

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:—

Apparatus for Boring Wells.—The object of this invention is to improve some of the devices and appliances used in connection with a derrick for boring oil and other deep wells, and it consists in applying a brake to the windlass on which the drill rope is wound, so as to control the descent of the drill when it is to be lowered in preparation for work; also in placing a pulley in front of the windlass of the sand-pump rope, so that the rope shall be wound thereon square, although the windlass may not be directly in front of the derrick; also in a mode of making the frame which sustains the windlass of the sand-pump rope. P. H. Hynes, of Cooperstown, New York, is the inventor.

Combined Envelope and Letter Sheet.—This invention relates to a new and improved combination of an envelope and letter sheet; which, it is believed, possesses advantages over the various plans hitherto devised for effecting the same end. The invention consists in applying flaps to the letter sheet in such a manner that when the sheet is folded with a single fold, the flaps may be turned over the folded sheet and gummed, so as to securely conceal the face side of the letter sheet and render it impossible to see its contents and the invention at the same time admitting of the flaps being widely torn open without at all injuring the letter sheet, and the letter sheet, when folded and the flaps gummed over it, having the appearance of an ordinary detached envelope with a letter sheet within it. Chas. Rowland, Clinton, Ill., is the inventor.

Improved Lamp Wick.—This invention relates to a new and improved lamp wick, and has for its object, the constructing of the wick in such a manner that it may be adjusted, raised and lowered in the wick tube by means of a serrated wheel, and always be under the perfect control of said wheel. There has hitherto been a great difficulty in adjusting lamp wicks in their tubes by means of serrated wheels; the wick, if supplying the flame properly by capillary attraction, being too loose to be operated upon perfectly by a serrated wheel, the latter being inclined to catch and stick in the loose texture; and, if the wick be made sufficiently hard or compact to obviate this difficulty, another one presents itself in the form of a lack of capillary attraction, and the flame consequently is poorly supplied with the burning fluid or oil. This invention, it is believed, fully obviates these difficulties, and to this end it consists in inclosing a series of loose fiber longitudinally within a case knit or woven so as to form a close or compact covering for the loose fiber, and without interfering in the least with the capillary attractive power of said fiber, from a firm or compact exterior from the serrated wheel to act upon. Person Noyce, Lowell, Mass., is the inventor.

Starter Brake for Railroad Cars.—This invention relates to a new and useful device to be applied to railroad cars and other wheeled vehicles to serve as a brake and also to assist the vehicle in starting, the parts being arranged in such a manner that the impetus or momentum of the vehicle, when the device is applied as a brake to stop the vehicle, will be husbanded or stored up and made to apply itself to the vehicle as a motor in starting the same. The invention is more especially designed for street or horse-railroad cars, and to relieve the horses in starting them. Street cars are generally constructed to carry a large number of passengers, and a team can draw a great number when the car is fairly under way. The great difficulty occurs in starting, and as cars of this class are necessarily stopped at very short intervals, in order to take in and let out passengers, any means which can relieve the team or assist it in starting the car will not only effect a saving as regards the labor of the team, but will also greatly expedite the progress of the car on its route. Thos. R. Sinclair, New York City, is the inventor.

Tanning Apparatus.—This invention relates to an apparatus which is intended particularly to reduce the labor required for handling the hides or skins

during the process of tanning. This purpose is effected by the use of baskets provided with a large number of hooks or crossbars on which the hides or skins can be hung, said baskets extending down into the pits, and being suspended from truck frames which rest on suitable rail tracks, in combination with a crank shaft, connecting by suitable rods with said baskets, in such a manner that by turning the crank shaft a reciprocating motion is imparted to the baskets, and the desired agitation of the hides in the tanning liquor is effected. The operation of laying away the leather for the purpose of increasing its weight is also facilitated by the use of baskets which are provided with tilting bottoms, and which are fitted with alternate layers of tan and leather, and immersed into the pits partially filled with tanning liquor in such a manner that the entire mass of leather can be raised from the pit and lowered therein in a short time; and when it is desired to take the leather out, the operation can be effected with ease and facility simply by raising the baskets and allowing their bottoms to swing open. Henry Leibernann, Paducah, Ky., is the inventor.

OPINIONS OF THE PRESS.

The Erie, Pa., *Dispatch*, says:—"We have received the prospectus of this able paper for 1866. On the 1st of January next it will commence a new volume. To those of our readers who are engaged in scientific or mechanical pursuits we shall be doing a favor in pointing to some of its excellencies. Having been ourself, for fifteen years, a practical mechanical engineer and machinist, we believe we have a right to express a decided opinion on the merits of this unequalled mechanical journal. Its publishers are too modest when they term it the 'best paper in the United States, for mechanics, inventors and manufacturers.' It is the best either in this country or Europe. A mechanic might almost be without the tools of his trade, or his tables of mensuration and of the comparative qualities of substances as without the *SCIENTIFIC AMERICAN*. Unlike popular journals generally, this never publishes mechanical or scientific trash, or gives notoriety and countenance to mechanical humbugs. We never knew one of its recipes or directions for doing work to fail. Its illustrations are not surpassed, if equaled, by those of any other publication, and its explanations are always lucid and plain. Its value to the inventor, in presenting weekly a full list of patents, with specifications, can hardly be estimated. To the progressive mechanic, the intelligent farmer and the scientific student, its editorials, reports and comments on mechanical progress are invaluable. Although not now in the strictly mechanical line, we regard it as among the most valuable of our exchanges. Every mechanic should take it."

The Rochester *Evening Express*, says:—

This meritorious publication enters upon a new volume on the first of January prox., and issues its prospectus for the year 1866. It has been in the field for upward of twenty years, and so well has its conductors met the public want for a magazine of its kind that no similar publication has been able to compete with it. Several such have been commenced since the *AMERICAN* attained its great popularity, but found the ground so well occupied that they failed to receive sufficient patronage for support, and were compelled to back out. The *SCIENTIFIC AMERICAN* is acknowledged on all sides to be the best paper in the country for mechanics, inventors, and manufacturers."

The Providence *Evening Press* says:—

"This paper has been published twenty years, and during that time has been the organ of the practical, mechanical and inventive talent of the country. It has been conducted with masterly ability and is a complete record of the principal inventions and discoveries of the day. Its articles are profusely illustrated, and all the principal tools and machinery used in workshops, manufactories, steam and mechanical engravings, woolen, cotton, chemical, petroleum, and other manufacturing and producing interests are fully described. Its several departments embrace popular and practical science in its application to the varied interests of the country. Household, horticultural, and farm implements are especially noticed, that a knowledge of all improvements in these directions may be as widely diffused as possible.

The Boston *Advocate* says:—

The prospectus of the magnificent weekly, known as the *SCIENTIFIC AMERICAN*, published at New York, by Munn & Co., is before us. What we have often said before, we reiterate now, that no mechanic, artisan, inventor, or manufacturer, should fail to subscribe for a paper which chimes so admirably with all these pursuits of life. Elegantly printed, illustrated with all the perfectness of art and genius, and so wholly devoted to mechanical improvement, it seems as that it properly makes a demand for universal circulation.

HAZELNUTS, and the bark of the boughs on which they grow, are found in perfect preservation and large quantities at great depths in the peat beds of Ireland. The nuts never contain a trace of the kernel, and the wood has generally decayed, leaving the bark as a tube.

The tenacity of cast copper is sufficient to support a weight of 19,000 lbs. to the square inch, or rather more than half as much as good cast iron.



A., of Pa., says:—"A patents the mode of making an article, also gets another patent on the production. B contends that the patent will not hold good on the production unless A confines himself to the first patent. A wants to know what is the use of a second patent, or patent on the production, as A considers himself secure by having the patent on the production, no matter how it is produced afterward." **ANS.**—Separate patents, both valid, may exist, one for the machine and one for the production. A new and useful article can be patented without limitation as to the manner of its production. It is always best, in important manufactures, to obtain as many securities as the patent laws will allow.

A. P., of Canada, asks:—"Why cannot you, who are so great a nation, be magnanimous, and extend to us the rights of other foreigners in regard to patents, even if we are narrowed in this thing?" **ANS.**—Our correspondent should remember that the United States laws permit Canadians to take out patents on payment of \$500. But by the laws of Canada, Americans are wholly prohibited from obtaining patents there. The Canadian Parliament has for many successive years refused to change their law so as to conform to similar laws of other enlightened nations.

J. B. W., of Va.—A portable engine is any engine that can be moved from place to place. The best engines are advertised in the *SCIENTIFIC AMERICAN*. You can use the exhaust steam for any purpose, if it is properly applied.

D. R. P., of Ky.—We have seen no satisfactory proof of the great economy claimed for the engine spoken of.

H. R. W., of N. J.—The substance you send us is French gelatin, prepared from colorless isinglass, and afterward tinted to suit the taste. It is said to be made of fish bones.

H. V. J.—A good quality of iron, resembling Russia iron, is made in Boston.

J. P. B., of Ill.—Chilled tools are cast from hard metal in an iron mold, cutting end down.

C. M. M., of Mass.—T. H. Leavitt, No. 49 Congress street, Boston, Mass., has published a work on peat, and has the machinery.

L. D., of Cal.—It is well known that sound travels faster in moist than in dry weather.

E. N. G., Pa.—We do not know where mezzo-tint tools could be had. Why do you not inquire of Sartain, in your city? **Constant Reader**, of N. Y.—Cows' milk may be retarded from souring by the addition of a small quantity of carbonate of soda, say a piece as big as a large pea to a quart. A better way is to drink it while fresh.

S. W. B., of Ill.—If a thing is patented the date of the patent must be stamped thereupon. If not patented, it is an offense so to stamp.

J. B., of Pa.—We are always ready to publish any suggestions in relation to ornamental design, provided they have any force or interest.

J. H. R., of Ill.—The construction of a boiler 12 feet in diameter, of Bessemer steel, that would sustain 5,000 lbs. to the inch, is probably within the power of mechanical art, but such a boiler would be enormously expensive—too expensive to be practical.

J. H. P., of Mich.—The porcelain lining of cast-iron pots is baked on at a high temperature; it could not be applied to wood.

The Crank Motion.

Watt devised no fewer than five distinct methods of obtaining rotary motion without using the crank, by means of wheels of various sorts rotating round an axis. The motion eventually preferred was that invented by Murdock, and known as the sun-and-planet motion, which has the singular property of going twice round for each stroke of the engine. Watt has spoken of the sun-and-planet motion as an old plan of his own, revised and executed by William Murdock, but the late Mr. Josiah Parkes has stated that at an interview he had with Mr. Watt, at which Murdock was present, the latter spoke of the sun-and-planet motion as his invention, which Watt did not contradict. Boulton has also attributed the invention to Murdock, in an authenticated letter written about the time the motion was being patented. One of the original Boulton and Watt engines, fitted with the sun-and-planet motion, still exists at the brewery of Messrs. Combe and Delafield. The engine is used occasionally when the more modern machine is stopped, and does good work.—*Mechanics' Magazine*.

From the experiments made by Prof. Thomson, of Copenhagen, on light as a source of motion, he calculates that the light emitted by the sun would lift thirty-five billions of tons one billion of kilometers high per second, and that it would raise the earth twenty feet at the same time.