

**AN ANALYSIS OF FOOD.**—It is stated that a hungry man whosits down before a pound of beefsteak, tender, juicy, and an inch thick, and eats it, will find upon analysis that 65 per cent of his steak was water; that 18 per cent will go to give him an aldermanic fleshness; and that 14 per cent is assigned to warm him, and make him feel comfortable on a cold day. Of the flesh-forming ingredients, according to Dr. Playfair, every one, on an average, requires 92 pounds annually to keep up a proper bodily condition. If it is not obtained from steaks, then it must be secured from something else. Cheese is a great flesh former (30 per cent), and, taken with beer, speedily conceals all traces of unsightly bones. Two ounces of flesh formers per diem will keep a man alive if he is not forced to labor, but hard labor requires six, or the body will run short of starch and sugar, and go behindhand in health and strength. In 100 parts of wheat there are 10 pounds of flesh, but there is nearly double the amount in the same quantity of oatmeal.—*Philadelphia Ledger.*

**KILLING THE CHOLERA BY ARTILLERY.**—It is a well known fact that the presence of ozone is fatal to the existence of cholera. Telegraph operators are rarely attacked with this disease for this reason, and the accumulation of atmospheric electricity during thunder showers exerts a salutary influence in infected districts. Depending on this fact, Dr. Zantedeschi, of Padua, Italy, has proposed a plan for the destruction of the poison of cholera, by the explosion of gunpowder mixed with common salt and the chloride of lime and of sulphur. The Doctor suggests the placing of cannon loaded with the disinfecting mixture on towers or high eminences in the locality where cholera exists, then at every discharge the air would be cleared of its poison by the combustion of the sulphur generated by the sulphurous vapors, and the consequent formation of ozone. Caution must be practiced, by closing doors and windows, as the descending gaseous substances are very irritating if inhaled.

**NATIVE SUGAR CANE IN NEVADA.**—In the tules along the banks of the Humboldt river, the wild sugar cane grows luxuriantly and abundantly. Though sheltered by the tules from the wind, the surface receives some small breaks, and from them the rich juice exudes and drying in the atmosphere as it comes to the surface, forms along the stalk little balls of sugar which increase in size according to the length of time the wound remains open. The Indian squaws go through the brakes equipped with large grass baskets, and by collecting the sugar balls, obtain their family saccharine supply at their convenience. This wild sugar is superior to sorghum in that it granulates so readily, and it is confidently asserted that the cane will grow in any low lands in the United States.

**THE MECHANICAL HORSE,** at the Exposition, to which we have already referred, bears no resemblance to his equine namesake, but consists of a box seven feet long and wide enough for a man to saddle, and about five feet high. This body is mounted on five wheels. In a trial before the Emperor, a mile race course was moderately passed over in two minutes, twelve seconds. When at its fastest speed, the distance was made in fifty-eight seconds, and the inventor affirms that nearly this speed could be kept up for four hours. What is the real motive power, is a secret which the inventor has imparted to the Emperor only, and in return for this distinguished confidence, the inventor has been decorated with the Cross of the Legion of Honor.

**THE CAEN STONE OF FRANCE** has a rival in the stratified limestone which underlies the whole of the high prairie land of Kansas. A correspondent describes it as white, cream colored, pink, yellow, and red, lying horizontally, and requiring no other quarrying than the use of a crowbar to lift it in blocks from its bed. So easily worked is it that he has seen it hewn into shape with a common wood-ax, and mortised with a carpenter's chisel as easily and quickly as a pine beam; he has also seen it planed with a jack plane, sawed with a scroll saw into brackets and ornamental door and window caps, and cut with a buzz saw into blocks for street pavements or bricks of any size. The material hardens on exposure to air, and becomes as impenetrable as Tennessee marble.

**MASTIC CEMENTS.**—Böttger has recently published some account of these cements, and states that they are mixtures of one hundred parts of sand, limestone, and litharge, with seven parts of linseed oil. These ingredients carefully mixed and well worked together will have the consistency of moist sand, and at first but little coherence. When pressed, however, the mixture gradually acquires the hardness of ordinary sandstone, and in six months time will emit sparks when struck with steel. The binding agents in such cements are the litharge and oil, the sand giving the body, and limestone or chalk filling up the interstices.

**PYROTECHNICS FOR THE SAVAGES.**—The Magnesium Metal Company, of London, have received an order for the manufacture of 50-lb. weight of magnesium to be used for signaling purposes in the Abyssinian expedition. The metal will be burnt as a powder and mixed with resin and lycopodium, the light being produced at will by blowing, by means of a pair of bellows, a portion of the compound through a flame.

**EXHIBITORS** of articles, at the Paris Exposition, will have one month, or until the first day of December, to pack up and remove their products. All articles not removed by that date will be transferred by authority to the public stores of Paris, at the risk and expense of the exhibitors, and if not called for by the 30th of June, 1868, will be sold and the net proceeds applied to charities.

**ARTIFICIAL OIL OF BITTER ALMONDS** is manufactured from the benzine of coal tar. A fine stream of benzine and another of smoking nitric acid are allowed to run together in a worm kept well cooled. The liquids react on each other on coming in contact, heat is disengaged, and the artificial oil collected at the end of the worm is first washed with water, then with a solution of carbonate of soda, and lastly, again with water.

**SULPHURIC ACID IN LIVING MOLLUSCA.**—At the last meeting of the Academy of Sciences, M. Dumas communicated a curious note by which M. de Luca determined, in the liquid contained in living mollusca the presence of a thirtieth part, or about three per cent of pure sulphuric acid; and stated, furthermore, that the same mollusca, plunged in water, disengages a considerable quantity of carbonic acid.

**A NEW LUBRICANT.**—From specimens of the Chinese tallow tree transplanted into Northern India, Dr. Jameson has made several hundred weight of grease, and has forwarded on trial a portion of it to the Punjab railway to have its qualities tested as a lubricant. The grease thus obtained forms an excellent tallow, and burns with a clear, brilliant, and white light, emitting no unpleasant odor or smoke.

**MUNICH** boasts of possessing the largest bronze statue in the world. The colossal figure represents the protectress of Bavaria, with a huge lion by her side. The height of the figure is 63 feet; weight 230,000 pounds. It stands on a granite pedestal 30 feet in height, through which a spiral stairway leads to the head of the figure where are seats provided for eight persons.

**A GENEROUS BURGLAR,** who is said to have been recently transported to Australia for breaking open a safe, made a draft of a model safe which he believes thief-proof, and sent it to one of his victims as a compensation for the injury which he had inflicted upon him.

#### Minerals of the Pacific Coast.

One of our California exchanges thus speaks of the unexampled richness of the mineral resources of the American States on the Pacific:—

"The variety as well as the richness of the mineral resources of the American States on the Pacific appear to be without example. No other district of equal extent can boast the possession of such an abundance and multitude of valuable metals. The colony of Victoria, in Australia, for a short time surpassed California in the production of gold, but our State has resumed its supremacy. As a gold mining country we are in advance of any other State of either the past or the present. Brazil and Spain may have had places of equal richness and extent, but the laborers were not so skillful, nor the production so large; and their diggings are apparently exhausted, while ours are still turning out millions every month.

"In silver, Nevada is not the equal of Mexico, but it is superior to any State of Mexico, and the Virginia district produces annually more silver than any other district does now, or ever did produce. Neither Guanajuato, Zacatecas, Cerro Pasco, Potosi, nor Chanarcillo can show a yield of \$12,000,000 a year; and in their best days that figure was never reached by any of them. All those districts had a wealth equal to that of the Comstock lode, perhaps greater, but they had not the steam power to hoist, and crush, and amalgamate the ore, and to pump out the water. Many of our silver districts are yet unopened. Kearsarge, Owen River Valley, Co-so, Cortez, Toyabe, White Mountain, Montgomery, Excelsior, and dozens of other argentiferous regions have only been seen near the surface. The expense of cutting roads, fighting Indians, proving the extent of the veins, and erecting mills is too much for the prospectors, and years may pass before the necessary capital is obtained. The silver exists in the rocks, and in time it must come out.

"In quicksilver, California is richer than Spain, and our production now considerably exceeds that of any other country. The New Almaden is now yielding, according to published reports, at the rate of 400,000 pounds annually, surpassing old Almaden considerably. Discoveries of ore have been made lately at various points, promising a large addition to the production.

"It is the opinion of many miners that in five years California will be at the head of the copper producing States. Our copper mines are rich, extensive, and numerous. Large lodes, containing ore varying from ten to twenty per cent, are found in not less than a dozen counties, from Del Norte to San Diego—lodes that in England would be worth millions, but now lying idle and almost worthless, simply because of the high cost of freight, the dearthness of fuel, or the lack of skilled labor. The Union, which ships about a hundred tons per day, is one of the best copper mines in the world. If our ores could now be sent from our mines to Swansea for \$10 per ton, we could ship 500 tons every day. Railroads must be built through the copper regions, and they will have a vast influence to stimulate the production.

"Gold, silver, quicksilver, and copper, are the only metals which the coast now yields in any considerable quantity. A little platinum is obtained, and there are rich veins of iron, lead, antimony and tin, in the State, but they are not worked. Of the non-metallic minerals, coal is the most important, and of that the annual production is about 80,000 tons, all of it from Monte Diablo. The borax lakes, in Lake county, are the richest sources of that mineral known, and the production of refined borax is becoming important. The porcelain clay, of Michigan Bar, is of a very fine and valuable quality. The felspar, of Calaveras is considered equal to any for fine

ceramic uses. The plumbago, of Columbia, according to the report of experts, is as good as that of the best English mine, which is opened for only a few days in the year, and is a source of vast profit to its owners. The steatite, or soapstone, of El Dorado, is excellent in quality. Rumor says that marble, as white as that of Carrara, is found in Tuolumne and Chasta counties, and the variegated gray marble of Indian Diggings is unsurpassed in beauty of color and susceptibility of polish. Beautiful alabaster is found in Placer, El Dorado, Los Angeles, and Solano counties. There is a manganese mine on Red Rock. Vast beds of sulphur are found in various parts of the State, and the business of refining it has been established in Lake county. Our deposits of asphaltum are extensive, and large quantities of it are sent to market. Petroleum exists in the rocks from Humboldt to San Diego, and the production is slowly but steadily increasing. An opal mine, near Mokelumne Hill, is regularly worked; and diamonds, emeralds, and rubies have been obtained in the placers. There is alum in Santa Clara county, sulphate of magnesia in Lake county, and crude soda, in vast quantities, in the Colorado and Mohave deserts. Common salt is made from the sea water in considerable quantities in Alameda and Santa Barbara counties. Yellow ochre, sienna, and amber, and an iron ore that can readily be made into Venetian red, are among the resources of California. Numerous other minerals might be added, but they are either found in very small quantities, or little importance is attached to them. The list, however, as we have given it, is surely remarkable for its variety, and mineralogists will seek in vain for its like in any other country of equal area."

#### NEW PUBLICATIONS.

**ATLANTIC MONTHLY.** Boston: Ticknor & Fields.

The November number of this popular monthly is just out, fraught as ever with interesting articles by the best of authors. Terms, \$4 per annum; sold by all periodical and news dealers.

**MODERN PALMISTRY.** New York: American News Company, 121 Nassau street.

This is a very curious book, full of illustrations of various shaped hands, which, from the lines denoted thereon, are presumed to indicate extraordinary developments of character, when found delineated in the human hand. The book we have not read, but believers in astrology, and fortune tellers under every disguise, will be interested in it.

#### MANUFACTURING, MINING, AND RAILROAD ITEMS.

The Amsterdam Canal works consists in the digging a ship canal 213 feet wide, and 18 feet deep to open a communication between Amsterdam and the North Sea, and avoid the circuitous route through the North Holland canal which for many years has formed the only approach to the city navigable by large vessels.

A number of railroad enterprises are now being pushed forward in Connecticut with an earnestness that indicates success. The citizens of Middletown have taken such action as to ensure the building of a road from New Haven to the east bank of the Connecticut at Middletown where it will await the action of the next Legislature for permission to bridge the river when the great air line from New York to Boston, will be speedily completed. The Boston and Erie railroad have secured a union with the Erie railroad by the election of its president, as president of that company, and the guarantee of its bonds to the amount of \$3,000,000. This ought to insure the extension of the line from Waterbury to Newburgh, N. Y., thus developing the resources of Litchfield county. The Connecticut Western road, from Springfield to Collinsville, and thence to the Hudson, is in strong hands and the extension of the Collinsville branch of the Canal road to Lea and North Adams, Mass., is regarded as almost certain.

The whole number of mines in France, is now 1,194 of which 598 are coal mines; 249 iron mines, and 337 mines of other minerals. The production of the coal mines and iron works last year reached the value of 472,000,000 francs.

During September the heading at the East end of Hoosac tunnel was carried forward one hundred and eleven feet, and sixteen hundred and nine cubic yards of rock were excavated from the enlargement at the East end.

At the plumbago mines near Senora, Cal., from twenty to twenty-five tons are daily prepared ready for market. The remarkable purity of the products commands for it a very high price.

In the Chollar Potosi, Nevada, mines, a rich strike is announced at the depth of eight-hundred and sixty-five feet from the surface. This is the deepest shaft on the Comstock lode and the success in finding rich ore at that depth is thought will be quite encouraging to other companies on the ledge.

The old Greek silver and lead mines of which the historian Xenophon once had the management, and regarding which he has left a memoir or State paper—have lately been brought again to notice from the fact that a French company, at Port Mandri, are diligently smelting down the old scoriae, slag and refuse from them, and extracting as much as 30 tons of metal a day. The works said to pay well, and the lead goes to England in Newcastle ships which bring out coal for the furnaces. The value of the daily produce of the works averages 15,000 francs and it is calculated that there is a sufficient quantity of scoriae between Port Colonna and Port Mandri, to supply the works for fifteen years to come. The yield is between 7 and 12 per cent of good metal.

The new law providing for the wearing of distinguishing uniforms by all persons employed by railway companies in this State, goes into effect on the 22d inst.

Pennsylvania takes the lead among the States, in the annual amount of iron mined; Michigan ranks next, New Jersey, New York, Missouri, Massachusetts, Connecticut, Maryland, New Hampshire, and Ohio, follow in this order. New Hampshire and New Jersey produce mainly the magnetic ores; New York, the magnetic and hematites; Connecticut, hematites; Pennsylvania and Ohio furnish the argillaceous ores of the coal measures, and Missouri and Michigan mine the compact red and black oxides.

The correspondent of an exchange asserts that the "De Witt Clinton" was the first locomotive built in this country, and in 1831 it ran on the Albany and Schenectady railway. The engine weighed less than five tons: its cylinders were nearly vertical, were on the outside of the boiler, and the driving wheels were made with light wrought iron spokes. Being so light it required heavy repairs every trip.

The United States commissioners have finished the inspection of a section of the Central Pacific Railroad west of Cisco, carefully examined the grades, culverts, bridges, etc., and pronounce it to be twenty-five per cent better constructed than any portion of the road before accepted. Over the section there are already four miles of roofing, and two and a half additional will be built this fall. The commissioners then commenced the primary inspection of the road two miles east of Cisco, at Coburn Station. The cars are running eight and one half miles east, and construction trains are laying the track at the rate of one and one half miles daily. In thirty days the section will be completed. The intermediate section over the summit will not be completed for transportation purposes until spring, although the company expect to lay the track before winter. By August next the cars will be running to Truckee river, near Crystal Peak, while a considerable portion of the road will be graded towards Humboldt.