

27,729.—John V. S. Adriance and Joseph W. Clark (assignors to J. V. S. Adriance and Benjamin G. Kelly), of Buffalo, N. Y., for an Improved Refrigerator:

We claim the combination of a refrigerator, constructed in the manner set forth, with a provision chamber, when said provision chamber is provided with double glass walls or sides, with an air space between said walls, the two being so arranged and constructed that the provisions within will be exposed to view, while a current of cold air from the ice-box is being constantly circulated through the provision chamber, substantially as specified.

26,730.—Wm. C. Allison (assignor to himself and John Murphy), of Philadelphia, Pa., for an Improvement in City Railroad Cars:

I claim the arched reflector, H, its plate of glass, I, and the lamp, G, when arranged on and adapted to the overhanging portion, D, of the roof, in respect to the window, F, and the other windows of the car, substantially as and for the purpose set forth.

26,731.—Solomon N. Carvalho (assignor to himself and L. K. Bowen), of Baltimore, Md., for an Improved Apparatus for Superheating Steam:

I claim, first, Subjecting steam, while undergoing the superheating process, to the action of the metals named, as and for the purposes set forth.

Second, I claim the arrangement of the pipes, the valves and the retort, or its equivalent, for conveying from, heating and returning to the boiler, or its connecting steam dome, the steam, substantially as described.

26,732.—L. R. Dreyse (assignor to himself and James E. Blythe), of St. Louis, Mo., for an Improvement in Ruling Machines:

I claim the application of the pen-holder, D, to the pen-holder, B, substantially in the manner described for the purpose specified.

26,733.—Thomas Fry, of Brooklyn, N. Y., and Charles A. Seely, of New York City, assignors to William Campbell, of Jersey City, N. J., for an Improved Mode of Backing-up Pictures on Glass:

We claim the process of using wax, stearine, spermaceti, or other substance or composition substantially the same, for the purpose of backing-up, and as a medium of color for the chemytype and other pictures or designs on glass.

26,734.—Theodore P. Gould, of Niagara Falls, N. Y., assignor to Stephen V. R. Watson, of Buffalo, N. Y., for an Improvement in Breech-loading Firearms:

I claim the relative arrangement of the powder magazine, A, the ball magazine, C, and the sliding breech, D, for the purposes of a breech-loading gun, substantially as set forth.

I claim so arranging the valve, R, in relation to the barrel, B, and stock, G, that when the barrel is unscrewed in the act of loading, the said valve will open automatically, and when the barrel is turned back to its place the said barrel will close automatically and fit tightly over the mouth of the tube, thus preventing all danger of igniting the powder in the magazine by the discharge of the gun, substantially as described.

26,735.—John S. Gray, of Hartford, Conn., assignor to himself and David Lyman, of Middlefield, Conn., for an Improvement in Washing Machines:

I claim the combination of the rollers, C, C, with the turning frame, B, having proper forked or slitted projections to secure the roller frame to the tub or box, when arranged and operating substantially in the manner and for the purpose described.

26,736.—James A. Hamer, of Reading, Pa., assignor to himself and Norris Maris, of Kimberton, Pa., for an Improvement in Brick Molds:

I claim, first, The interposition of vulcanized rubber, or its equivalent, between the ends and sides of the mold, substantially as and for the purposes set forth.

Second, The combination and arrangement of the cams, ff, levers or arms, I, I, inclines, and grooves, h, with the sides and ends of the mold, substantially as and for the purposes set forth.

Third, The secondary cams, g, g, in combination with the outer division pieces of the mold, as and for the purposes set forth.

26,737.—Peter Hinds (assignor to himself and W. Van Name), of Cedar Run, Pa., for an Improvement in Cant Hooks:

I claim attaching or connecting the hook, C, to the handle, A, by means of the socket, D, the hook being provided with the curve, a, at one end and the ledges, e, at its center, substantially as shown, to admit of the two adjustments of the hook, for the purpose specified.

26,738.—Thos. E. Hunt (assignor to Hunt Brawner & Co.), of Louisville, Ky., for an Improvement in Grinding Mills:

I claim the combination of spring, o, with the cutting blades, M, in the manner and for the purpose substantially as set forth.

26,739.—Franklin W. Willard, of New York City (assignor to E. G. Allen, of Boston, Mass.), for an Improvement in Coal Retorts:

I claim, first, The construction of coal oil retorts with internal false or extra heads at either end of the retort, and held at proper distances from the head proper by means of stays or studs, as described, the intervening space between each of the false heads and the end of the retort being filled with clay or other non-conducting material, substantially in the manner and for the purposes specified.

Second, The use of the circular plate, r, hung upon the false head, p, and operating as described.

26,740.—Marcus A. Winham (assignor to J. B. Low and F. Smith), of San Juan, Cal., for an Improvement in Valve Chests for Hydraulic Mining:

I claim the arrangement for controlling by means of a chest or distributor, provided with suitable gates, valves or stopcocks for the purpose of cutting-off the water employed in hydraulic mining, substantially in the manner as described and set forth in the specification.

26,741.—John Wright (assignor to James Chesterman), of Sheffield, England, for an Improvement in Tempering Steel. Patented in England Oct. 16, 1857:

I claim preparing strips of steel for hardening and tempering by drawing the same through a metal fire-clay tube, heated in a furnace, constructed and arranged to operate substantially in the manner and for the purpose set forth.

EXTENSION.

W. H. Robertson (formerly of New London, Conn.), of Havana, Cuba, for an Improvement in Mattresses. Patented Dec. 17, 1846; ante-dated January 2, 1846:

I claim, first, Making mattresses by confining within a ticking or tickings (made of any material) layers of glazed cotton batting or unglazed batting with glazed paper or cloth interposed, substantially as described, to prevent the fibers of the different battings and those of each batting from matting together, as described.

And, second, Confining the compressed cotton between two cloths, connected together by means of a cord or cords, when this is combined with ticking or outer covering, substantially as above described, whereby the cotton can be retained by the cords and cloths, in a state sufficiently compressed to admit of its being easily introduced in the ticking, or removed therefrom, as described.

RE-ISSUES.

Amy Coes, of Worcester, Mass., for an Improved Screw Wrench. Patented Aug. 16, 1853:

I claim the use of two screws in working the movable jaw of a wrench, so that said jaw will travel with the united velocities of said two screws, substantially as set forth.

Cyrenus Wheeler, Jr., of Poplar Ridge, N. Y., for an Improvement in Grain and Grass Harvesters. Patented Dec. 5, 1854:

I claim, first, In combination with the bar, II, and finger-bar, the intermediate shoe, M, hinged to said bar, II, substantially in the manner and for the purpose set forth.

Second, I claim, in combination with the hinged bar, II, a lever that when released allows said bar to freely swing around its pivoted points, and when fastened holds said bar firmly in its adjusted position, as described.

Third, I claim the shoe, M, both as a hinge and a support to the cutter-bar, substantially as described.

Fourth, I claim the socket or recess, n, in the shoe, M, for the reception of the finger-bar, substantially as described.

Fifth, I claim, in combination with a finger-bar, hinged at one of its ends to an intermediate piece, also hinged to the main frame, an elevating and supporting cutter or wheel for carrying that end of the machine, when adjusted for reaping or mowing, substantially as described.

Sixth, I claim the combination of a brace or support, t, on the shoe, and a similar brace and support, u, on the bar, II, for resisting the strain on the finger-bar when reaping, substantially as described, or for transporting it from place to place.

Seventh, I claim the flexible connection for elevating the outer end of the finger-bar, substantially as described.

Cyrenus Wheeler, Jr., of Poplar Ridge, N. Y., for an Improvement in Grain and Grass Harvesters. Patented Dec. 5, 1854:

I claim, in combination with the main frame of a grass harvesting machine, a finger-bar, so hinged by one of its ends only to the grain side of the main frame as that said finger bar as it is advanced by means of its hinge shall be free to rise above and fall below the plane on which the carrying or driving wheels are passing, substantially as described.

Cyrenus Wheeler, Jr., of Poplar Ridge, N. Y., for an Improvement in Grain and Grass Harvesters. Patented Dec. 5, 1854:

I claim, first, So hinging a finger bar by one of its ends only to the main frame, as that it may oscillate or turn around its longitudinal axis for the purpose of raising or lowering the points of the fingers, to adapt the machine to the condition of the ground or of the crop to be cut, substantially as described.

Second, I claim, in combination with a finger bar hinged by one of its ends only to the main frame, so that the points of its fingers can be raised or depressed, a connecting rod or pitman in two pieces, and so connected that one piece can turn independently of the other, for the purpose of preventing the cramping or torsion of said rod, when the finger bar is turned, substantially as described.

Cyrenus Wheeler, Jr., of Poplar Ridge, N. Y., for an Improvement in Grain and Grass Harvesters. Patented Dec. 5, 1854:

I claim a short finger-bar, so hinged by one of its ends only to an arm, brace or support, that is in turn hinged to the main frame in or near the line of the finger-bar, as that said finger-bar may rock or roll in the line of its length as well as rise and fall in a line transverse thereto, by being simply drawn over the ground, substantially as described.

Cyrenus Wheeler, Jr., of Poplar Ridge, N. Y., for an Improvement in Grain and Grass Harvesters. Patented Dec. 5, 1854:

I claim, in combination with a cutter bar, the shoe, M, and its hinge and a supporting piece, and its hinged connection to the main frame, the arranging of the pivots of said hinges at right angles to each other, and in or near the line of the finger-bar, as described.

Cyrenus Wheeler, Jr., of Poplar Ridge, N. Y., for an Improvement in Grain and Grass Harvesters. Patented Dec. 5, 1854:

I claim the use of two hinges, substantially as described, whereby the finger-bar may be folded to the main frame in the manner essentially as set forth.

Cyrenus Wheeler, Jr., of Poplar Ridge, N. Y., for an Improvement in Grain and Grass Harvesters. Patented Dec. 5, 1854:

I claim the combination of the drooping main frame, the loose tongue, and a hinged finger-bar, substantially as and for the purpose described.

Jesse Urmy, of Wilmington, Del., for an Improvement in Grain and Grass Harvesters. Patented July 24, 1855:

I claim, first, In combination with the driving wheel placed inside the gearing as above described, the angular tongue, for preventing side draft, and at the same time allowing the horses to walk on the side of the standing grass or grain.

Second, I claim the above-described use of the balanced dogs, b, b, under the driver's feet, for throwing the cutting apparatus in and out of gear.

Third, I claim making the parting and gathering board, f, hinged and adjustable, as set forth.

Fourth, I claim regulating the size of the sheave by means of the several ranges of gearing, p, p, within the driving wheel, in combination with the adjustable pinion, r, as set forth.

Jesse Urmy, of Wilmington, Del., assignor to David M. Osborne, of Auburn, N. Y., for an Improvement in Grain and Grass Harvesters. Patented July 24, 1855:

I claim, in combination with a closed guard, the projections on the top and bottom of the cutter bar, for the purpose of clearing out the grass and other matter which tends to lodge in said guard, substantially as described.

DESIGNS.

James Meyer, Jr., of New York City, for a Design for a Trade-mark.

N. S. Vedder and A. Murray (assignors to Potter & Co.) of Troy, N. Y., for a Design for Doors of Cooking Stoves.

N. S. Vedder and E. Ripley (assignors to Potter & Co.) of Troy, N. Y., for a Design for Side Plates of Box Stoves.

N. S. Vedder (assignor to Potter & Co.), of Troy, N. Y., for a Design for the Side Plates of Stoves.

N. S. Vedder (assignor to Potter & Co.), of Troy, N. Y., for a Design for the Doors of Cooking Stoves.

Literary Notice.

RURAL REGISTER. S. Sands & Mills, publishers, Baltimore, Md.

This most excellent and well-conducted monthly is devoted to agriculture, horticulture, rural life and general news; it is always brimming full of valuable information on the above topics.

Notes & Queries

S. S., of Pa.—All paint containing oil is liable to give off an offensive smell when applied to steam pipes. Black lead, mixed with a little turpentine, is a good coating for such pipes. The best way to paint floors is to give them three coats of any of the common paints, mixed with boiled drying oil, and allow each coat to dry perfectly.

ALFRED, of —.—About a year ago a paper was read before the Society of Arts, in London, which stated that the British navy at that time consisted of 67 fighting ships of all classes, of an aggregate burden of 65,230 tons, with a steam power equal to that of 100,000 horses, and involving a cost of \$14,700,000.

I. P. C., of N. J.—We thank you for sending us a club of subscribers. In regard to binding the SCIENTIFIC AMERICAN, we would state that if you should send us a thousand volumes for this purpose, we could not bind them as we are now doing in cloth for less than 50 cents. The binding is much superior to any other hitherto done by us.

I. B. S., of N. Y.—The mechanical part of the Patent Office Report for 1855 is published. Your only way to procure the report is to address your member of Congress. The Commissioner of Patents has only enough to supply the legitimate demands of the Office.

L. P., of N. Y.—Water led through a 6-inch pipe to a distance of 150 rods, from the foot of a hill, where it has a fall of 175 feet, will throw a higher steam than any fire engine in this city. With such a fall, and water flowing full through a 6-inch pipe, the power would be about 21-horse.

S. C., of Ill.—We are not acquainted with any substance which can be used as a substitute for borax in welding iron and steel. Its peculiar office seems to be that of a cementing flux, which promotes the union of the red-hot surfaces when sprinkled upon them before they are hammered together.

I. L., of N. Y.—You can make a small quantity of the soluble glass for experiment by boiling ground glass in a strong solution of caustic potash. The latter you can obtain where you live more conveniently than caustic soda. The boiling must be continued for a long period, and a close vessel should be used for the purpose to obtain a high degree of heat.

S. W. S., of N. Y.—Steel and iron are united together in anvils by melting the steel and casting it upon the iron in a proper mold; the iron is poured in first, then the steel. Great care must be exercised in pouring in the steel or a proper union of the metals will not be effected.

I. W. H., of N. Y.—A cement made of plaster-of-paris and alum water is very good for filling holes in millstones. It becomes very hard if suffered to dry before it is used.

H. R., of R. I.—To double the speed of a locomotive, it requires four times the power. The power increases according to the square of the velocity; and, in practice, it has been found that, to double the power of an engine, four times the amount of fuel must be consumed.

I. I., Jr., of Conn.—You will find the test for experiments with water wheels at Philadelphia described on page 67, Vol. I. (new series), SCIENTIFIC AMERICAN, in a communication from Mr. Birkenbine, the chief engineer of the water-works.

I. A. H., of Mo.—Ure's "Dictionary of Arts" gives a very full description of paper-making, as practiced several years ago; but it does not come up to the practice of the present day, nor is there any printed work which does so.

T. D., of N. Y.—The only way known to us to make artificial stone of close texture, by molding and without burning, is by the use of soluble silicates and sand ground to powder. Professor Hardinge, of Woodland, on the Bloomingdale road, near this city, can give you information on this topic.

A. M., of N. Y.—You cannot use the india-rubber backing for teeth when another person has a patent for such an application, even though you should have the india-rubber vulcanized by the patentee for the vulcanizing process. The inventor of the vulcanizing process himself has no right to such an application; it belongs to another patentee.

Money Received

At the Scientific American Office on account of Patent

Office business, for the week ending Saturday, Jan. 7, 1860:—
J. R., of N. Y., \$55; P. C. Y., of N. Y., \$30; C. & Z. W., of N. J., \$25; J. H. M., of Cal., \$35; W. H. P., of Ind., \$30; W. W. G., of Ill., \$30; N. C. S., of Conn., \$95; F. & S., of N. Y., \$30; C. B., of Ohio, \$25; W. L. F., of N. J., \$30; P. C. C., Jr., of N. H., \$10; A. F., of N. J., \$25; G. B. C., of N. Y., \$35; N. J. H., of N. Y., \$30; A. F., of N. Y., \$12; K. & S., of N. Y., \$30; O. H., of N. Y., \$25; W. D. A., of N. Y., \$40; I. G., of Ga., \$25; J. H., of R. I., \$30; J. C., of Maine, \$35; G. P., of Pa., \$30; G. & McC., of Ohio, \$30; G. K., of N. Y., \$30; H. K., of Ill., \$25; J. G., of Ga., \$30; D. & S., of N. Y., \$100; L. A. B., of N. Y., \$30; W. M., of N. Y., \$25; G. M. B., of N. Y., \$25; G. A. W., of N. Y., \$25; T. L., of Ill., \$25; G. C., of Ill., \$25; I. S. B., of Pa., \$25; W. S., of Pa., \$30; G. G., of Oregon, \$25; R. C. H., of N. J., \$25; T. I. G., of Mass., \$30; H. & J., of Ohio, \$25; S. A., Jr., of N. Y., \$30; L. F., of Mass., \$25; W. P. Jr., of N. Y., \$20; E. E. H., of Iowa, \$30; C. S., of Conn., \$25; E. H., of N. Y., \$25; E. P. & J. N. F., of N. Y., \$25; J. Van B., of N. Y., \$25.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Jan. 7, 1860:—

I. G., of Ga.; G. G., of Oregon; C. B., of Ohio; E. P., of Conn.; A. F., of N. Y.; C. B., of Mass.; P. C. C., Jr., of N. H.; A. F., of N. J.; J. Van B., of N. Y.; J. S. S., of Pa.; S. & K., of Ill.; J. C., of Maine; G. M. B., of N. Y.; H. M. P., of Mo.; L. F., of Mass.; K. & S., of N. Y.; Z. W., of N. J.; G. K., of N. Y.; H. & J., of Ohio; W. M., of N. Y.; E. P. & J. N. F., of N. Y.; C. M. P., of N. J.; G. A. W., of N. Y.; G. C., of Ill.; J. R., of N. Y.; R. C. H., of N. J.; E. H., of N. Y.

Rates of Advertising.

THIRTY CENTS per line for each and every insertion, payable in advance. To enable all to understand how to calculate the amount they must send when they wish advertisements published, we will explain that ten words average one line. Engravings will not be admitted into our advertising columns; and, as heretofore, the publishers reserve to themselves the right to reject any advertisement sent for publication.

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JUST PUBLISHED.—ENGINEERING PRECE-

DENTS FOR STEAM MACHINERY. By B. F. ISHAWOOD, Chief Engineer of United States Navy. Vol. I. Screw propellers, &c. Illustrated, \$2.50. Vol. II. Pistons, &c., with seven plates. \$1.50. BAILLIÈRE BROTHERS, Publishers, No. 440 Broadway, New York.

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Inventions, granted by the United States during the year 1846, will expire by their own limitations during the current year (1853) UNLESS EXTENDED ACCORDING TO LAW. The statute provides for the extension of Patents for an additional term of SEVEN YEARS, the grant being made to the inventor himself, or if deceased, to his heirs and administrators. The extended term inures solely to the benefit of the inventor or his heirs. Assignees or owners of rights under the first term of the Patent have no rights whatever in the extended term. The inventor or his heirs may, however, sell their interests in the Extension prior to the grant thereof, in which case the Extended Patent, when granted, becomes the exclusive property of such purchaser. Applications for Extensions must be made at the Patent Office at least 60 days prior to the extension of the Patent. The undersigned, having had great experience in Patent business, will promptly prepare the various documents and prosecute Extension cases on moderate terms. For further information address MUNN & CO., Solicitors of Patents, No. 37 Park-row (Scientific American Office), New York.

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