

we mean on the outside, and when we first discovered its approach we made a rush for hair restoratives, poultices, flying sinapisms—indeed anything to save us from a bald head—but in vain; we could neither coerce nor coax a spear of wool to grow where it ought to grow, and we have at last yielded to our bare-headed fate. Seriously, we do not think the thing can be done, and the advertised hair restoratives are usually money-traps, to gull the public; all certificates to the contrary, notwithstanding. A gentleman of our acquaintance has informed us that he has improved his hair crop by the free use of Castile soap and water with a generous rubbing—a simple remedy which it will do no harm to try.—Eds.

ANNUAL PETROLEUM PRODUCT.

A very full and interesting annual review of the petroleum trade is given in the *Shipping and Commercial List and New York Price Current*. From it we learn that no less than 28,000,000 gallons were exported during the year 1863. This export was as follows:—From New York, 19,547,604 gallons; Boston, 2,049,431; Philadelphia, 5,395,738; Baltimore, 915,866; Portland, 342,082. In 1861, the total export was only 1,112,476 gallons; in 1862, 10,857,701 gallons. This trade has sprung into existence with such rapidity and attained to such dimensions, that it appears almost like the work of some great wizard. A few years since, some persons, while boring for water in an obscure Pennsylvania valley, were surprised to find their labors culminating in an oil instead of a water-spout. The event caused great excitement; other wells were soon sunk, with like results, until finally the rocky chambers of that valley have become the natural laboratory which supplies all the rural mansions and cottages in America and Europe with beautiful artificial light to cheer the long winter evening hours. Next to gas, refined petroleum gives the most clear light, while it is also the cheapest ever used by man; we therefore hope, for the good of our fellow-men, that the supply of it will long continue to be copious.

Since petroleum was first introduced, great improvements have been made in refining it. Formerly it produced an offensive odor while being burned, and it was usually of a dark color. That which is now generally used is freed from disagreeable smell, and is as clear and colorless as water. The present price of the crude is 31 cents per gallon; refined, 53 cents. The quantity exported in 1863 amounted to 252,000 tons weight, and engaged no less than 252 ships of 1,000 tons burden each, to carry it. It has become one of the most important of our national products. The value of 28,000,000 gallons of the refined article is no less than \$14,840,000, but not over one-half of the quantity forwarded was refined; still, with this allowance, our petroleum has brought the country \$11,900,000 during the past year—a snug little sum for such a young trade. While in conversation, a few days since, with a gentleman engaged in this business, he stated that the export for the next year would, in all likelihood, greatly exceed that of the past twelve months, and would probably reach forty millions of gallons.

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:—

Deflecting Window for Railroad Cars.—This invention consists in having the frame of the car window hung on central pivots, and arranged in such a manner that it may be adjusted in an oblique position relatively with the car body, so as to deflect dust, cinders, &c., from the car while it is in motion and at the same time admit of a passage of air out from the car, and also admit of being so adjusted as to cause air to enter the car through the window when there is no dust to contend with. George Mann, Jr.; of Ottawa, Illinois, is the inventor of this improvement.

Horse Hay-fork.—This invention relates to a new and improved horse hay-fork, such as is used for elevating hay in barns. The invention consists in the employment of one or more spiral or screw tines attached to an arbor which is fitted in a suitable head having steady tines or ends attached to it, these parts being used in connection with a pawl and ratchet or other device to serve as a fastening for the above, all being so arranged that large loads may be elevated

by the fork. T. H. James and H. James, of Stockport, N. Y., are the inventors of this improvement.

Nail Machine.—This invention relates to machinery for the manufacture of forged nails, more especially horse-shoe nails. In the manufacture of such nails by machinery it is difficult to produce as thin or fine a point as is desirable by a hammering or drawing operation. The plan adopted in this invention is to cut the points, after having reduced the nail as much as desirable by hammering or drawing. The improvement consists in the employment, in a machine for making forged nails, of cutters so constructed and applied that they will serve the purpose of cutting the metal from the side of the nail to reduce the thickness and produce the desired form of the point. It also consists in the employment, in combination with such cutters, of a moving finger or presser, so arranged in combination with a fixed guide as to press the nail against such guide and hold it in contact therewith, and in proper position during the operation of cutting the point, and so to act upon the point before or during the cutting operation as to bring it into line with the center of the nail when the cutting is completed. Daniel Dodge, of Keeseville, N. Y., is the inventor of this improvement.

Horse Hay-fork.—This invention relates to an improvement in horse hay-forks which are provided with a bail or sustaining bar, and a brace or toggle-joint bar, the latter serving to hold the fork in proper position while being elevated with its load, and admitting, when its joint is shoved out of line with the two parts or bars which it connects, of the load being discharged from the fork. These forks have been much used since being introduced to the public, and have given general satisfaction, the only material objection urged against them being the effort required to actuate the toggle-joint bar in order that the fork may discharge its load. The object of the invention is to obviate this difficulty, and to that end it consists in applying a lever to the fork in such a manner as to act against the toggle-joint bar, and cause the latter, with a quite inconsiderable effort on the part of the attendant, to be so used or adjusted as to admit of the load being discharged. J. D. Halsted, of Rye, N. Y., is the inventor of this hay fork.

Improvement for Removing Obstructions from Harbors and Rivers.—This invention consists in providing, in the interior of a vessel propelled by steam, sails or other means, a fixed working chamber with an open bottom and into which air is compressed as in a diving-bell, to permit persons to operate within it below the surface of the water so as to be protected from an enemy's projectiles by the water. It also consists in the combination with such chamber of an air-lock, so arranged below the surface of the water as to permit persons to pass through it on their way to and from the working chamber. Benjamin Maillefert and Levi Hayden, of No. 108 Wall street, New York city, are the inventors of this improvement.

Eccentric Valve for Steam Engines.—This invention consists in a certain novel construction of an eccentric and its encircling strap, whereby it is made so to operate the valve as to give a full opening to the ports, both for induction and eduction, during the first quarter of the stroke of the piston, and to close the ports during the last quarter of the stroke, leaving the valve stationary and the ports full open during the second and third quarters of the stroke, by which is maintained not only the full pressure of steam on the piston more nearly to the termination of its stroke, but to provide for a freer exhaust than is possible when the valve is connected with a common eccentric, thereby obtaining the full power of the engine and enabling it to work at a higher speed and keep up a more steady motion. Wm. G. Snook, of Corning, N. Y., is the inventor of this improvement.

Method of Removing Torpedoes and Obstructions from Harbors and Rivers.—This invention consists in the removal or destruction of torpedoes or other submerged or partly submerged obstacles, or obstructions from harbors, rivers and other waters, by throwing over them from a mortar or mortars on board of a vessel placed at a suitable distance, projectiles which are furnished or have attached to them, hooks or other grappling devices, and connected with the vessel by ropes or chains of suitable length and then propelling the vessel in a direction to produce a draft on the said ropes or chains and drag away or destroy the said obstructions or obstacles. By this means the

vessel employed in removing the obstructions is not liable to be damaged by the explosion of torpedoes. Charles Sholl, of Brooklyn, N. Y.; is the inventor of this improvement, and it has been assigned to F. A. de Mey, of No. 49 Broad street, New York.

Manufacture of Glass.—This invention consists in the employment for what is termed the finishing of glassware, of a furnace and pots of the same kind as are used in the melting process, whereby goods are produced having a brighter and cleaner surface than goods finished by the use of any other kind of furnace, as the glass while being finished is not exposed to the fumes of sulphur or to smoke, dust or any other deleterious agency. It also consists in providing in the outer shell of a glass furnace a system of air flues which are open at the top and the bottom on the exterior of the shell or cone, the lower opening being arranged at a suitable distance from the floor of the glass-house for the reception of the heated and impure air, and the upper ones for the discharge of such air above the roof of the house, and the said flues serving both for the ventilation and cooling of the house and for the reduction of the excessive heat of the shell of the furnace. John L. Gilliland, of Brooklyn, N. Y., is the inventor of this improvement.

Revolving Fire-arm.—In revolving cylinder fire-arms which load at the rear of the cylinder there have been many different constructions of the frame and modes of applying the cylinder to provide for loading. One mode of applying the cylinder, which admits of a very simple construction of the arm, is to attach its axis pin to a swinging support, which permits the cylinder to swing outward from the other parts of the arm in a lateral direction; but as the said pin has only been attached at one end to such support, the attachment has not been sufficiently firm and durable. The object of the first part of this invention is to afford a better support for a so-called revolving cylinder and its more durable attachment; and to this end it consists in the employment, within the main frame of the arm, of a laterally-swinging frame, constructed to support both ends of the axis pin and to fit within recesses in the main frame. The second part of the invention consists in a novel mode of applying a plunger in combination with a cylinder having such a swinging movement for the purpose of expelling the discharged cartridge shells from the chambers and cleaning them, whereby, while remaining attached to the arm, the said plunger is permitted to have the necessary movements for the purpose, and when not in use is permitted to lie close under the stationary barrel, out of the way. H. A. Briggs and S. S. Hopkins, of Norwich, Conn., are the inventors of these improvements, and C. A. Converse, of Norwich, Conn., may be addressed in relation thereto.

Postage Revenue Stamps.—The stamps at present in use for postage and inland revenue can, after being canceled, be easily restored beyond detection except by the most careful examination, owing to their being printed solely with indelible ink, and to the inks commonly used for their cancellation, viz., printer's ink for postage stamps, and writing ink for revenue stamps, being of a fugitive character. The object of this invention is to prevent the restoration of such stamps and thereby to protect the government against loss by their fraudulent second use, and to this end it consists in printing such stamps partly or wholly with fugitive ink, the impression of which will be destroyed or removed by the means that would be likely to be employed for the removal of the fugitive ink employed in their cancellation. Abraham J. Gibson, of Worcester, Mass., is the inventor of this improvement.

Dyeing and Printing Textile Materials.—This invention relates to a mode of applying that class of colors derived from aniline, naphthaline, nitro-benzine, cinchonine and analogous substances to the obtaining of patterns or designs upon textile materials and fabrics, and it consists in the employment of tannin, either alone or in combination, for the purpose of fixing colors derived from aniline or analogous substances on to textile materials and fabrics, in such a manner that cheap and fast goods can be produced. Robert H. Gratrix, of No. 69 East Twenty-seventh st, New York, is the inventor of this improvement.

It is stated that forty thousand dollars worth of Massachusetts marble has been used in the capitol at Washington.