

INVENTIONS AND THEIR DATES.

Valuable and Interesting Contribution for Your Scrap Book.

Buckles were first made in 1680.
Brandy was first made in France in 1810.
The first horse railroad was built in 1825.
Chloral was discovered by Liebig in 1831.
Lampblack was invented by Mini in 1844.
Water pipes of lead were first made in 1836.
The folding envelope was first used in 1830.
Coal was first used in England as fuel in 1850.
Quicksilver was first used in the arts in 1540.
Telescope were first made by Jansen in 1608.
The electrotypewriter was the work of Spencer, 1837.
Coal oil was first used as an illuminant in 1826.
The velocipede was invented by Drais in 1817.
The piano was invented by Cristofori, in 1711.
The Gatling gun was the work of Gatling, 1861.
Barometers were invented by Torricelli, 1643.
Bombshells were first made in Holland in 1495.
Ice was first made by machinery by Carré in 1850.
Steel needles were first made in England in 1545.
Anemometers were invented by Woflers in 1709.
The first almanac was printed in Hungary in 1470.
Iron pavements were first laid in London in 1817.
Aerometers were first described by Baume in 1768.
The cotton gin was the work of Eli Whitney, 1793.
Roller skates were invented by Plympton, in 1863.
Corn-shellers were the invention of Phinney, in 1815.
The first American paper money was made in 1740.
Covered carriages were first used in England in 1590.
English books were first printed by Caxton in 1474.
The first iron wire was drawn at Nuremberg in 1531.
Alcohol was discovered in the thirteenth century.
The thermometer was the invention of Galileo, 1596.
Gun caps were first used in 1822 in the English army.
Steam-winding watches were invented by Noel, 1851.
Aniline dyes were discovered by Unverdorben in 1826.
The torpedo was the invention of Dr. Bushnell in 1777.
Flints for gun locks were used in the French army, 1630.
The revolving pistol was the invention of Colt in 1836.
The first plaster cast was made by Verrocchio, 1470.
Advertisements first appeared in newspapers in 1652.
The first cast-iron plow was made by Newbold in 1797.
Bagonets was first made at Bayonne, in France, 1647.
The iron blast furnace was the work of Dethmold in 1842.
Shorthand writing was the invention of Pitman, in 1837.
The planing machine was the work of Woodworth in 1828.
The Armstrong gun was planned by Armstrong in 1855.
The steam fire engine was the work of Ericsson in 1830.
The knitting machine was the work of Hooton in 1776.
The mariner's compass was a Chinese invention, 1200 B. C.
The Argand lamp was the invention of Amie Argand in 1780.
Stocking-making machines were the work of Lee, in 1589.
Diving bells were invented by a Dutch mariner in 1509.
Furnaces for puddling iron were invented by Cort in 1781.
Machines for setting type were invented by Mitchell in 1854.
Shoemaking machines were invented by Gallahue in 1858.
Billiards were invented in France by Desgains about 1471.
The first pipe organ was made by Archimedes, B. C., 230.
Silk manufactures were established in Europe in A. D. 550.
The notation system of writing music was invented in 1070.
Wooden pavements were the invention of Nicholson in 1854.
The turning lathe was invented by T. Blanchard in 1843.
Locomotive engines were first made by Trevethick in 1802.
Nail-making machines were invented by Wilkinson in 1775.
Bells were invented by Anacharsis, in Scythia, B. C. 569.
The machine for paring apples was devised by Contes in 1803.
The steam printing press was invented by Richard Hoe, 1812.
The circulation of the blood was discovered by Harvey in 1617.
The magic lantern was the invention of Roger Bacon in 1260.
Washboards were invented by an American named Rice in 1819.
The first dictionary was made by the Chinese scholars, B. C. 1109.
The first pair of spectacles was made by Spina, an Italian, 1290.
The first silver coin was made by Phidon, King of Argos, 869 B. C.
Globes and maps were the invention of Anaximander, 602 B. C.
Platform scales were the invention of Thaddeus Fairbanks, in 1831.
The circular saw was devised by Bentham, an Englishman, in 1790.
The snare drum was brought to Europe by the Saracens, about 763.
Diamond-cutting by machinery was first done in Holland in 1489.
Machines for making tacks were first made by Thomas Blanchard, 1806.
The amalgamator was an American invention by Varney about 1850.
Light howitzers, for field use, were first made by Paikhan, in 1822.
The dinner fork was introduced into Italy in 1491, into England in 1608.
The soul-moving accordion was invented by Damian, of Vienna in 1829.

POPULAR SCIENCE NOTES.

AN ENGINEERING ACHIEVEMENT.—An important government work has been completed in Japan. From Lake Biwa, having an area of 500 square miles, at an elevation of 143 feet, a navigable canal seven miles long has been run to Kioto, involving two miles of tunneling and an aqueduct of considerable length. Near the city is a sharp decline of 118 feet, from the base of which the canal continues to the sea. This difference in level is overcome by inclined plane ways 2,100 feet in length, on which boats are raised and lowered from one canal to the other by an electric motor driven by a water-wheel. The new waterfalls also supplies power for manufacturing purposes.

LIFE AT GREAT DEPTHS IN THE SEA.—For a century or more, writes Prof. N. S. Shaler, naturalists have known a great deal concerning the marine organisms which dwell in the shallow waters next the shore. They long ago learned the amazing richness of these littoral forms. The census of species amounts now to more than one hundred thousand distinct forms; it is, however, of late that they have ascertained that the deeper parts of the ocean-floors have also an abundant and varied peopling. The greater part of these shore dwellers are exceedingly intolerant of the enormous pressure of the deeper waters, as well as of the low temperature and total darkness which exists there. Certain forms have, however, acquired the ability to withstand these peculiar conditions, as generation by generation through the geologic ages they have crept away from the realms of fierce combat next the shores, to the less contested fields of the open and deeper seas. Through all the geologic ages this selection of especially prepared groups for the singular stations or habits of the ocean depths has been going on, with the result that these deep and pressure-burdened regions are now tenanted by eminently peculiar animals, by species which ever surprise the student who is accustomed alone to the forms which dwell near the shore.

One of the most striking features connected with the animals of the deep seas, is the frequency with which we find there living specimens which remind us of kinds which in former geologic periods dwelt in the coastal districts of the oceans. It seems that many of these ancient creatures, when they could no longer hold their own against the more highly organized and developed animals which inhabited the favored stations next the shores, shrunk away into the deep water, and in that undisturbed part of the world found an asylum, where amid the changeless environment, they have dwelt for ages unaltered. Thus a sort of stasis, whereunto antiquated forms have retired before the overwhelming pressure which the newer and higher life ever imposes on its ancestors. From the results of the relatively trifling explorations which have, as yet, been made, there seems good reason to hope that in time we may win from the deep the nearest living representation to many creatures which once occupied a large place in the seas, but now have abandoned the fields of more active combat, which are usually the seat of the greatest advance.

In the profounder seas the invertebrate life appears to have a larger share than is secured by the vertebrate, or backboneed animals; yet there are a number of fishes known in these depths, and it seems likely that these tenants of the deep may be numbered by thousands of species. Among the finned tenants of the profounder parts of the ocean, we find the most startling departures from the types with which we are familiar in coastal waters. In general shape they differ little from their kindred which dwell in the sunlit shallows. The differences are largely in the mechanism of the senses, especially of the eyes. These organs undergo surprising variations with reference to the enduring of the darkness of these depths. In certain of the species the sight not only fails, but the visual apparatus entirely disappears; in others the eyeball becomes very much enlarged and the nervous apparatus increased, and are evidently arranged to catch mere glimpses of the light. As it is certain that no trace of sunlight can ever penetrate through the deep which overlies the realm where these animals dwell, adaptation of these eyes to the needs of different vision at first appeared to be a very inexplicable matter. Some recent discoveries provide us with what seems to be an adequate explanation of the enigma. It has been found that certain of the denizens of the deep sea-floors have phosphorescent parts of their bodies which serve to give light in a manner in which it is yielded by the familiar fireflies and glowworms. The end secured by these light-giving parts is probably the attraction of the sexual mates of the creatures. In the utter darkness of the ocean this indispensable end could be attained in no other way.

Universal Pigeon English

Many persons do not know and many may be interested in learning that for a hundred years Pigeon English has been the recognized language of trade and commerce for about 500,000,000 Asiatics and Africans in all their dealings with foreigners of all other nationalities. The Russians, Germans and Dutch must all use Pigeon English in order to transact business with the natives.

Pigeon English is more nearly a universal language than any other in the world, and if our alphabet could be made "phonetic" would likely soon become a special language for all nations, especially if aided by the 100,000,000 speaking regular English and its dialects. What is Volapuk alongside of Pigeon English?—(Minneapolis Tribune.)

Big Oysters are Sick.

The enormous oyster shells displayed in front of a popular restaurant are an abnormal growth. In the Indian Ocean the shells sometimes reach an extraordinary size, but the remarkable thickness is caused by a disease, which, to the oyster, is something like elephantiasis to the man. The disease is common enough among oysters, but it is rare that so exaggerated a case is seen as in the huge shells already mentioned.—(New York Journal.)

SOMEWHAT STRANGE.

ACCIDENTS AND INCIDENTS OF EVERY DAY LIFE.

Queer Episodes and Thrilling Adventures Which Show That Truth is Stranger Than Fiction.

GRAY hair has a peculiar effect. It makes an elderly face look much younger and a young face appear older. The other day some people were discussing the natural kindheartedness of Americans and an Englishman. And the argument was settled by an incident related by a young man on the sunny side of thirty, but whose hair is fast getting white. His face is smooth and youthful, but his hair is as gray as most men's at sixty. He was traveling recently in the Yellowstone Park and made the acquaintance of a young Englishman. Every time they had any walking to do, or were obliged to carry their own satchels, the Englishman would insist on carrying the one belonging to his companion with his own. For nearly two weeks he had burdened himself with the satchel of the American, which excessive kindness rather mystified the gray-haired young man. It would have appeared almost servile to him, but it was plain to the part of the Englishman. Finally, one day in conversation they spoke of ages. The Englishman was made speechless by discovering that he was nearly ten years older than his companion. He had been paying respect and kindness, as he supposed, to gray-haired old age. The American's satchel was carried by himself the rest of the trip.

MONTHLERS have been interested during the past few weeks in the feats of Mme. Zucca at Sohmer Park. The lady has been announced as the champion strong woman of the world, and certainly the wonderful tests to which she has been subjected have resulted in proving that she is undoubtedly all that has been claimed for her. Regarding the wonderful lift of a horse weighing 1,000 pounds or more, several people doubted that she could perform it, and yesterday afternoon in the presence of a large number of gentlemen she stood upon the platform six feet high and attaching chains from a horse to her shoulders she easily straightened herself and swung the animal in the air. It was afterwards weighed, and the Vicer market clerk gives his certificate for 1,050 pounds. The other feats of Mme. Zucca were equally wonderful, and certain it is that never has Montreal witnessed such remarkable feats of strength on the part of a female. Her reappearance in Montreal will be welcomed.

For half an hour the other afternoon a crowd surrounded a truck which had halted in front of the Mills Building, New York. Attached to the truck was a horse, and there was a peculiarity in the animal's appearance which had caused the crowd to gather. The horse was doing its breathing not through its nostrils, but through a tube inserted in its neck. The contrivance looked very much like an old-fashioned candlestick with the base and an inch or two of the shank showing. In the tube was a sort of filter to catch impurities in the air which passed through it, and the arrangement appeared to work very satisfactorily. The driver explained that tracheotomy had been resorted to save the life of the horse, which had suffered from asthma. The tube had been in use for several months, and the horse appeared to be as well as ever. It was certainly able to do its full share of work. Every two or three days the tube was taken out and cleaned, but the horse laid it in its neck the rest of the time.

RICH VALLEY, Virginia, has a veritable dime museum curiosity in the person of the twenty-year-old daughter of Nathan Harris. Although little Miss Harris is now old enough to seriously contemplate the drawbacks of an old maid's existence, she is not as large as the average child of five years. In her nineteenth birthday she measured but thirty-five inches in height and weighed 304 pounds. She is not a stunted hunchback, as are a great majority of the so-called dwarfs, but is a perfect Venus in miniature, pleasing and intelligent and with a beautiful head of hair sweeping like a train across the carpet when she cares to let it down for the admiration of her many friends. She is the oldest of four children, all the others being of regulation size. Her parents as well as herself shrink from notoriety. She declares that she would not go before the public for all the world, and that she expects to live and die in the beautiful Virginia Valley that has always been her home.

A FRENCH paper states that one day recently Dr. P., who had company to dinner, sat quietly chatting in a corner of the drawing room, when he was told that a patient had come to see him who was strongly recommended by some fellow-practitioners and whose card was brought in by the page. The doctor submitted with a bad grace and stepped into his surgery. The visitor was in an advanced stage of consumption. The bronchial tubes were in a deplorable condition and the vocal chords nearly worn out. Our physician was in the habit of ascertaining the condition of the patient by asking him to count, and generally stopped him at thirty or thirty-five—quite long enough for the purpose. This time, also, Dr. P. asked his patient to count. Time passed on, and the guests began to feel alarmed at his protracted absence. One of them opened the surgery door. Dr. P. had gone to sleep in his armchair, and the patient had counted up to 8,642.

In a small house of the Rue Sainte Marguerite, Paris, there has lived for a long time past a crippled old beggar known in the quarter as "The Terrible Savoyard." One morning recently he left his lodgings as usual to offer pencils to the charitably inclined, and when he arrived at the wineshop of the Rue Bastour, where he was known, he began to tease the housemaid, Clemeuse Provost. The girl, not relishing his attentions, retorted: "If you had your wits, you would write this morning you would be less troublesome," and threw a glass of water in his face. The old man sprang forward with an insult on his lips, but suddenly staggered back and fell down dead. The doctor summoned in haste to the spot declared the cause of death to have been congestion of the brain, produced by the unexpected cold aspersions.

A NUMBER of years ago, says a local paper, a letter was dropped into the mail box, at Pittsfield, N. H., by a young lady. It was written to her lover, but never reached him, and, after some time, supposing she had wearied of him, or transferred her affections to another, he married. In 1890, when the Pittsfield postoffice was repaired and overhauled, the letter in question was found in a crevice back of a partition, and sent on by the officials to whom it was directed. Though he was not at liberty to resume his acquaintance with the one who, owing to this unusual accident was entirely lost to him, he felt it his duty to say to persons whom he has met from that vicinity, that he deeply grieves over the thought that the one to whom he intended to prove true has all these years supposed him false.

GEORGE UNVERZAGT is a Cincinnati man who has been troubled with the rheumatism for a long time. He has been to a number of doctors, but they gave him no relief. He tried all sorts of prescriptions recommended by all sorts of people, and still got no better. Finally a man who professed to know a thing or two told him that lemons, properly taken were a sure cure. He must eat one the first day, two the second, three the third for thirty days, then he should diminish the number consumed in the same way. Unverzagt did as he was told, but before the sixty days were expired he found himself in bed suffering from a complication of disorders resultant in the introduction of so much citric acid into his system.

A DENVER (Col.) paper relates an amusing episode in the recent visit of a Presbyterian clergyman in that city. One day on the street he thought it would be a fine thing to shoot his kodak at a Ute squaw; but when the squaw saw the kodak pointed toward her she thought she was being bewitched, and pulling a large knife from under her dress, she made a desperate lunge for the dominie. He saw what was coming, and made a very undignified dive for the other side of the street. The squaw captured the switch instrument, and after demolishing it, replaced her knife with a satisfactory grunt and marched triumphantly away.

AT Hazlewood Cemetery, near Montezuma, La., one day Charles Bloek, wishing to remove the remains of his wife who died eight years ago, opened her grave. He found it full of water and was astonished at the weight of the coffin. The combined weight of five men finally brought the coffin out of the grave, and when opened it was found that the action of the water had turned the body to solid stone, preserving its natural appearance to a remarkable degree. Even a bouquet of flowers held by the dead woman was perfectly petrified. The skin was soft, the hair as black and glossy as in life.

GEORGE HAZEBER, of Kiowa, Kan., is the father of a five-year-old boy who is an electrical wonder. The little fellow's body seems to be surcharged by electricity at all times, and he takes great delight in shocking those who come near him. He can greatly increase the force of the shock by rubbing his feet on the carpet, and after dark the electrical discharge is so strong that sparks are emitted when he slides across the floor and touches a piece of metal. He amuses himself by touching all the dogs and cats about the place, and the result is that they all flee at his approach.

OSCAR MOORE, a colored boy of six living in Boston, possesses a marvelous memory. He can repeat the names of the presidents of the United States from Washington to Harrison, giving dates and places of birth, as readily as a politician can read them. Poetry he commits to memory on the first reading to him, be the stanzas however long and numerous.

The body of a New Zealand lady, Miss Hewitt, the head mistress of the Girls' High School at Napier, was recently taken out in a steamer several miles to sea and buried at night there. She had left this in her will as an alternative to cremation, fearing that there might be no means for the latter and being averse to burial in the earth.

ACCORDING to a correspondent there is a bottle afloat somewhere that contains an interesting manuscript. This writer says that the Emperor William was so delighted with his recent exploit of harpooning a whale that he wrote with his own hand a detailed account of it, put the writing in a bottle, and threw it into the sea.

THE BODY AND ITS HEALTH.

DRINKING MILK.—Do not swallow milk fast and in such big gulps.

As one physician directed, "chew it!" in short, sip it slowly, a teaspoonful at a time. Many persons who like milk, and know its value as a strength-giver, think they cannot use it because it gives them indigestion. Most of them could use it freely if they would only drink it in the way we have described, or if they would, better still, drink it hot.

MEDICAL USE OF EGGS.—Every reader has been told one time or another that eggs are "meat and drink." Their value as a nutritive, nourishing food is well-known. Everybody, however, may not know that an egg beaten up lightly, with or without a little sugar, is a good remedy in cases of dysentery and diarrhea; it tends by its emollient qualities to lessen the inflammation. There are few things more soothing for either a burn or a scald than the white of an egg. It is contact with the air which makes a burn so painful, and the egg acts as a varnish and excludes the air completely, and also prevents inflammation.

THE PHILOSOPHY OF A BOIL.—Let us look at the philosophy of the boil, the carbuncle and like affections, says Dr. J. H. Stearns in the Medical Summary. Some fault exists in the regular elimination, and the morbid material is collected at some convenient point to force it out of the system in an extraordinary manner, and it will be noticed that a wall of coagulable lymph forms around it to complete the encasement, and the obvious inclination is to assist in this work, which can be done in the most admirable way by applying collodion over the hardened, thickened part, leaving the center uncovered. On drying, the collodion contracts, and thus firmly separates and protects the surrounding parts from the pestiferous mass. By touching the suppurating points with pure nitric acid and keeping the centre of the tumor moist there is a prompt discharge of the pus and a rapid recovery. This is no mere theory, but has been used in scores of cases with the most satisfactory results.

THE CARE OF THE EYES.—Not long ago, says a writer in Harper's, an advertisement was read in which an optician promised to examine the eyes of all who came to him free of charge, and to provide glasses for the same at moderate rates. The object of this free examination was evidently to provide customers for the sale of the glasses and spectacles. The advertiser may have been a skilled oculist, and perfectly able to provide for the needs of his patients, but is it worth while to make the experiment? Any one who has ever been threatened with blindness will protest against running any risk in the treatment of the eyes. Sight is the most blessed of all the five physical senses. Blindness, or the thought of blindness, seems like a living death, and only those who have experienced the fear, can understand it. Do not take any risks with your sight. Do not experiment with your eyes if they are weak or failing. Economy of money at the risk of losing your eyesight is foolishness. The eye is one of the most delicate of organs, and easily ruined and the sight destroyed. There is no excuse for negligence in the matter; there is no use to try home or cheap remedies. If your sight is failing, if your eyes are out of order, hesitate not for a moment, but consult a competent oculist at once, and seek none but the best. Sight is too valuable and precious to be trifled with. Those who have suffered to be trifled with, where the eyes are treated free in many cases by the best oculists, so it is not a question of money. And the warning cannot be repeated too often—do not trifle with your eyesight under any consideration.

MILK FOR BABIES.—The preparation of milk for little babies in summer is always a question with those mothers who must bring up their children "by hand." The best physicians are now agreed that sterilized milk is altogether the best food for infants. Not every mother knows that the kitchen double boiler will serve in the place of a sterilizer. Yet according to so high an authority as Dr. Leroy M. Yale, in a recent article written on this subject for "The Mother's Nursery Guide," "the common kitchen double boiler will do in place of the sterilizer." The plan employed by Dr. Chapin at the Babies' Wards, where ordinary market milk is used, is given in this article. At this institution, the writer states "that the main object is to provide such a food as shall meet the needs of the children, and, at the same time, shall be easy of access in any house and by any person of ordinary intelligence." The milk is allowed to stand undisturbed for three hours, when the lower half is drawn off leaving the top milk. Where it is not practicable to draw off the lower half of the milk, the upper half may be obtained by dipping it off with a cup. We now have the top milk, and this is placed in the sterilizer or double-boiler, and is sterilized by boiling the water around it for half an hour. This time is astonishing to many who have been accustomed to prolong the process of sterilizing the milk for two hours. In the Babies' Wards, a barley water made from good barley flour, and not from the expensive prepared barley sold in drug stores, is used with the sterilized milk. The preference of the best authority seems to be for a barley flour which has been subjected to a heat of 212 degrees for five or six days. Such a flour is offered in market, and it is to be preferred to the crude barley flour. One advantage of sterilized milk is that it keeps longer, and this is especially valuable to the very poor to whom the milk is sold at a nominal price in New York City at some of the dispensaries.

Russian Hotels.

Accommodations are meagre in the small hotels of Russia. Rooms contain two broad benches or sofas, on which there is a covering of straw, held in place by coarse cotton cloth nailed along the edges of the board. These benches serve as beds, and each patron is expected to provide his own bedding from the rugs and wraps carried in his tarantass (Russian carriage). This is the custom through the interior of Russia. It is only in the cities that one can find beds in conformity with Western ideas.

HEADS OF VARIOUS TYPES.

It is interesting to observe how the shape of a man's head acts as an index to his nationality—that is, if you know how to consult the index. As a proof of this, notice how long and narrow the average American head is. Hats made in England will not fit such a head at all, the head being so long "fore and aft" as to make the hat too wide at the sides. With the Germans it is the reverse, if any difference. The head of a true Rhinelander is wide at the temples; if the hat is the exact length, in nine cases out of ten it has to be stretched sideways in order to make it fit. English heads are wide, but not the Germans. There is more of a "sliding scale" with them as to the relative length and breadth. The Celtic head is almost invariably round or oval, and without pronounced phrenological "bumps." For general smoothness of the cranial protuberance, the Italian comes next to the Celts, either of the two beating the classic Greeks in that respect. Odd as it may seem, anatomists declare that the Turkish skull is almost identical in shape, size, etc., with that of the enlightened Nineteenth Century inhabitant of the United States. Hat dealers, such as the makers, furriers, etc., say that the heads of all nations are gradually growing larger. In 1860 the average hat used was 6 7/8, to-day it is 7 1/4.—(St. Louis Republic.)

Belgium is declared to be the most temperate country in Europe.