

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week; the claims may be found in the official list:—

Petroleum Elevators.—This invention is embraced in two separate Letters Patents, and relates more particularly to apparatuses for the raising of petroleum from deep wells, although it can be adapted to the raising of liquids generally from great depths or to great heights, in which an air-blast is used, and consists principally in a peculiar construction and arrangement of the air-nozzle or orifice through which the air issues to the petroleum in the well, whereby the oil can come in contact with both the exterior and interior surfaces of the air blast, thus greatly increasing its suction and consequently drawing up and discharging a proportionally greater quantity of oil at the top of the well. S. F. Schoonmaker is the inventor, who can be addressed at the Astor House, New York City.

Smoking Pipe.—Mr. L. C. Walker, of 21 South Calvert street, Baltimore, Md., has obtained a patent through the Scientific American Patent Agency, for quite a noticeable improvement in smoking pipes. One feature of the invention consists in breaking the current of smoke in passing from the bowl to the mouth, allowing more time for the nicotine, an injurious element of the smoke, to be deposited and received into the saliva cup. Another point of the invention is in having the stem closed at the end and the smoke passage to lead into the mouth at the upper side of the stem, thus restricting the tendency of the saliva from passing into the mouth of the smoker. As a further guard against this latter evil, a smoke bag or sack is formed in the stem just below the egress opening for the smoke. The patent is dated March 21, 1865.

Baling Press.—This invention relates to a new and improved press of that class designed for compressing substances, such as cotton, hay, hops, etc., for baling, and consists in the employment of toggles, arranged and applied to the press in such a manner as to afford a very compact and efficient mechanism for operating the follower, and compressing the substance within the press-box. The invention for these consists in novel and improved fastenings for the side and top doors of the press, while the same may be very readily secured in a closed state, and also very readily opened. George C. Paine, of San Francisco, Cal., is the inventor, and the Patent bears date April 4, 1865.

SPECIAL NOTICES.

AARON PALMER, Brockport, N. Y., and Stephen G. Williams, Janesville, Wis., have petitioned for the extension of a patent granted to them on the 1st day of July, 1851, for improvements in harvesting machines.

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Parties wishing to oppose the above extensions must appear and show cause on the 19th day of June next, at 12 o'clock, M., when the petitions will be heard.

DURING the starvation of an animal, all its secretions are still formed; a consideration which proves that the productions of urine, bile, and other such bodies are, in reality, connected with the destructive processes going on in the animal system. These processes of decay originate in the action of oxygen admitted by the process of respiration.

POLYTECHNIC ASSOCIATION OF THE AMERICAN INSTITUTE.

The Association held its regular weekly meeting at its room at the Cooper Institute, on Thursday evening April 13, 1865, the President, S. D. Tillman, Esq., in the chair.

CEMENT PIPE FOR SEWERS.

This was announced as the subject of the evening. Mounted on a table in the room were three pieces of pipe twelve inches in diameter and each piece about four feet in length; they were from the manufactory of Knight & Woodward, No. 10 Reade street, Brooklyn. This firm have made large quantities of this pipe for the sewers of Brooklyn.

Mr. Knight explained the process of manufacture. The materials are one part Rosendale water cement to two parts clean sand. These are thoroughly mixed together dry, then moistened with water into a stiff mortar, and immediately molded into pipe. The core is iron smoothly polished upon the outside, and the exterior mold is of iron polished upon the inner surface. The mortar hardens, or "sets" almost instantly, but it is kept in a damp place a fortnight before it is placed in the ground for use. The pipe is manufactured in sizes ranging from 3 inches to 24 inches in diameter, the prices being from 14 cents to \$1.30 per lineal foot. More than 50 miles of the 12-inch pipe have been laid in the sewers of Brooklyn, and many miles of other sizes.

Mr. Woodward read some extracts from the report of an English commission appointed to examine the sewerage system of London, showing the conclusion of the commission that small pipes are less likely to be obstructed than large sewers which are several times more expensive.

Mr. Enos Stevius gave the results of some experiments that he had tried to ascertain the descent required for water to carry along stones and other substances. He found that in a V-shaped trough, after it had become smooth, a descent of 1 foot in 58 was sufficient to wash away all obstructions.

After further discussion at considerable length the subject of comb-making was selected for the next evening and the Association adjourned.

Curious Trees.

The Adansonia, or Baobab Tree, is the giant of the vegetable world. We have the record of one whose trunk measured one hundred and four feet in circumference. The height of this tree does not exceed fifty or sixty feet, while the branches are about the same length, and when seen from a distance, the hemispherical cap of foliage almost resembles a forest. A full-grown Adansonia, with its deep green leaves, and large snowy blossoms is a magnificent sight. It attains to a patriarchal age, and it is said there are trees now living more than two thousand years old. It is a native of Senegal and other parts of Western Africa.

The Dragon Tree—another gigantic tropical growth—has ordinarily an erect trunk of not more than twelve or fourteen feet in height, which divides into short branches, each terminating in an expanded tuft of pointed, sword-shaped leaves. There was one of these trees, destroyed by a tempest some forty years ago, in the island of Teneriffe, which measured forty-five feet in circumference, and nearly sixty feet in height, and which was supposed to be one of the oldest living inhabitants of our globe.

The Courbarils, of Brazil, are described as having trunks more than eighty feet in circumference at the base, and sixty feet where the boles become cylindrical. They are said to resemble living rocks more than trees, for it is only on the pinnacle of their bare and naked bark that foliage can be discovered, and that at such a distance from the eye that the forms of the leaves can not be distinctly seen.

There was, and for anything we know, there is still, a cypress at Chapultepec, in Mexico, whose trunk measured one hundred and eighteen feet in circumference. In Buckinghamshire, England, there is a famous yew which has a diameter of about twenty-seven feet.

The Norfolk pine, or Kawri of the New Zealanders, attains a huge size. This majestic tree grows to the height of from one hundred and sixty to two hundred and thirty feet. One is spoken of which measured seventy-five feet round the base.

Among gigantic flowers and leaves, we have the Victoria Regia, a water lily.

The Rafflesia Arnoldi is still larger. This colossal parasite is a native of Sumatra, growing on a kind of vine, and having no true stem or leaves. The petals of the flower, as observed by the discoverer, were five in number, of a dull brick red, and covered with yellowish white spots. They and the nectary were from one-fourth to three-fourths of an inch in thickness. The flower measured a full yard across, and the nectary was of the capacity of six quarts, while the weight of the whole was at least fifteen pounds.—*Horticulturist*.

Profits of Fruit Growing.

Looking carefully into the matter of the profit realized from all descriptions of fruit growing, and running over only two or three authorities on the subject, multitudes of instances are to be found where extraordinary gains are annually realized without apparent care or skill. Some years ago there was an orchard of 70 Mayduke cherry trees, a few miles below Philadelphia, the daily sales from which during the season amounted to \$80. A single Washington plum tree, in a city garden, has been known to yield six bushels of fruit, worth \$10 per bushel. A vineyard some sixteen miles from Philadelphia, occupying three-eighth of an acre, has produced \$300, when the grapes sold only for eight cents a pound, or at the rate of \$800 per acre. A single Catawba vine, in the same neighborhood, has produced ten bushels, worth \$40 at market prices.

No matter what fruit is examined, the same results are found to occur. A row of common gooseberries a hundred yards long have realized \$40. Two superior Apricot trees have produced \$100 worth of fruit in a season. There are Onondaga pear trees in New Jersey gardens which yield fruit enough, every season, to net their owners \$30 per tree.

Treatment of Fowls.

The *Country Gentleman* has a correspondent who writes as follows:—The best English chemists have pronounced kerosene oil to be the most effectual and harmless remedy known for the destruction of parasites upon animals and fowls. I have proved it by experience; the lice die at once and their extermination is almost certain. Two days' confinement is generally sufficient to overcome the incubating fever. I think it is by far the best and most humane remedy known. A very valuable remedy for sick fowls is jalap. I have often tried it, and been astonished at the rapidity of their recovery from disease; it is very efficacious in many diseases, and its timely administration would save many a valuable fowl; fourteen to sixteen grains made into a pill is a dose for a good sized fowl.

STAMP ALL ASSIGNMENTS.—We would call the attention of all corporations, stock companies and banking institutions to the fact that the Commissioner of Internal Revenue has lately decided that "an assignment of stock made by the owner which passes the title to the purchaser, whether made upon the bonds of the corporation or upon the certificate, is subject to stamp duty of five (5) cents." No general publicity having been given to this decision, the corporations, in consequence, have failed to comply with the law in this respect, the failure of which makes the transfer invalid.

HARDENING OF BURNT CLAY.—At Rivieres, France, they make tiles and bricks of a sandy clay which contains 32 per cent of chalk. When first burnt they are so tender that, unless they are carefully handled, they fall to pieces. As soon, however, as they are cold enough to touch, they are quickly removed from the furnace and carefully stacked. They are then soused with water, by the action of which they are so hardened that they may be used the next day for building. This fact is, perhaps, easily capable of a chemical explanation, and brickmakers may be able to gather a hint from it.—*Chemical News*.

GOLD may be purified from silver by quartation; that is, fusing it with three times its weight of silver, and then acting on the mass with nitric acid; the gold is left as a dark powder, and may be fused after being washed.