

28,721.—I. N. Whitaker (assignor to himself, J. H. Frees and M. Hellar), of Foreston, Ill., for an Improved Apparatus for Heating Wagon Tires:

I claim the combination with the outer periphery of the tire box, B, of the furnace, D, and smoke box, C, when the said tire box is arranged to stand vertically, as shown, and is provided in its upper part with rollers, J, J, by which the tires are suspended and rotated; all as set forth and represented, for the purpose specified.

[This invention consists in heating tires for wheels of any description by confining them within a suitable furnace and giving a revolving motion to the tire or tires by any suitable means of hanging them on, or by any proper prime-mover, so as to submit them uniformly to the direct heat from the fire. The apparatus is so constructed that it will be easy of manipulation, and so that it may be used equally as well within the workshop as out of it.]

28,722.—S. H. Whitaker (assignor to himself and Wm. L. Thomas), of Cincinnati, Ohio, for an Improvement in Gas Regulators:

I claim, first, In the described connection with receiving and discharging chambers, A and B, and a stationary seat, F, supported on a stem which passes through the diaphragm, the valve diaphragm, D E, or its equivalent, operated by the unequal pressures, on its opposite sides, of the entering and escaping gas, substantially as set forth.

Third, The nut, H, rod, G, and seat, F, in the described combination with the valve, E, for the purpose of adjusting the capacity of the apparatus from the exterior.

RE-ISSUES.

Wm. S. Carr, of New York City, for an Improvement in Water-closet. Patented Aug. 5, 1856:

I claim, first, A cylindrical plunger or plug, 3, substantially as specified, acting to close the water passage, 2, at the time the water-closet seat is depressed irrespective of the weight on the seat, as distinguished from a valve which requires compression to a given point before closing, a set forth.

Second, I claim the valve, g, cylinder, 3, and openings, x, in combination with the seat, v, and acting in the manner and for the purpose set forth.

Third, I claim, in a valve for water-closets, a cup leather for controlling the motion of said valve in closing gradually, substantially as specified; said cup leather moving freely in one direction and closing against the containing cylinder in the other direction, and the leakage of water in said cylinder allowing the movement of said cup leather, as set forth.

Fourth, I claim the lever, p, acted on by the seat and simultaneously controlling the movements of the pan, r, and valve or cock for admitting water, as specified.

Fifth, I claim the combination of the lever, p, latch, t, and valve spindle, g, h, as described, for regulating the movements of the pan, r, as set forth.

Sixth, I claim the valve for admitting water to the closet, in combination with the trunk or hopper, when said valve is connected directly to the said hopper, for the purposes and as set forth.

Seventh, I claim, in a water-closet in which the cock is attached to the hopper, a hollow arm, o, or opening into said hopper, substantially as specified, for conveying leakage from said cock into the hopper, as set forth.

J. P. Collins, of Troy, N. Y., for an Improved Water Wheel. Patented Dec. 6, 1859:

I claim, first, The arrangement of the lighter plate, L, in the particular manner specified, and for the purpose set forth.

Second, The arrangement, in the particular manner specified, of the packing ring, n, for the purpose set forth.

Third, The arrangement, in the particular manner specified, of the lip or projecting piece, e, of the buckets, for the purpose set forth.

Fourth, The arrangement, in the particular manner specified, of the regulating plate, J, in combination with the peculiar specified device for operating it, for the purpose set forth.

Fifth, The employment of the sliding strip of iron inserted in the buckets, substantially as and for the purpose set forth.

Sixth, The fitting of the lower part of the box, G, over the annular flange, o, of the wheel, as shown, or in an equivalent way, so as to form a joint as nearly water-tight as may be in connection with the openings, l, in the plate, d, and the oblique plates, m, at the sides of the openings, as and for the purpose set forth.

Seventh, The employment, for united use in one wheel, of the lighter plate, B, packing, n, projecting lip or flange, e, gate or regulating plate, J, and annular dividing plate, A\*, the whole being constructed, arranged and operating in the manner and for the purpose set forth.

Nathaniel Drake, of Newton, N. J., for an Improvement in Corn-shellers. Patented April 3, 1860:

I claim, first, The combination of a plate, E, which presses directly upon the ear while the corn is being shelled therefrom, with a spring, F, arranged and operating as and for the purposes set forth.

Second, I claim the combination of the adjustable gear chain, j, with the plate, E, and spring, F, whereby the plate is prevented from falling against the shelling wheel, although free to adapt itself to different sized ears, and whereby the plate, E, and spring, F, can be raised by an attendant while the machine is in operation, substantially as described.

Third, I claim the combination of the plate, E, spring, F, with the wheels, B and D, constructed and arranged to operate in relation to each other, as and for the purposes set forth.

Fourth, I claim the combination of the adjustable shaft, e, with the plate, E, substantially as set forth.

Fifth, I claim the arrangement and combination of the obliquely-acting adjustable spring, F, set screw, k, plate, E, and adjustable gear chain, j, as and for the purpose shown and described.

P. G. Gardiner, of New York City, for an Improvement in Springs for Railroad Cars and Carriages. Patented April 26, 1859:

I claim primarily the combining and arranging two blades, bent elliptically, with an intermediate plate curved or corrugated, so as that the intermediate plate acts only by tension or strain apart from end to end, in the manner and for the purposes described.

I also claim the manner described of securing together the elliptical blades and tension bars at the ends without rivets, pins, bolts, hinges or screws.

William Godaev, of Manchester, Mass., assignor to himself and Isaac Ayers, for an Improved Steering Apparatus. Patented June 7, 1859:

I claim the described steering apparatus, consisting essentially of the toothed segment, M, traversing on the curved way, F, and operating substantially as described.

John Wyberd, of New York City, for an Improved Night-light Reflector. Patented April 10, 1860:

I claim the arrangement of a series of reflecting surfaces in an arch or dome form, over gas burners, so as to permit a current of air through the reflector and strongly illuminate objects below the light.

Turner Williams and David Heaton, of Providence, R. I., assignees of said Turner Williams, for an Improved Window Stop. Patented Oct. 26, 1858:

I claim the described window stop, consisting of the roller, C, the shank, m, spring, E, and lever, K, or their equivalents, in combination with the inclined surface, d, and operating substantially as set forth.

ADDITIONAL IMPROVEMENT.

J. C. Dickey, of Saratoga Springs, N. Y., for an Improvement in Machinery for Crushing Quartz. Patented May 16, 1860:

I claim a stamper or stampers working in a mortar made on the top of a stationary cone by a hollow-revolving cone working on and projecting above the top of the said stationary cone, with the pulverizing surfaces made by the said cones coming in contact with each other, in combination with the projections, H, made on the base of the said revolving cone, working in and on the side of one or more channels made on the base of the said stationary cone, for the purpose of crushing, grinding and pulverizing quartz rock and earth containing gold, and forcing the said pulverized rock and earth into the

bottoms of the said channels, in contact with quicksilver, for the purpose of securing the gold.

EXTENSION.

R. D. Granger, of Albany, N. Y., for an Improvement in Cooking Stoves. Patented June 13, 1846:

I claim locating the pipe communicating from the body of the stove to the elevated oven between the two back boilers, so that its front lower edge shall be contiguous to the fire, in combination with the division strips, h h h, and the dampers, j j, arranged and operating as described and shown, viz., so as to form one center flue beneath the connecting pipe, k, which flue may be closed at pleasure by the damper, j j, in order to throw the heat through two side flues, i i, and cause it to pass under the rear boiler before it escapes into the connecting pipe, k.

I further claim forming the connecting pipe of the horizontal section shown and described; that is to say, having the pipe made broad on its front side next the fire for the purpose of obtaining a large capacity of pipe, and also to bring the broadest portion of its section in contiguity with the fire and accommodate the boilers in the rear.

DESIGNS.

A. C. Barstow, of Providence, R. I., for a Design for a Cooking Range.

Gardiner Chilson, of Boston, Mass., for a Design for a Cook's Range.

S. G. Smith, of New York City, for a Design for a Nut-cracker.

L. W. Volk, of Chicago, Ill., for a Design for a Bust of Abraham Lincoln.

S. W. Gibbs, of Albany, N. Y., assignor to North, Chase & North, of Philadelphia, Pa., for a Design for a Stove.

J. L. Jones (assignor to himself and A. McDowell), of Slatington, Pa., for a Design for an Ornamental Ridge for Roofs.

E. J. Ney, of Lowell, Mass, assignor to the Lowell Manufacturing Company, for a Design for Carpets.

E. J. Ney, of Lowell, Mass, assignor to the Lowell Manufacturing Company, for a Design for Carpet Patterns.

N. S. Vedder, of Troy, N. Y., assignor to Tibbets & McCoun, for a Design for a Cook's Stove.

Notes & Queries.

J. M., of Ohio.—The practice of betting, even on questions of science, is a most unscientific way of making money, which we emphatically condemn. Abjure it forever, and you will become a richer if not a better man. In answer to your question, however, we will state that your friend is right, and you have lost your wager, inasmuch as a gambler gazing upon a table could easily count the number of cards or coins spread upon another table in an adjoining room separated by a brick wall. For the philosophy of this paradox we refer you to page 325 of the present volume of the SCIENTIFIC AMERICAN.

D. S., of Ill.—We do not know where Dr. Maynard's rifles are manufactured. We believe he resides in Washington, D. C., and he can give you all the information you request concerning them.

J. W. W., of Iowa.—A cubic foot of hydrogen gas will raise about half an ounce at the surface of the earth. Oiled silk will expand and contract, and answer your purpose for a balloon.

J. L. L., of Iowa.—We do not recollect having received your former letter. Steam may be carried down to a depth of 200 feet in a mine with well-covered copper pipes, and its pressure maintained at nearly the same rate at the bottom as in the boiler above ground.

J. C. R., of Mich.—Not a single fact has yet been adduced worthy of notice in proof of a pre-Adamite race of men. The ridiculous attempts made by quasi-scientific men, to do this from broken china-ware dug up in Egypt and old flint arrows exhumed in France, are not worthy of attention from men of sound judgment.

McA. & Bros., of Ind.—Molds for wax figures are made of plaster, and are not oiled, but are first steeped in hot water for about half an hour, and then dried thoroughly. You state that your wax figures have adhered to both iron and plaster molds, and add you used "almond oil" in them. This explains the cause of failure. When you pour the wax into the plaster mold, allow it to become dry, then place the mold in water, after which the cast will be easily removed.

G. M. Jr., of Ill.—Two lightning-rods on a building—one at each end—are frequently connected together by a horizontal rod of the same size. In the absence of such a horizontal rod, common wires may be usefully applied to effect the same object. It is very dangerous, as you state, for persons to seek shelter under trees during a thunderstorm, because lightning always strikes the nearest and best conductor to the earth, hence it passes in preference from the cloud by the tree.

D. H. Jr., of N. Y.—The aluminum bronze has been patented in England, and its mere application to any purpose, excepting as new articles of manufacture, is not patentable.

G. R., of Vt.—Your idea in regard to obtaining butter from milk is to apply an air-pump to the churn and exhaust all the air from the cream, by which operation you expect the cream to swell, and the butter globules to burst from it, and float on the top in golden-colored balloons. You ask our advice about trying the experiment. We exhort you to use your own judgment in the matter, but inform you that your plan is the very opposite of that which is carried out in what are called atmospheric churns. In these air is forced in to swell the globules, not exhausted, as you propose.

O. P. P., of Ind.—Rough sea shells can be polished smoothly by first rubbing them down with a file, then with emery paper, and finishing off with rottenstone or tripoli. Sometimes, when polished, have a very beautiful appearance, but those which possess the most variegated hues and glossy surfaces are found so in their natural state.

H. A. B., of N. Y.—We do not know what you mean by inquiring, "Does the velocity of water give the overshoot an advantage over the breast wheel?" Venice turpentine is extracted from the larch pine, and contains succinic acid. It came from Venice first to England, hence its name. We have not space to give you a treatise on dialling. Any old encyclopedia will furnish you with the information.

C. F. R., of N. Y.—The constant operations of a siphon depends upon the pressure of the atmosphere on the outside, and a perfect freedom from gas or air inside. If carbonic acid or sulphurous gas in the water gets into the siphon, it offers resistance to the outside pressure, and as a consequence, the flow of water is impaired. You will always find it difficult to keep a siphon free from air and gas; make up your mind to irregularities in its operations.

MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, June 16, 1860:—

- J. M., of N. Y., \$30; J. S., of N. Y., \$30; W. J. C., of Pa., \$250; H. N., of N. Y., \$30; C. J. S., of N. Y., \$55; W. D. M., of Va., \$55; J. C. A., of Texas, \$30; E. M. J., of N. Y., \$25; J. W. T., of Vt., \$25; W. S. H., of Miss., \$15; N. A. P., of Tenn., \$10; M. F. J., of Tenn., \$32; J. B. F., of Ohio, \$25; J. R. L., of Mass., \$30; W. M., of Mass., \$25; R. M. G., of N. Y., \$30; H. B., of N. Y., \$20; D. C. T., of Wis., \$30; L. & L., of N. Y., \$30; J. W. D., of Tenn., \$30; H. Y. W., of Pa., \$30; J. B. S., of Mich., \$30; J. I. B. R., of N. Y., \$30; A. J., of N. H., \$25; P. & O., of N. Y., \$25; J. H. H. B., of N. Y., \$10; J. S. G., of Mich., \$5; C. & M., of Texas, \$5; C. C., of N. Y., \$25; S. A., of N. Y., \$30; E. S. C., of Mass., \$25; E. & W., of Ga., \$5; C. E., of La., \$50; E. C., of La., \$25; J. C. C., of Conn., \$1,550; A. H., of Iowa, \$10; A. A., of N. Y., \$30; G. W. L., of N. Y., \$30; J. L. B., of N. Y., \$30; L. S. & J. E., of N. Y., \$30; S. U. C., of Md., \$100; J. E., of Tenn., \$25; A. J. V., of Mo., \$30; J. B. W., of Pa., \$30; J. M. H., of Cal., \$10; C. M. Y., of N. Y., \$25; J. F. K., of N. Y., \$30; H. L., of Ind., \$25; C. H. B., of R. I., \$30; J. H. H., of Ga., \$30; W. H., of Ill., \$30; S. S., of Mass., \$30; E. B., of Mich., \$30; O. H. W., of Miss., \$30; H. & S., of R. I., \$250; J. B. McE., of Pa., \$15; J. H. F., of Cal., \$30; T. O. S., of Cal., \$25; H. & P., of N. Y., \$300; P. K., of R. I., \$20; J. W. B., of La., \$15; C. G., of Mich., \$30; D. T., of Ohio, \$30; S. J. P., of S. C., \$30; M. B., of Ohio, \$30; H. H. H., of Pa., \$30; J. G., of Fla., \$30; W. E. B., of Conn., \$50; H. F., of Ind., \$25; S. A., of —, \$30; T. & G., of Miss., \$20; H. A. R., of Ohio, \$21.80; J. S., of Pa., \$25; J. E. L., of N. Y., \$55; C. G. G., of Ala., \$25; J. J., of Maine, \$30; W. H. G., of N. Y., \$30; W. H., of Ohio, \$30; I. G. M., of N. Y., \$30; W. F., of Mass., \$60; W. W., Jr., of Pa., \$250; E. S. B., of N. Y., \$30; Z. D., of Ga., \$25; E. H. B., of Mich., \$55; J. C. of S. C., \$30; W. J. S., of N. J., \$30; C. & L., of N. Y., \$25; F. N., of N. Y., \$25; W. H. D., of N. Y., \$25; A. S., of N. Y., \$25; E. W., of N. J., \$25; H. L. N., of N. Y., \$25; C. P., of N. Y., \$75.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, June 16, 1860:—

- N. A. P., of Tenn.; J. B. F., of Ohio; E. M. J., of Conn.; W. S. H., of Miss.; J. W. T., of Vt.; R. S. W., of Ga.; K. & H., of N. Y.; A. L., of Mich.; F. A. G., of Ill.; D. W. M. L., of Iowa; G. V. C., of N. J.; N. Q. M., of Wis.; O. & L., of N. Y.; G. A. L., of Ill.; F. N., of N. Y.; J. C. C., of Mass.; W. H. D., of N. Y.; A. S., of N. Y.; H. L., of Md.; O. H. W., of Miss.; E. B., of Mich.; J. H. B. B., of N. Y.; A. M. W., of Ga.; E. S. C., of Mass.; H. B., of Ohio; C. C., of N. Y.; J. H. B., of N. Y.; B. & T., of Ohio; A. J., of N. H.; J. W. D., of Mass.; W. M., of Mass.; H. L. N., of N. Y.; E. M., of N. J.; J. S. G., of Mich.; T. E., of Tenn.; E. C., of La.; A. J. V., of N. P.; C. M. Y., of N. Y.; M. D., of Minn.; J. O. C., of Conn.

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