

highly-wrought copper-plate. To artists, the most interesting capability of the invention is its power of transferring, in a few minutes, impressions of a drawing or sketch to a steel plate, line for line, touch for touch. M. Gerome, the celebrated French artist, made, in the presence of the French Commissioners of Fine Arts, a sketch of the head of a dromedary, which was prepared and printed from in a few minutes. The sketch was drawn with lithographic chalk. There is by Jules David a sketch—something between an etching and a wood-cut: the subject, a French cottage girl hearing a child read; also a dog by another artist, drawn with chalk and touched with India ink, wherein the spirit and manner of the drawing are so perfectly maintained that it is difficult at first to determine it other than the drawing itself."

#### Patent Extensions before Congress.

We notice that applications are now pending before Congress for the further extension of certain well known patents, of which the prominent ones are the famous india-rubber patents of Charles Goodyear, deceased—the Woodworth planing machine—Sherwood's Janus-faced lock—and Fitzgerald's fire-proof safe. The three last-named patents have each been extended, the patents have since expired, and are now, if we mistake not, the property of the public. Goodyear's rubber patents were extended by Commissioner Holt, under provisions of the general law of patents, made and provided, and will expire in June, 1865, unless Congress can be induced to prolong the term for another seven years.

It strikes us that, after an invention has received all the protection the laws afford, and has become the property of the public, Congress is not justified by any equitable principles in depriving the public of the indisputable right to continue such use; and it is a questionable proceeding, to say the least, on the part of Congress to interfere to extend patents by special act. The india-rubber patents of the late Mr. Goodyear are acknowledged to be the most valuable in existence.

Immense manufacturing establishments have grown up under the protection afforded by law to these patents, and the public have been compelled to pay enormous profits to those concerns without the right to participate in the manufacture of the goods. This is a monopoly of which (so long as the principles of the patent laws have been carried out) we do not complain, but it seems to us now that, after a monopoly of twenty-one years, the people should be allowed to avail themselves freely of the right to use these inventions without let or hindrance. We have not the statistics before us of the receipts and expenditures under these Goodyear patents, but observation satisfies us that they are among the most valuable franchises now existing; and, so long as they exist, the people must be taxed to support the wealthy monopolists who control them, and have no power to check their rapacity; not only this, but protected by extended patents, they can not only exact their own tariff of prices, but can effectually crush out all attempts on the part of other inventors to make improvements in this branch of the art.

This point is one which we urge as a very strong reason why Congress should decline to listen favorably to the prayer of the petitioner.

We all recognize the utility and value of patents; the prosperity of the whole country is due in a great measure to the influence of invention in all the industrial arts. We all recognize also the justice of affording protection to all good improvements, and our patent system is acknowledged to be in this respect a model of excellence, but it is not designed to hedge up the field of discovery by perpetuating patents beyond a reasonable limit; and the people consented, under the act of 1836, to allow protection to inventors for a period of fourteen years, with the right of extension for a further term of seven years, under certain conditions, after which the right to use the invention belongs to the public.

Now unless Congress respects the laws of its own making, and regards with care the interests of the people in such matters, there is no telling what abuses may arise. If the Goodyear patent is extended by Congress, the heirs are to have five per cent of the net sales of goods, to which must be added the enormous manufacturing profits. We submit that this system of taxation is one against which the people have a

just right to complain and we trust that Congress will set its seal of disapprobation upon the whole scheme by refusing the application.—*Bridgeport (Conn.) Standard.*

#### MISCELLANEOUS SUMMARY.

**DEATHS FROM CHLOROFORM.**—"Out of fifty-one cases of death from chloroform, thirty-eight declared their danger by sudden stoppage of the pulse; twenty-five of these showed in addition, as a chief sign, pallor of the countenance. In two deaths the symptoms have occurred thus:—sudden vomiting, instant cessation of the pulse (food had been taken just before). In six cases congestion of the face was the most marked symptom. In eight cases cessation of the breathing was the most noticeable symptom. What is to be done in cases of threatened death? There is only one perfect stimulus to the failing heart—the stimulus of aerated blood; and the only means of producing this is by the excitation of respiration. Artificial respiration may be practiced by one or two postural methods—that of Dr. Silvester, or that of Marshall Hall; or by mouth to mouth insufflation, or by galvanism of the phrenic nerve. Before any means for artificial respiration are adopted, the tongue should be well drawn forward. A great error would be committed if a patient in *extremis* were wheeled round to an open window. Dr. Richardson has well established the value of warmth as an adjunct to the respiratory efforts."—*Dr. Sanson in Medical Times and Gazette.*

Dr. Ziegler, one of the editors of the *Dental Cosmos*, adds:—"Arterialization and respiration can be most readily induced in asphyxia, by nitrous oxide, either in its gaseous form through the lungs, or condensed in water and introduced into the alimentary canal by the mouth or bowels."

**THE MAPLE SUGAR CROP OF 1864.**—From present indications there is little doubt that the maple sugar crop of 1864 will vastly exceed that made in any previous year. The season thus far has been a good one, and favorable for the early commencement of operations. We have had for the past two weeks a succession of sunshiny days and freezing nights. In all probability the crop of maple sugar at the north for the present year will reach 25,000,000 pounds, worth, at the low estimate of 15 cents per pound, \$3,750,000, an important item in the sugar product of the country. This will be but a small amount of the sugar consumed in the whole country, yet it will go far toward supplying the deficiency caused by non-production at the South. Few people comprehend the great amount of sugar annually used in the United States. In 1862 it is estimated that the total consumption of sugar, both of the North and South, was 482,411 tons, or nearly 29 pounds to every man, woman, and child. This consumption was largely decreased in 1863, and will be still more so during the present year. By the manufacture of sugar from the maple and from sorghum, the North will soon be independent of all foreign sugar-producing countries.—*Detroit Tribune.*

**WHITE BEESWAX.**—Have a hard-wood board made in the shape of a shingle, then put the wax in a pot of hot water over the stove. While the wax is melting soak the board in warm water to prevent the wax sticking to it, then dip the board into the pot of water and wax as you would to dip candles, and you will have a thin sheet of wax on the board. This you can loosen with a knife so it will slide off. Then dip as before, and so on until you have dipped all the wax off. Take these thin sheets of wax and spread them on a white cloth in the hot sun until they are white, afterwards melt and cake.

**TO RESTORE FADED PHOTOGRAPHS.**—The prints should be unmounted by soaking in water for a time, and then immersed in a saturated solution of bichloride of mercury, in which they may be left for two or three minutes, and afterwards thoroughly washed. The change takes place directly they are in the bichloride solution.—*Br. Jour. Phot. Almanac for 1864.*

The new planet (No. 70), discovered by the American astronomer, Mr. Watson, on Sept. 19, 1863, has received the name of Eurynome, a daughter of Oceanus and Thetis, and according to Hesiod, the mother of the Graces, by Zeus.

**BEES AND HONEY OF GREECE.**—The honeys of Hybla and Hymettus are at this day almost as celebrated as they were in the time of the classical Greek poets; the honeys of Cerigo, of Zante, and many other places, continental and insular, are all fine, and each has its admirers. The honey of Leucadia is, perhaps, almost as good as any, and the descendants of the bees that fed Ulysses deserve some consideration. I was interested, then, in the little bee-garden on the site of the city of Leucas. It was a rocky, barren-looking spot, and did not at first sight seem promising, for the whole ground for a great distance around looks naked and without vegetation; but it is not really so. Every little crevice or interval between two stones, whether large or small, and not a few holes made by vegetation in the solid rock itself, contain some little flowering plant especially patronized by the honey bee. Rosemary and sages abound. I was not much surprised, therefore, to see the bees, but the hives rather puzzled me at first. They consist of small oblong boxes placed on end on a low stone, each box being covered by two or three tiles, evidently to keep off the heat of the sun in the summer. Two round holes, each about half an inch in diameter, sufficed for the bees, to enter and emerge, and it did not seem to matter much where the holes were pierced. The boxes were constructed in the roughest manner, and seemed to be not two feet apart, and each box was about twenty inches high, and nine inches square. The bees were exceedingly busy and perfectly good-tempered.—*Ansted's Ionian Islands in 1863.*

At the last sitting of the French Academy of Sciences, M. Coombs described a new system of locomotives now in use on the Northern railway so constructed as to surmount considerable declivities and to describe curves of a small radius. These engines have four cylinders and six axle-trees divided into two groups of three each, moved by the pistons of one pair of cylinders. The wheels are so small that the fire-place of the boiler extends beyond them, whereby the fire requires the unusually large surface of 3-33 square metres. [A metre is about 39 inches  $\frac{1}{4}$ th.] The engines are provided on starting with 8,000 kils. [a kilogramme is  $2\frac{1}{2}$  pounds] of water and 2,200 kils. of combustibles; their total weight is then 60,000 kils. equally divided on the six axle-trees. In order to facilitate the describing of small curves, a little play is left between the flanges of the wheels which keep the train within the rails and the rails themselves; moreover, the axes have some play in their sockets. By these various contrivances combined, the new engines have mounted gradients of 25 millimetres, (a millimetre is  $\frac{1}{25}$  of an inch) and described curves of 80 metres' radius.

THE "Berkshire Sand Company," of Massachusetts, which for many years has been doing a very large and prosperous business, has recently purchased a most valuable property in Bennington county, Vt., in and about Dorset, and lying on the Western Vermont railroad, containing a series of sand beds said to surpass any in New England, the sand being of the softest and finest quality for glass purposes. These beds formerly belonged to and were worked by the "Brooklyn Flint Glass Company," and from which the company obtained its supply.

THE Danish engineers have discovered an ingenious and simple (?) contrivance for keeping their opponents exposed to a heavy fire, by a sort of invisible fence made of strong wire, supported at stated distances by timber posts inserted in the ground. It must take, at all events, some precious minutes to overcome this obstacle, during which the attacking troops would be open to a destructive fire without any shelter. The entrenchments at Duppel are surrounded by these formidable barriers.

THE GOODYEAR PATENT.—Before the House Committee on Patents on the 25th of March, Messrs. Clarence A. Seward and James T. Brady appeared for the extension of the Goodyear Patent, and Messrs. Fuller and Horace Day of New York, E. S. Day of Connecticut, Parsons of Providence, and Spofford of Boston, appeared against it. The petition and remonstrance were filed, and the hearing then adjourned to April 7th.

EIGHT thousand school-houses have been erected in Russia since the emancipation of the serfs took place.