

28,130.—Duncan McKensie (assignor to M. A. E. McKensie), of Brooklyn, N. Y., for an Improvement in Ovens:

I claim the combination of the hot-air flues, D, escapes, K K, and flue, I, with the lower part or floor of the oven, C, as and for the purpose shown and described.

I also claim the enlargement and downward extension of the rear end of flue, I, in combination with flue, P, as and for the purpose shown.

I also claim the arrangement, in combination with the oven, G, of the flues, H I D, and the dampers, K K and L, as and for the purpose shown and described.

[This invention consists in the general arrangement and construction of a fire-place or places, with their arches and bridges or beds, and a system of escape flues which lead off from one side of the fire apartment towards the side of the oven, and conduct the heat directly from the fire and fire arches and flame bed into the oven to the top of the same, and down again, at the front and back ends of the oven, through a central flue which leads to the main escape pipe.]

28,131.—H. A. Reynolds (assignor to R. T. Wilde), of New York City, for an Improved Clamp for Bonnet Frames:

I claim the elastic clamp, constructed and operating substantially as described for purposes substantially such as that specified.

28,132.—John Stuber (assignor to John Carton), of Utica, N. Y., for an Improvement in Lamps:

I claim, first, The air chamber, I, and the air tube, K K<sub>2</sub>, as described, or substantially in that form, in combination with a shallow can, as described.

Second, The outer tube, D, in combination with the cap, E, chimney, L, and button, M, as substantially described.

28,133.—Eli Tiffany (assignor to himself and George Cooper), of Thompsonville, Conn., for an Improvement in Knitting Machines:

I claim, first, The single presser bar, D, and its arrangements, whereby it is made to operate and perform the duty of the two presser bars that are now usually employed.

Second, I claim the arrangement of the two sets of needles, crossing each other at right angles, whereby the bars of each are acted on by the single presser bar, D, reciprocally.

28,134.—G. W. Whipple (assignor to H. Rowell & Co.), of West Acton, Mass., for an Improvement in Powder Flasks:

I claim the described cut-off for powder flasks, consisting essentially of the gate, f, disk, d, and spring, m, operating substantially as specified.

28,135.—Benjamin Hardy (administrator of the estate of Aaron Williamson, deceased, late of New York City), assignor to himself and Thomas France, both of that city, for an Improvement in Narrow-ware Looms:

I claim constructing one portion of the raceway of a tongued plate, G, applied substantially as described, to constitute a guide, which leaves a continuous, unobstructed opening in front of the reed, clear across the loom, substantially as and for the purpose described.

28,136.—J. A. Brock, of Chicago, Ill., for an Improved Amalgamator:

I claim a revolving disk, e, subdivided into a number of receptacles, 1, 1, in combination with an upper revolving ribbed disk, o; the two disks revolving in opposite directions, so that the ribs of the upper disk carry the pulverized ore all over the surface of the mercury, and the lower disk carries the mercury in a still plane towards the ore, substantially in the manner and for the purposes set forth.

28,137.—J. A. Gray, of Albany, N. Y., for an Improvement in Pianofortes:

I claim, first, What is termed the full iron plate of a pianoforte with an upward projecting rim, c, along its back and sides and round the front corners, to form the upper portion of the exterior of the case, substantially as described.

Second, Casting the bottom, G, of the music rack or desk, and the brackets, b b, to which its sides are attached, with what is termed the full iron plate, substantially as specified.

28,138.—G. H. Jones and John Brown, of Rose, N. Y., for an Improvement in Water Wheels:

We claim the employment of the regulating lever, f, float, D, and gate, e, actuated by the discharge water of the wheel, to regulate the speed thereof, substantially in the manner and for the purpose shown and described.

RE-ISSUES.

Thomas Ellis, Wm. A. Ellis and A. D. Ellis (assignees of Thomas Ellis), of Philadelphia, Pa., for an Improvement in Casting Boxes for Wheel Hubs. Patented Dec. 6, 1859:

We claim supporting the sand core, E, between two sand heads, F, or their equivalents, when used in combination with a chamber, D, of uniform taper, in the manner and for the purpose substantially as set forth.

C. Aultman & Co., of Canton, Ohio, assignees of C. B. Brown, of Griggsville, Ill., for an Improvement in Grain and Grass Harvesters. Patented Dec. 7, 1852:

We claim, first, The bent main beam, so constructed as to serve as an axle for the driving wheel, a finger beam, and a support for the rear end of the tongue and the greater portion of the gearing, whereby the machine is rendered compact, strong and simple, substantially as described.

Second, Constructing the main beam of a reaper and mower with a variable bend, for the purposes substantially as described.

Third, The combination of the pallets, J, geared together, and the arm, G, or its equivalent, with the tappet wheel, C, or its equivalent, for imparting to the cutter a vibrating motion, substantially as described.

C. Aultman & Co., of Canton, Ohio, assignees of C. B. Brown, of Griggsville, Ill., for an Improvement in Grain and Grass Harvesters. Patented Dec. 7, 1852:

We claim, first, The combination of a skeleton track-clearer with the cutting apparatus of a mowing machine, substantially as described.

Second, The construction of skeleton track-clearers of a series of fingers, substantially as described.

Third, A yielding finger, or the equivalent thereof, in track-clearers, substantially as described.

Adolph Brown and Felix Brown of New York City, for a Machine for Cutting Loaf Sugar. Patented March 24, 1856:

We claim, first, The application and use of two or more rollers having brushes around their circumferences, and acting upon both sides of slabs of sugar, for the purpose of cleaning off the dust adhering to the same by the process of sawing, thereby re-producing the appearance of the crystals, as described.

Second, We claim, in a machine for cutting loaf sugar, the combination of two circular surfaces, with knives or cutters on each, and the knives or cutters opposite each other, substantially corresponding in form, and so combined that, in operation, the knives or cutters will act simultaneously on each side of the slab of sugar, in the manner and for the purpose substantially as described.

C. C. Bradley, Jr., of Syracuse, N. Y., for an Improvement in Grinding the Inner Surface of Cast Iron Kettles. Patented Feb. 24, 1857:

I claim forcing around the interior surface loose pieces of grinding material, by means of revolving wings or other sufficient apparatus which shall cause said loose pieces to revolve around, while they are left free to act upon the surface with which they are brought into contact, substantially in the manner and for the purpose set forth.

G. W. Hildreth, of Lockport, N. Y., for an Improved Mode of Hanging Bells. Patented June 19, 1855:

I claim the securing of the bell firmly to the yoke, and suspending the bell upon the shoulders of the bolt, c, passing through a round hole cast or made in the top of the bell and shank, by the nut and thread upon the end of such bolt, in combination with the round tapering shank of the bell, and corresponding tapering hole in the yoke.

H. H. Stimpson, of Boston, Mass., for an Improvement in Cooking Ranges. Patented April 5, 1859:

I claim, first, The combination of the flanges or projections attached to the side plates of the boiler chambers, with the grate constructed by as to admit air to the fuel from below and hung so as to allow of its free play, and made narrower than the firechamber, as described, whereby the contraction and expansion of the grate is prevented from injuriously affecting the remaining portions of the range or stove.

Second, In combination with the back plate, constructed as described, I claim providing the boiler chamber with flanges or projections of such shape and width as to lap over the lateral end of said back plate, whereby the said plate is allowed to expand and contract without deteriorating the parts adjacent thereto, and without leaving open spaces for the escape at the sides of the products of combustion, substantially as set forth.

Third, The use of the sliding covers, q q, in combination with the top plate, arranged to operate substantially as described.

S. H. Titus and O. Des Granges, of St. Louis, Mo., for an Improvement in Cellular Iron Pavement. Patented Oct. 13, 1857:

We claim combining together a series of hexagonally-formed ribs and a pump, so as to constitute a block of pavement of the form shown upon the drawing.

We also claim constructing each cell perfect in itself, and, by such construction, making the cells of the upper periphery of the block not only uniform, but adverting as ledges to support the same upon the adjoining block, and thereby distribute the superincumbent weight equally along the whole side of the block, substantially in the firm manner described.

ADDITIONAL IMPROVEMENT.

F. D. Newbury, of Albany, N. Y., for an Improvement in Revolving Fire-arms. Patented June 12, 1855:

I claim the application to cylinders having their cones placed within cells, or to cylinders so fitted as to require them being capped from the rear, of a guard, constructed of a ring of metal closed at its end by a disk, having appropriate openings for the access of the hammer to each cone, and with a door giving access to the cone cells; the guard being fitted to move independently of the cylinder, or in connection with it, as required, substantially in the manner and for the purposes set forth in the above specification.

Notes & Queries.

F. B. D., of Conn.—You seem to think that a manufactory of kindling wood in this city must be a novelty. In Cincinnati there is a large and prosperous concern devoted to the manufacture of wrought iron nails. Not long ago, we procured a patent for a man, living on Long Island, for a machine for skinning eels, and it would not be surprising to hear, one of these days, that a large establishment had been erected for the manufacture of these machines. There is no limiting the progress of inventions and manufactures in this country.

C. A. H., of Mass.—There is no work published in this city on wool-carding and machinery for woolen mills.

G. P. W., of N. Y.—A large wheel runs over an obstruction more easily than a small one. The draft of a vehicle varies in the inverse ratio of the diameter of the wheels.

G. W. R., of Iowa.—By running two pairs of burr stones of different diameters with the same spur wheels and pinion, we would expect back-lash in one of the pairs, if you have ample power for driving both at once. The pinions should always be proportioned to the size of the burrs. You should increase the speed of the smaller pair.

E. M. R., of Va.—A bill of exchange for £100 at par would cost \$444.44. To arrive at the cost of a foreign bill in our currency, at a certain premium—say 9%, or 9½%—multiply the unit at par by the rate of premium and add it to the principal; this will give the cost of the bill in dollars and cents.

J. H. T., Jr.—The only work published in this city, on ornamental weaving, is that of C. G. Gilroy, sold by J. Wiley, No. 56 Walker-street,—price, \$5.

S. & S., of —.—Please to inform us where you reside and we will write to you about your hay and cotton press.

H. C. P., of C. W.—We are much obliged for your rule on cutting patterns for the joints of stove-pipe elbows. It is no doubt a good one, but the one we published some time ago must answer for the present.

J. M., of N. Y.—In order to give directions for fixing your photograph, we should require to know the process pursued in taking it. Your shortest way will be to call on some teacher of the art for practical instruction.

W. A. L., of Ill.—Your unsatisfactory experience with the diamond, for dressing millstones, seems to have been the same as that of all who have tried it.

J. A., of Md.—The method of distilling sassafras oil, which you describe as being practiced in your section of the country, is as good as any other known to us. It is simple distillation with the common copper still. If you had pointed out the defects we might have been able to show that, while you had the proper apparatus, the operations had not been correctly conducted, owing to a want of skill in managing the business.

A. S., of R. I.—It is very difficult to give advice regarding the use of spectacles, either for persons who are shortsighted or those whose vision is failing. The best rule to pursue, in both cases, is to choose spectacles by which print like that of the SCIENTIFIC AMERICAN may be read clearly at about 18 inches from the eyes, which is the natural distance for persons who have good vision. Spectacles which greatly magnify or diminish the size of objects at the natural distance should be avoided.

W. B., of Ill.—Your views regarding the action of the paddle wheels of steamers is correct in the main, but the difficulty in the operation of the wheels of the "Great Eastern" is, not their being too small, but that they have too great a dip in the water. There is no cheap work on propellers in print in this city.

T. S. S., of Mich.—Your statement that ice-boats similar to those which produced so much excitement during the last winter, along the Hudson, have been in use on the western lakes for some time, has been received. We are pleased to give the credit of the invention to whom it is due.

G. M. McL., of N. C.—You state that you wish to obtain reliable information about employing steam or caloric for transporting large timber to sawmills. We do not know where you can get it—if you mean practical experience in the business. We suppose that you want a portable engine for hauling the timber. All you have to do for securing this object is to put a locomotive on small broad wheels.

J. M. W., of N. Y.—The conducting power of a wire depends upon its solid contents—the greater the solid contents, the less is the resistance. The inductive power of a current in the wire of a magnet is in proportion to the magnitude of the wire—the smaller the wire the more intense is the power of the magnet. A fine-wire magnet is one of intensity; a magnet having large-wire coils is one of quantity.

J. W., of N. J.—White oak fence-posts will endure much longer if kyanized. To prepare timber with sulphate of copper, chloride of zinc, or corrosive sulphate, it requires to be steeped in a solution of these substances placed in a tank until the wood is saturated. This can be done in a very short period, in an exhausted iron tank, from which the air may be extracted by a pump, and the solution forced in under pressure; but as you have no apparatus of this kind, we advise you simply to coat the feet of your fence-posts with warm coal tar. This will render them much more durable.

N. S. C., of Mass.—The muriate of zinc, when used as a preparatory soldering solution is liable to rust tools and all iron articles with which it comes in contact. To obviate such evils, add some grains of block tin to the solution, and always wash your tools and articles with an alkaline solution, such as a little sal-soda dissolved in water. This is all the remedy we can offer at present.

G. W. J., of Mass.—It does no damage to a steam boiler to blow it out while hot, except you permit the water to fall below the fire-line. When the fire is strong, and the steam is seen issuing from the blow-cock, it is a sign that the water is too low.

MONEY RECEIVED

At the Scientific American Office on account of Patent

Office business, for the week ending Saturday, May 5, 1860:—

- S. & G., of Vt., \$30; S. S. K., of Cal., \$30; A. P. T., of Ga., \$30; M. W. H., of Ind., \$30; S. K., of N. Y., \$30; C. C., of Iowa, \$30; S. P. G., of Wis., \$30; E. P. M., of N. Y., \$30; W. B. T., of Mass., \$25; T. B., of Ill., \$25; J. B., of Pa., \$30; M. H., of Conn., \$30; F. G. & E. A. F., of Ill., \$25; J. E., of Pa., \$30; T. & R., of N. J., \$200; S. J. S., of N. Y., \$45; R. N., of N. Y., \$10; A. & B., of N. Y., \$150; O. J. P., of Pa., \$25; S. M., of Ind., \$30; G. W., of N. Y., \$30; J. P. B., of S. C., \$30; W. H. C., of Ill., \$25; S. R. B., of Pa., \$30; T. S. W., of N. Y., \$15; C. R. B., of Conn., \$30; J. B. W., of Tenn., \$15; C. E. L. H., of Conn., \$30; J. C., of Vt., \$25; W. G., of Wis., \$23; D. P., of N. Y., \$35; B. & C., of Ohio, \$40; W. D. G., of N. J., \$25; W. H. A., of N. Y., \$56; P. V. W., of Mich., \$25; K. J. G., of Ind., \$35; S. & P., of Cal., \$50; J. N. J., of Mass., \$30; M. & B., of Mass., \$30; K. P., of N. Y., \$25; K. & T. C., of N. Y., \$25; A. C., of N. H., \$37; L. P. R., of Mich., \$30; T. H., of N. Y., \$25; H. A. M., of N. Y., \$250; G. H. K., of Pa., \$25; W. T., of N. Y., \$25; J. G., of Mass., \$30; G. S. G., of Pa., \$15; H. & L., of N. Y., \$25; C. J. H., of N. Y., \$30; G. & C., of N. H., \$15; T. & C. C., of Conn., \$200; T. E., of Tenn., \$30; L. A., of Wis., \$30; G. S., of Ga., \$30; D. & M., of Va., \$30; G. W., of N. Y., \$15; G. W. B., of Mich., \$10; B. S. W., of Ohio, \$25; J. J., of Pa., \$30; S. T. R., of Ill., \$40; J. G., of Md., \$30; D. S., of N. Y., \$10; S. K., of N. Y., \$25; J. W., of Maine, \$25; G. P. D., of Texas, \$25; W. W., of Wis., \$30; M. B., of N. H., \$30; H. F., of Ind., \$30; H. B., of Ill., \$30; G. E. F., of L. I., \$25; A. B. K., of N. Y., \$30.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, May 5, 1860:—

- W. D. G., of N. J.; O. J. P., of Pa.; A. M. C., of N. Y.; W. H. A., of N. Y. (2 cases); M. B. T., of Mass.; J. B. W., of Tenn.; S. J. H., of Ill.; F. G. & E. A. F., of Ill.; G. W. R., of N. Y.; J. H. C., of N. Y.; P. V. W., of Mich.; H. & L., of N. Y.; J. W., of N. Y.; T. B., of Ill.; G. S. G., of N. Y.; W. G., of Wis.; G. H. K., of Pa.; S. S. K., of Cal.; R. J. G., of Ind.; S. J. S., of N. Y. (2 cases); S. & P., of N. Y.; C. R. A., of Conn.; E. P., of N. Y.; W. H. C., of Ill.; T. H., of N. Y.; A. H. B., of N. Y.; R. N., of N. Y.; G. J. H., of N. Y.; W. T., of N. Y.; J. T. H., of Md.; T. S. W., of N. Y.; G. F., of L. I.; G. P. D., of Texas; B. S. W., of Ohio; I. W., of Maine; E. N. F., of N. Y.; S. K., of N. Y.; K. H. & T., of Mass.; G. W., of N. Y.; J. C., of Vt.; T. M., of N. Y.

NEW BOOKS AND PERIODICALS RECEIVED.

BLACKWOOD'S MAGAZINE. Published by Leonard Scott & Co., who also publish the four great British Reviews. This favorite magazine, for the present month, contains a leading article on the Duke of Wellington, another on Lady Hamilton, a review of Allison's History, and the story of Norman Sinclair, which is the autobiography of Professor Ayton, by himself. It is an excellent number.

THE HISTORY OF INK, including its Etymology, Chemistry and Bibliography. By Thaddeus Davids & Co., No. 127 William-street, this city.

This is altogether a unique publication, and contains a great deal of decidedly interesting matter upon a somewhat odd subject. It is, moreover, one of the most beautiful specimens of the typographic art we have ever seen.

THE BIBLICAL REASON WHY: a Family Guide to Scripture Pleadings and Hand book for Biblical Students. Illustrated with numerous engravings. Dick & Fitzgerald, publishers, No. 18 Ann-street, this city.

This work expounds, by question and answer, the most important events in the history of the Bible—the life of our Saviour and the acts of His apostles; and so far as we can judge, it is a valuable aid to the study of the Holy Scripture. It has received the endorsement of some of the most eminent divines of our country.

THE HAUNTED HOMESTEAD. By the well-known authoress, Mrs. Southworth. Published by T. B. Peterson & Bro., Philadelphia.