

Ninth, Combining the axis pin, I, of the cam by which the forward longitudinal movement of the cylinder is produced...

[This invention consists in certain improvements in the means of obtaining a longitudinal movement of the many-chambered cylinder...

1,330.—Moses Ducharme (assignor to himself and George Ducharme), of Cohoes, N. Y., for an Improvement in Locks:

I claim the combination of the latch bolt, A, shackle, B, escutcheon, C, and spring to enter an escutcheon spring, D, J, all constructed and arranged substantially as shown and specified...

1,331.—C. H. Leffingwell, of Providence, R. I., assignor to himself and P. B. Carpenter, of North Providence, R. I., for an Improvement in Boot Legs:

I claim a boot leg constructed of the pieces, A, D, F and E, cut in the shape represented in the drawings, with the elastic pieces, G, G, introduced in the manner and for the purposes set forth...

1,332.—C. O. Luce (assignor to himself, I. M. Strong and J. F. Eastbrook), of Brandon, Vt., for an Improved Washing Machine:

I claim the arrangement of the racks, j, pinions, i, shaft, E and rollers, I, with the stems, K, pounders, G, rotary shaft, D, and gearing, f, g, e, B; all as shown and described, for the purposes set forth...

[This invention consists in the arrangement of a tub rotated by means of a toothed ring at its bottom and on its outside, in combination with a series of rising and falling pounders arranged in the interior of the tub...

1,333.—George Murray (assignor to himself and Sarah H. Hilbert), of Cleveland, Ohio, for an Improvement in Water Elevators:

I claim, first, The circular spout, N, in combination with the double oblique valves, L, L', when the same are constructed, arranged and operated as and for the purpose set forth...

1,334.—Joseph Neumann (assignor to G. W. Robertson), of Philadelphia, Pa., for an Improvement in Hydrants:

I claim the case or guard, B, in combination with the upper end of the barrel of a hydrant cock, the said case or guard being constructed and applied to the cock, substantially in the manner described and for the purpose specified...

1,335.—John Range (assignor to J. and E. Parker), of Meriden, Conn., for an Improved Thumb Latch:

I claim the slide bolt, B, attached to a frame or plate, A, and provided with a spring, d, and the central bow-shaped part having double-beveled surfaces, b, b', in connection with the thumb piece, D, and with or without the bottom, G, as and for the purpose set forth...

[The object of this invention is to obtain a simple and economical thumb latch which may be applied to either a right or left hand door and be capable of being locked or buttoned at the side of the door on which the slide bolt of the latch is placed.]

1,336.—S. Roberts (assignor to himself and Alfred Adams), of Cleveland, Ohio, for an Improved Barrel:

I claim the making of the cylinder part of barrels of a volute piece or pieces, having gore or wedge-shaped pieces cut from each end, as described, for the purpose of forming the proper bulge to the body of the barrel, in the manner set forth and described...

1,337.—W. D. Wood, of Wilmington, Del., assignor to A. Wood, of Philadelphia, Pa., for an Improvement in the Manufacture of Sheet Iron:

I claim, first, Removing the scales of oxide of iron from the plate of iron in the manufacture of sheet iron, by annealing it and then passing it successively between corrugated and plain rolls or presses, substantially as described...

Second, The coating of the plates of iron with graphite or plumbago, or other carbonaceous matter, ground in oil prior to the finishing process, in the manner and for the purposes substantially set forth...

Third, The coating of the rolls with graphite or plumbago, or other carbonaceous matter ground in oil, for the purpose of finishing the outer surfaces in the manner described...

1,338.—L. L. Miller, of Jersey Shore, Pa., for an Improved Washing Machine:

I claim, first, The arrangement of the rubber, E, handle, H, slides, I, stems, b, volute springs, K, and hand lever, J, the whole being constructed, combined and operated in the manner and for the purpose shown and explained...

RE-ISSUES.

78.—F. J. Seymour, of Waterbury, Conn., assignor to the Waterbury Brass Company, for an Improvement in Making Brass Kettles. Patented May 13, 1856:

I claim, first, The production of kettles and articles of similar character, by the combined processes of stamping, to produce a preliminary shape and spinning to complete the ultimate or finished form, substantially as described...

Second, I claim the new method or process, substantially as described, of stamping up vessels by a mode of operation in which the bottom is stamped up first and the sides are then formed or drawn in successive lengths by means of dies, substantially as set forth; and this I claim whether the vessel be entirely finished by this new stamping process, or whether it be completed by a spinning process, subsequent thereto...

79.—J. R. Robinson, of Boston, Mass., for an Improvement in Steam Boiler Furnaces. Patented March 5, 1861:

I claim, first, The gas-mixing chamber, B, constructed in the rear of the bridge well, C, with a covering arch, F, and openings, d, d, in the said arch, substantially as described...

Second, Providing a boiler furnace with one or more trunks, e, or equivalent independent outlets from the fire chamber for the exit of the lighter gases of combustion, substantially as specified...

Third, The combination of one or more trunks, e, with a gas-mixing chamber, B, substantially as specified...

80.—John Brayley, of Buffalo, N. Y., administrator, and Mary Pitts, of Buffalo, New York, administratrix, of the estate of John A. Pitts, deceased, late of said Buffalo, for an Improvement in Horse Power. Patented July 4, 1854:

I claim, first, So combining an internal gear main driving wheel with two pinions working at diametrically opposite sides thereof, as that the said main wheel may move in a direction transverse to that of a line drawn through said pinions for the purpose of allowing said main wheel to automatically adjust itself to said pinions, substantially as and for the purpose set forth...

Second, Hanging the pinions of a double-gear horse power in adjustable bearings, so that they may be set close mesh with the main or master wheel, substantially as described...

Third, In so combining the pinions and bevel wheels upon one shaft in pairs, and supporting them in adjustable bearings, as that their shafts may be kept in a perpendicular position, whilst the two gears are made adjustable to the respective wheels that they mesh with, substantially as described...

shafts may be kept in a perpendicular position, whilst the two gears are made adjustable to the respective wheels that they mesh with, substantially as described.

EXTENSIONS.

Anson Atwood, of Troy, New York, for an Improvement in Cast Iron Wheels for Railroad Carriages. Patented March 20, 1847; re-issued June 9, 1857:

I claim the connecting of the rim of the wheel with the hub in cast iron car wheels by means of two curved plates, starting from near the ends of the hub and joining at a part of the distance between it and the rim, thus forming a hollow ring or arch around the hub, and joining said ring with the rim by a single plate, or its equivalent, for the uses and purposes set forth...

Anson Atwood, of Troy, N. Y., for an Improvement in Cast Iron Wheels for Railroad Carriages. Re-issued Sept. 22, 1857:

I claim connecting the rim of a wheel cast in one piece with a solid hub by means of a single waved plate, in combination with the dished flanch or flanches of the hub, forming a ring concentric with the rim of the wheel, substantially as described, whereby the several parts can yield to the unequal contraction in all directions without serious strain of the metal...

Anson Atwood, of Troy, N. Y., for an Improvement in Cast Iron Wheels for Railroad Carriages. Re-issued Sept. 22, 1857:

I claim a cast iron disk, corrugated in the manner substantially as and for the purposes described, when used in connection with the chilled rim of a cast iron wheel...

P. W. Gates, of Chicago, Ill., for an Improvement in Dies for Cutting Screws. Re-issued May 7, 1847:

I claim the forming of such dies of one solid block, in such manner as that they shall cut a perfect screw by the once passing of it along the piece to be cut, this being effected in the manner set forth, that is to say, by the forming of acute cutting edges on the threads within the die, which threads are to be regularly reduced in height from the upper to the lower face thereof, at which part the last terminating thread is obliterated, and by the filing away of a large portion of the threads, as shown at B, B', and by the curves, e, m and f, m; the cutting edges being also furnished with throats for the escape of the cuttings, as made known and represented, and the whole apparatus being arranged, combined and operating substantially in the manner and for the purpose set forth...

DESIGN.

Garretson Smith and Henry Brown (assignors to Liebrandt & McDowell), of Philadelphia, Pa., for a Design for Cooking Stoves.

NOTE.—The number of patents issued on the 14th of May, and reported above, amounts to seventy-one; out of this number, TWENTY-SEVEN were secured through the Scientific American Patent Agency.



R. W., of N. Y.—The centrifugal gun of Robert McCarty, of this city, which has recently been brought prominently before the public, was patented on the 1st of December, 1838. The patent has therefore expired. D. J. Martin, of Louisville, Ky., obtained a patent for an improvement on this gun on the 3rd of August, 1840.

O. C. K., of Conn.—Bronzing powders are mostly made in Germany, from compositions of tin. You may use them mixed with any varnish, then burnish them when dry, or you may put on the varnish first, and dust the powder on the top.

C. O. G., of Wis.—You can make your floor perfectly water-tight by placing a cement in the same, composed of white lead and pounded glass. Or, if you cannot obtain pounded glass, use dry-slaked lime as a substitute. It must be allowed to dry perfectly before you use water to wash it. The cement should be applied about the consistency of putty.

J. M. H., of N. Y.—A very good cement for fastening glass standards into wooden frames is composed of a strong solution of glue and plaster-of-paris, or fine chalk. Dissolve the glue in water, then add the plaster until the composition is of the proper thickness. Apply this cement quickly, as it dries rapidly.

H. S., of Mass.—In our description of firing with Hotchkiss' shot, wherein it is stated that the iron cannon used was 2 1/2 inches bore and 4 inches long, there is a misprint. It should have been 4 feet long.

J. A., of Ill.—Puddled steel is allowed to be at least twice as strong as cast iron. We know not where you can obtain castings of this metal, varying from five to twenty-five pounds in weight. In all likelihood you can obtain malleable iron castings of all sizes in Chicago.

W. de S., of Pa.—Address the Secretary of the Navy for a copy of the Report of Naval Engineers.

T. McEl. H., of Wis.—A metal roof, if put on properly, is certainly better than one of cement. A good cement roof, however, is made by taking equal quantities of tar and asphalt, boiling them together for one hour at least, then stir in some perfectly dry, sifted lime until it becomes of the proper thickness. Put it on hot upon felt or thick tar paper, and cover the whole with dry sand and fine gravel. Lay it on in successive coats of about three square yards at once, and beat the gravel on the top with a shovel.

W. J., of Cal.—On page 275, Vol. X. (old series), of the SCIENTIFIC AMERICAN, you will find a recipe for destroying red ants. Take a large sponge, wet it, then squeeze out the water, and sprinkle some powdered sugar over it so as to fill the pores. Now place it in the vicinity of the ants' nests, and in a short period it will be filled with the insects, when it should be lifted and plunged into a vessel of boiling water. Pursue this system persistently, and you will ultimately rid your premises of these pests.

L. K., of Pa.—A preparation of india-rubber and cork, called "kamptulicon," was experimented with as a protective coating for iron ships in 1850. You will find a brief description of these experiments on page 62, Vol. VI. (old series), of the SCIENTIFIC AMERICAN.

H. S., of Mass.—A 12-pound rifled cannon shot measures 3 1/4 inches in diameter at the base, and is conical shaped.

W. W. B., of Pa.—We have received a great many communications on the subject of aerostation, but have published only those which we supposed would interest our readers. We wrote you a long time ago that we should probably not publish your communication.

H. C., of N. Y.—When we find some definite and authentic intelligence in regard to the gold of Nova Scotia we shall publish it.

J. E. B., of Ohio.—The best pale varnish for carriages is made by mixing 2 1/2 gallons of hot boiled linseed oil with 8 pounds of pale African copal gum fused in an iron vessel. About 1/2 pound of sulphate of zinc should be added slowly to the mixture, and the whole boiled until it becomes stringy. It is next thinned down with turpentine, for use. This varnish dries in about 4 hours in summer, and is used for the outside work. It is durable and quick-drying.

G. E. S., of Ill.—Mr. Fairbairn, of England, is the author of a work on iron bridges. You could obtain it through some importing house, such as J. Wiley, or Balliere Bros., this city.

E. L., of Pa.—The experiments of Mr. Charles H. Haswell, of this city, have shown that the dynamical effect of a falling body is equal to its weight multiplied by its velocity in feet per second and by 4.426. A weight falling 80 feet would have a velocity, in round numbers, of 72 feet per second, and if its weight were 3,000 pounds, it would compress a spiral spring to the same extent as a weight of 54,000 pounds resting upon it.

H. G. G., of N. Y.—Carbonic acid gas is heavier than atmospheric air, still it does not fall and occupy the lowest stratum of the atmosphere, owing to a singular property which gases have of mixing together. When two gases of different densities are placed in the same vessel, though the heavier one be at the bottom, it is found that they gradually mingle completely together, forming a homogeneous mixture. The particles of gas are so far apart that they do not prevent another gas from ultimately occupying the same room, but they do obstruct the entrance of the second gas into the same space, rendering it more slow.

D. H. S., of Conn.—D. Appleton & Co., of this city, published a work on mechanical drawing, a few years ago.

M. K., of Ill.—To practise drilling an artillery company of volunteers, if you are going to use heavy cannon—say 24-pounders—they can be cast of iron; any foundry can do it. But if the company is to be of flying artillery, you want brass 6-pounders. These are expensive, but as the metal would always be valuable, the expense would be little more than the interest on their cost. Dahlgren guns are very heavy for stationary batteries, and are unsuited for field operations.

C. H. G., of Vt.—We believe that Wesson has ceased to manufacture rifles, but the same style of gun is made under the Clark patent by James, of Utica.

A. B. W., of N. Y.—The proportion of the feed pump or cylinder of an air engine to the working cylinder will depend on the temperature at which the air is used. Atmospheric air, like other gases, expands 1.493 of its bulk at 35° for each degree that its temperature is raised; that is, it takes an increase of 493° to double its bulk.

E. F., of Wis.—A process has been patented by A. Steers, of this city, for extracting the tannin from bark, whereby it is obtained in a very concentrated form for tanning leather. We have been informed that the extract retains all the qualities of the bark for tanning purposes.

J. P. & L. S., of Ind.—There can be no lime in the steam which you employ for heating your dyestuffs, and you should not blame the steam for the bad colors in your dye house.

Money Received

At the Scientific American Office on account of Patent Office business, during one week preceding Wednesday, May 29, 1861:—

- B. & R., of Ohio, \$15; M. D. W., of Ind., \$25; A. & H., of Cal., \$25; E. L. E., of Conn., \$15; A. C., of N. Y., \$400; W. P., of N. Y., \$15; S. M. R., of Mass., \$15; L. & P., of Pa., \$31; J. O. F., of Mass., \$25; J. A., of Pa., \$25; D. P. F., of Mass., \$25; E. D. W., of Pa., \$43; L. D. B., of N. Y., \$20; A. C., of N. H., \$20; E. C. W., of N. Y., \$43; H. L. B., of Conn., \$20; H. W. H., of Conn., \$20; W. B. S., of N. Y., \$25; A. W., of Vt., \$25; A. S., of N. Y., \$30; R. McC., of N. Y., \$25; F. N., of Conn., \$30; E. A. K., of Conn., \$15; D. E. T., of N. Y., \$15; J. C., of Pa., \$25; W. D., of Mo., \$10; L. & W., of Mass., \$25; W. M., of N. H., \$40; C. Van N., of N. Y., \$20; W. J. S., of N. Y., \$22; N. C. P., of N. H., \$20; S. A. B., of Conn., \$20; W. S. K., of Conn., \$20; G. L. K., of Pa., \$15; M. W. M., of N. Y., \$15; M. A. D., of Mich., \$12; U. B. V., of Pa., \$25; W. N. D., of Cal., \$35; A. H. T., of N. J., \$40; D. McK., of N. Y., \$15; J. W. C., of Mich., \$30; L. D. G., of N. J., \$20; T. S. & T. W. R., of N. Y., \$25; A. C., of Mass., \$10; A. M. H., of Conn., \$20; J. R. R., of Mass., \$40; E. F. H., of N. Y., \$20; J. S. P., of Conn., \$20; D. B. S., of Mass., \$22.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from May 22 to Wednesday, May 29, 1861:—

- D. B. S., of Mass.; M. D. W., of Ind.; A. W., of Vt.; C. K. H., of Cal.; J. L. T., of N. Y.; F. N., of Conn.; U. B. V., of Pa.; L. & W., of Mass.; J. A., of Pa.; E. C. W., of N. J.; T. C., of Cal.; R. McC., of N. Y.; A. N. R., of N. Y.; W. H. D., of Cal.; J. C., of Pa.; T. S. & T. W. R., of N. Y.; D. P. F., of Mass.; E. D. W., of Pa.; J. H. F., of Ky.; M. A. D., of Mich.; W. D., of Mo.; A. C., of Mass.; J. H. L., of Pa.; J. O. F., of Mass.; W. D., of R. I.

TO OUR READERS.

Models are required to accompany applications for Patents under the new law, the same as formerly, except on Design Patents, when two good drawings are all that is required to accompany the petition, specification and oath, except the government fee.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain a copy by addressing a note to this office, stating the name of the patentee and date of patent, when known, and inclosing \$1 as fee for copying. We can also furnish a sketch of any patented machine issued since 1853, to accompany the claim, on receipt of \$2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

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