in his likes. His love, he said, ought to have eyes like sapphires, teeth like pearls, a forehead like ivory—this was before the advent of the Russian bang—hair like gold, and hands of silvery whiteness.

Shakespeare's beauties, it will be observed, always had very white skin. Give him a snow-white skin, smooth and alabaster-like skin, and he seemed to care for little else; yet the chances are that Miss Hathaway was freckled every summer.

Scott's heroines, who presumably represented his ideal, were all of the Byronic "Souvenir," "Book of Beauty" order, high in the forehead, dark in the eyelash, and generally soft and pensive.

Ben Jonson asked for a face marked by simplicity, flowing hair, and a sweet neglect.

Cowper insisted upon the damask cheek.

How, then, is the rule to be fixed? Shall we say that the lissome and featherweight Burmese is not beautiful, because to the Sandwich Islander enormous girth is the *sine quâ non* to belledom; or shall we say that the straight up and down waist of the Venus de Milo is disgusting because that of Mme. de Maintenon was like a wasp? What right have we to make odes to our mistress' eye-brow because it is arched, when Aladdin fell in love with that of the Princess Nouraddin because it was slanted; or how shall we complacently liken our sweetheart's teeth to a double row of pearls, when the Turkish poets sing praises to their beauties' betel-stained teeth, because they are like pomegranate seeds?

Inventions and their Birth.

The first really practical sewing machine was invented by Elias Howe of Cambridge, Mass., in 1841.

The electric light was first obtained by Sir Humphrey

Davy in 1843, but recent improvements by Edison and Brush have made its general use possible.

The telegraph was invented by Samuel F. B. Morse of Charlestown, Mass., in 1837, five years after he began experimenting. He obtained his first patent in 1840, and in 1843 congress appropriated \$30,000 for its development.

The steam engine was invented by James Watt, an instrument maker at the University of Glasgow, in 1763. In 1769 he patented his famous condenser, and in 1784 his parallel motion, throttle valve governor, and indicator, all of which are still used.

Railroads, with wooden rails, were first used in 1672 at collieries; cast iron rails were first used in 1738. An iron rail nailed to wooden sleepers was first used in 1776, and the present idea of rails and wheels adapted to each other was invented in 1789.

The first locomotive was built by Richard Trevithick in 1804, but the first locomotive after the modern idea was built by George Stephenson in 1829. The idea of the construction of a locomotive was given to the world by James Watt in 1769, and patented by him in 1784.

The steamboat, now indispensable to the navigation of rivers and lakes and for ocean travel, was invented by Robert Fulton, an American, who conceived the idea in 1793. He built the first vessel, the *Clermont*, in 1807, the first successful voyage being up the Hudson from New York to Albany.

The telephone, an invention for reproducing the human voice by the agency of electricity at long distances from the speaker, is due to the ingenuity of Elisha Gray of Chicago; Professor A. Graham Bell of Washington; Professor A. C. Dolbeare of Tufts College, Massachusetts, and Thomas A. Edison of Menlo Park, N. J.

The air brake was invented by Westinghouse, 1874; the torpedo, by Bushnell, 1777; watch, by Peter Hele, 1477; thermometer, by Drebbel, 1609; telescope, by Lippersheim, 1608; printing, by Gansfleisch, 1438; cotton gin, by Eli Whitney, 1793; microscope, by Jansen, 1590; lithography, by Senefelder, 1798; lightning rods, by Franklin, 1752; gunpowder, by Schwartz, 1320;

balloon, by Montgolfier, 1783; barometer, by Torricelli, 1643.—*Journal of Education.*

The Big Toed People.

The strangest of all the Indo-Chinese races, the ancient Gioa-Chi or Big Toed Race, is called in our geographies "The Anamese." This extraordinary people are about the ugliest and worst built of all our semi-civilized Asiatic cousins. They are much shorter than the Malays, darker skinned, with lower foreheads, less developed skull, a flatter nose, larger mouth, thicker lips, blackened teeth, gums often destroyed by the use of betel nut, prominent cheek and jaw bones, so that the face is lozenge shaped, short neck, shoulders sloping abruptly, and a see-sawing sort of gait when walking. But the most curious development of all is the big toe. It is large, broad, and flat; moreover, the distance between that member of the foot and the other toes is so great that the Chinese so long ago as 2357 B. C. gave them the name of Gioa-Chi, or the Big Toed Race.

This curious physical formation is such that it quite marks them from all other Asiatic peoples who walk barefooted; and, strange to say, that though more than forty centuries have passed since this peculiarity was first noticed by Chinese travelers, and in spite of frequent intermarriages with other races, the Anamese have transmitted, without the least perceptible modification, this formation of the foot to their descendants to-day; which facts, according to some ethnologists, serve to prove that the Anamese are not descended from the mingling of indigenous races, but rather that they have existed for an immense period of time as a distinct and peculiar race.

Whistling Jugs of Peru.

The silvadors or musical jugs found among the burial places of Peru are most ingenious specimens of handiwork. A silvio in the William S. Vaux collection of Philadelphia consists of two vases, whose bodies are joined one to the other with a hole or opening between them. The neck of one of these vases is closed, with the exception of a small opening in which a clay pipe

is inserted leading to the body of a whistle. When a liquid is poured into the open necked vase, the air is compressed in the other, and, escaping through the narrow opening, is forced into the whistle, the vibrations producing sounds.

Many of these sounds represent the notes of birds; one in the Clay collection of Philadelphia imitates the notes of the robin or some other member of the thrush tribe peculiar to Peru. The close neck of this double vase is modeled into a representation of a bird's head, which is thrushlike in character. Another water vase in the same collection representing a llama, imitates the disgusting habit which this animal possesses of ejecting its saliva when enraged. The hissing sound which accompanies this action is admirably imitated. A black tube of earthenware, ornamented with a grotesque head in low relief, to which short arms are attached, pressing a three tubed syrx to its lips (Clay collection), deserves especial mention, as it suggests the evolution of this instrument from a single tube to more complicated forms.

Explosive Ice.

A most unusual phenomenon, which occurred in the laboratory of the University of Virginia, has been described by Mr Mallet, the professor of chemistry of that establishment. During a severe storm ice was formed in the glass vessel of a gazogene, the familiar apparatus for charging water with carbonic acid gas. The expansion of the ice burst the vessel, after which the ice itself exploded repeatedly and threw off fragments, with a crackling sound. The effect is attributed to the pressure of the gas contained in the ice, which, in the case of water, would appear as simple effervescence.—*Popular Science News*.

Try this Puzzle.

Open a book at random and select a word within the first ten lines, and within the tenth word from the end of the line. Mark the word. Now double the number of the page and multiply the sum by five. Then add twenty. Then add the number of the line you have

selected. Then add five. Multiply the sum by ten. Add the number of the word in the line. From this subtract 250, and the remainder will indicate in the unit column the number of the word, in the ten column the number of the line, and the remaining figures the number of the page.—*Exchange*.

Noiseless Gunpowder.

The noiseless powder is not a new invention. In the third volume of Benvenuto Cellini's autobiography, the author relates that when suffering from fever in Ferrara he cured himself by eating peacock, and that he procured himself the birds surreptitiously by shooting them with powder, "invented by him, that made no noise."

A Few Marred Quotations.

Milton's famous line on pride, "That last infirmity of noble mind," is spoiled by making the word "minds." So is Pope's fine thought, "Welcome the coming, speed the going guest" spoiled by the substitution of "parting" for "going." We hear "Westward the star of empire takes its way" quoted every day. Bishop Berkeley wrote "course," not "star."

Apt quotation sometimes finds its reward, as Bayle thought it should always.

Raleigh was knighted because he quoted to Elizabeth Shakespeare's lines on "The fair vestal throned in the west."

A Drop of Water.

"Think you that a drop of water, which to the vulgar eye is but a drop of water, loses everything in the eye of the physicist, who knows that its elements are held together by a force which, if suddenly liberated, would produce a flash of lightning? Think you that what is carelessly looked upon by the uninitiated as a mere snowflake does not suggest higher associations to one who has seen through a microscope the wondrously varied and elegant forms of snow crystals? Think you that the rounded rock, marked with parallel scratches, calls up as much poetry in an ignorant mind as in the mind of a geologist, who knows that on this rock a

glacier slid a million years ago? The truth is, that those who have never entered upon scientific pursuits are blind to most of the poetry by which they are surrounded. Whoever has not in youth collected plants and insects knows not half the halo of interest which lanes and hedgerows can assume. Whoever has not sought for fossils has little idea of the poetical associations that surround the places where imbedded treasures are found. Whoever at the seaside has not had a microscope and aquarium has yet to learn what the highest pleasures of the seaside are."—HERBERT SPENCER.

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