

INDUSTRY—MANUFACTURES—COMMERCE.

**A Fact for Firemen.**—The Common Council of New York have appropriated \$30,000 for steam fire-engines.

**Ventilating Porous Hats.**—We have frequently directed attention to the superiority of silk hats, so formed as to provide for complete ventilation of the head; and, on page 102 of our last volume, we described a unique hat of this character, made by a peculiar machine patented by W. F. Warburton, of Philadelphia, Pa. These hats have just been introduced into this city by John N. Geniu, the well-known hatter of Broadway, who has made arrangements with the patentee to make and sell them; each hat is pierced in its sides with 1,000 minute but unseen perforations.

**A Good Time Coming.**—The Staunton (Va.) *Spectator* says:—"The universal testimony of our farmers is that the wheat crop of this county never promised a better yield at this season of the year." The same cheering news comes to us from the western States and Canada.

**American Butter in Europe.**—The most striking feature of the past week has been the English demand for new butter, 300 tubs of yellow State dairy having been sold at 18c. a 20c. to go to Europe, and as much, if not more, will be shipped this week. This, with the demand for Southern orders, creates a scarcity and quick sale for yellow butter. White butter and tubs with white bottoms are plenty, and sell slowly at 13c. a 16c. Ohio butter is daily growing more plenty and the quality improving, and finds a ready sale at 16c. a 18c. per lb.: while Orange county butter ranges from 18c. to 22c.

**Philadelphia and Water Gas.**—Quite a controversy is going on in the Philadelphia papers between Messrs. H. C. Carey, Marmaduke Moore and A. Hart, as a committee in favor of Sanders' water gas, and J. C. Cresson, chief-engineer of the Philadelphia Gas-works, on the opposite side. The committee quote Professor Mapes' report to show the cost of making water gas to be 37 cents per 1,000 cubic feet; while that of coal gas is \$1.20 per 1,000 cubic feet. Mr. Cresson asserts that the report is not reliable, and that the prime cost of the water gas is \$1.44 per 1,000 feet, or 20 per cent more than coal gas. The committee invite a fair investigation, being confident that the water gas is the cheapest. The materials and the real essential parts of the process for making this water gas are old, and have been tested on former occasions.

**Kerosene Oil-works.**—The old and well-known Kerosene Oil-works situated on Newton creek, Long Island, were sold under the auctioneer's hammer on May 10th, and everything went off at very low figures, in comparison with their original cost. Peter Cooper bought the entire works and stationary fixtures for \$96,000, the original cost of which was \$302,000. There were 35,373 gallons of heavy oil (mostly solid paraffine) sold for 23c. per gallon, and 9,000 gallons of crude oil sold for 8c. per gallon. The thick paraffine oil was a bargain. The purchaser can clear about \$2 per gallon by converting it into candles. It is stated that a vast useless expenditure had been incurred in the erection of these works (for machinery and apparatus), and that they could not be carried on profitably on this account. Most of the coal oil-works in this section have been carried on under disadvantages. Scarcely any of them has been able to do more than pay expenses, while quite a number have broken down. The coal for making the oil is too dear, in the first place. That which the Kerosene Works had been using was the Scotch Torbane-hill cannel, and cost \$15 per ton. The expense for the carriage of cannel coal from the West to manufacture coal oil in New York is too great. The entire distillations and the refining processes can be conducted most economically at the coal mines. Several coal oil-works in Brooklyn obtain the crude oil from Virginia and Ohio, and simply refine it for sale; they are wise.

**Michigan Manufactures.**—The *Detroit Tribune* has a full statement of the manufacturing establishments of Michigan, and their valuation. The sum total of the capital invested is \$13,433,930. The largest interest is sawmills 1,226 in number, valued at \$4,435,200; 417 flouring mills, \$2,874,700; 5 railroad repair shops, \$584,000; 103 foundries, \$568,000; 34 breweries, \$580,500; 58 tanneries, \$372,800; 17 machine-shops, \$326,000; 9 iron-rolling mills, \$229,000; 42 furniture factories, \$195,000; 2 railroad car factories, \$175,000; 27 woolen factories, \$153,700; 1 locomotive factory, \$150,000; 4 blast furnaces, \$135,000.



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING MAY 22, 1860.

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\* Pamphlets giving full particulars of the mode of applying for patents, size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

28,337.—Calvin Adams, of Pittsburg, Pa., for an Improvement in Clevis for Plows:

I claim, first, Constructing the loose end-piece of the clevis with hooked ends fitting into suitable slots in the shanks, for the purpose of forming a connection between the outer extremities of the shanks and at the same time sustaining the end piece in its proper position without any bolt or other fastening for that purpose.

Second, Combining with a plow clevis, constructed as described, a projection or lug on one of the shanks, in the manner and for the purpose set forth.

28,338.—Daniel W. Ayres, of Middleport, Ill., for an Improvement in Grain Binding Machines:

I claim the employment or use of the rotating arm, G, with the toothed segment, E, and rod or bar, F, attached in connection with the stationary box G, and twister, formed of the stationary and movable heads, K, I, and the holder and cutter formed of the lever, K, provided with cutting and holding teeth, p and q, all being arranged for joint operation, substantially as and for the purpose set forth.

28,339.—G. L. Bailey, of Portland, Me., for a Ballot-box:

I claim, first, The employment of dials, O and P, with their numerals and blank space, operating in conjunction substantially as and for the purpose set forth.

Second, The employment of dials, O and P, as and for the purpose set forth, in combination with ratchet wheel, L, pawl, A and pull, B, or their equivalents.

Third, The combination and use of the above claimed dials, ratchet wheel, pawl and pull, operating as described, with alarm bell, C, for the purpose set forth.

Fourth, The combination and use of the above claimed dials, ratchet wheel, pawl and pull, whether with or without alarm bell, C, with any suitable box, substantially as described.

Fifth, The combination and use of an alarm bell, with a self-registering ballot-box.

Sixth, The combination and use of two sets of registering mechanisms, with one ballot box, operating substantially as and for the purpose set forth.

28,340.—H. O. Baker and James McGill, of New York City, for a Fire-escape:

We claim the stairs or ladders, the folding guard, or their equivalent, in connection with balconies upon the outside of a building, substantially as described, for the purpose specified.

28,341.—J. F. Bennett, of Pittsburg, Pa., for an Improvement in Apparatus for Condensing Coal Oils:

I claim subjecting the volatile products of the distillation of coal (composed of a mixture of various substances in the form of vapor), directly as it passes from the retort or prime generator, to gradually diminishing degrees of heat, in a succession of condensers, for the purpose of separating by one operation, each of these several different substances from the other substances with which it is mixed when in the form of vapor, at the particular degree of temperature at which it assumes the liquid form, as distinguished from the fluid or gaseous form, by means of an apparatus, such as described, when combined with a coal oil retort.

28,242.—G. W. Billings, and W. M. Hutton, of Cleveland, Ohio, for an Improved Apparatus for Elevating Water from Wells:

We claim the arrangement of the disks, F F', with the radial slots, G and revolving wedge, E, in combination with the radial arms or levers, H, shaft, B, and rope, D, the whole being constructed, substantially as set forth, for the purpose described.

We also claim the sliding draws, P P', hooks, N N', and loops, M M', when specially arranged as described, and operating conjointly in combination with a windlass and buckets, in the manner and for the purpose set forth.

28,343.—J. H. Bonham, of Elizabethtown, Ohio, for an Improvement in Corn Planters:

I claim the seed reservoir, C, in combination with the hopper B, operated by the driving wheel, E, in the manner and for the purpose set forth.

I also claim the combination of the pivoted hopper, B, perforated flange, m, hook, r, brush, h, and ring, k, constructed, arranged and operating substantially as and for the purpose set forth.

28,344.—John Broughton, of New York City, for an Improvement in Dress for Millstones:

I claim the employment or use of the peculiar zig-zag form of teeth, so cut or constructed on the grinding surfaces that while the working edges or meal-producing line shall present an obstruction to the discharge of unground portions of the substances passing through the mill, the furrows shall be clear and unobstructed, for the free passage of air, and the proper ventilation of the grinding surfaces, substantially as set forth.

[This invention relates to an improvement in that class of grinding surfaces for mills in which the teeth are cut or so constructed as to pass or cross each other at an angle and cut with a shearing action.]

28,345.—C. W. Brown, of Boston, Mass., for an Improvement in Rotary Cutting Shears:

I claim the annular shear plates, when formed and arranged essentially as and for the purposes described, so that their cutting edges will always be kept in perfect contact, and so as by their elasticity, to correct any variations in their thickness, resulting from imperfect workmanship, or other causes.

[This invention has for its object the cutting or shearing of india-rubber cloth into narrow strips by a new and improved system of rotary shears, which are constructed and arranged upon suitable shafts, in such a manner that they will be brought into contact only at their cutting edges, or so that the points of contact of the shears will be the cutting points.]

28,346.—Wm. R. Carnes, of Roxbury, Mass., for an Improved Flush Bolt:

I claim the above described flush bolt, or door fastening, consisting of a single spring bolt flush with the edge of the door or jamb which is locked by the edge of the other door, as set forth.

28,347.—Alfred Carson, of New York City, for an Improved Fire-place:

I claim the arrangement of the inclined grate, I, fireplace, C, feeder G, hearth plate, H, and cold air passage, J, with or without the air-heating passage, E, substantially as and for the purpose set forth.

[The object of this invention is to obviate the difficulty hitherto at-

tending open grates or fireplaces for heating apartments, namely, the escape of a large amount of heat up the chimney or flue, the result being due to the encompassing of the back and sides of the fire-place or grate by the masonry of the chimney, and the consequent small area of heat-radiating surface exposed, together with the very direct communication of the fire with the chimney or flue.]

28,348.—F. Y. Clark, of Savannah, Ga., for an Improvement in Molds for Metal Dies used by Dentists:

I claim, first, The impression cup, perforated, substantially as described, for the purposes specified.

Second, The combination of the perforated cup, C, the impression obtained directly from the mouth, and the two flasks, A and B, constructed substantially as described, the whole constituting a mold for casting the die, of which the impression taken directly from the mouth forms a part, as specified.

28,349.—A. C. Clemens, of Crain Township, Ohio, for an Improvement in Apparatus for Evaporating Saccharine Juices:

I claim the construction and arrangement of the several fire chambers and the tubes, B, C, as and for the purpose shown and described.

Second, The combination of the pan in different divisions at variable heights, substantially as set forth for the purposes described.

28,350.—J. H. Clifton, of New Castle, Pa., for an Improvement in Bands for Machinery:

I claim a band, the warps of which are of animal fiber, and the wefts of either animal or vegetable fiber, impregnated or coated with lime cement.

28,351.—L. O. Colvin, of Cincinnati, N. Y., for an Improvement in Cow-milkers:

I claim, first, The arrangement of the adjustable elastic tube, D, between the tubes, E, C, as and for the purpose shown and described.

Second, The attaching of the tubes, C, of the teat tubes to the pump cylinder, b, by means of the balls, q, sockets, p, and elastic tubes, r, for the purpose set forth.

Third, The employment, in combination with the milk pail, of a pump provided with double pistons and double brakes, or lever, that move in opposite directions, so that the force required to move one of the brakes and pistons in one direction will be counterbalanced or equalized by the force applied to move the opposite piston and brake, the apparatus forming the pump and apparatus from being capized or displaced by the act of pumping, and also producing a quick vacuum within the pump, all as shown and described.

[This invention consists in combining a single-acting pump with a series of teat tubes and a milk receptacle, whereby the device may be readily manipulated and applied to the animal, and the action of the teat tubes on the teats made to resemble the natural draw or suction of the calf. The invention also consists in a peculiar construction of the teat-tubes, pump, and valve, whereby the apparatus or device is rendered capable of being perfectly cleansed with facility.]

28,351.—Wm. Compton, of New York City, for a Pianoforte Action:

I claim, first, The repeating finger, k, when placed diagonally to the fly of the jack, and taking the butt, g, of the hammer beneath the center on which said hammer moves, for the purposes and as specified.

Second, I claim the twining-pin s, combined with the spring in the jack of a piano, for regulating the power of such spring, as specified.

Third, I claim the regulating screw, c, to adjust the elastic material that takes the side of the fly-jack, c, for the purposes set forth.

Fourth, I claim the regulating button, d, only when formed on and adjusted by a screw that passes through the base of the jack, f, c, whereby the said button is drawn out with the key, and is not in the way of the check, l, in removing the key, as specified.

Fifth, I claim controlling the action of the repeating parts of pianoforte actions, by means of the hammer rail, c, that takes said parts, and determines their position relatively with the hammer itself, as set forth.

28,353.—G. W. Davis, of Brooklyn, N. Y., for an Improved Arrangement of Counter Shaft:

I claim, first, The yielding counter shaft, or intermediate shaft, D, suspended upon and attached to the carriage, as described, and in relation to the shafts, B and C, as set forth.

Second, The lever, S, in combination with the gate, F, and the weight, P, substantially as and for the purpose specified.

28,359.—G. W. Davis, of New Orleans, La., for an Improvement in Ice Cream Freezers:

I claim the vessel, P, pump, V, pipes, X and S, in combination with cylinder, b, when arranged and operated as or substantially as and for the purpose set forth.

28,355.—A. E. Doty, of North Henderson, Ill., for an Improvement in Seeding Machines:

I claim the arrangement of the double-acting plates, H, openings, h, boards, i, slide bars, E, boxes, D, levers, F, rollers, B, and scrapers, I, all as and for the purpose shown and described.

[This invention relates, firstly, to an improved seed distributing apparatus, by which the proper and even distribution of seed is insured, and the device made to work properly as long as any seed remains in the seed boxes. The invention relates, secondly, to a combined coulter and furrow share, and also to scrapers for the purpose of depositing the seed in the earth, and covering the seed in a proper manner.]

28,356.—Carolus Dunham, of Batavia, N. Y., for an Improvement in Potato-Diggers:

I claim the rake, 6, operated as described, the plane, 13, spring inclined plane, 14, in combination with the plow and plow box, having closed sides and open bottom, substantially as described and for the purpose set forth above.

28,357.—David Eldred, of Monmouth, Ill., for an Improvement in Seeding Machines:

I claim the employment or use of the tubes or seed receptacles, a, when attached to the peripheries of the wheels, E, and provided with adjustable yielding or elastic stoppers, b, arranged as and for the purposes set forth.

I also claim the adjustable or hinged scattering board, F, attached to the seed box, C, as and for the purpose specified.

I further claim the double inclined partitions, c, c, in the seed box, C, arranged relatively with the seed-distributing wheels, E, for the purpose set forth.

[This invention relates to an improved seeding machine of that class which are used for sowing seed broadcast, and consists in a novel means for varying the capacity of the seed receptacles; and, consequently, for regulating the amount of seed to be sown on a given area. The invention also consists in the use of an adjustable scattering board attached to the seed box, and so arranged relatively therewith, that the distribution of the seed may be stopped whenever desired, without throwing the working parts of the distributing device out of gear with the driving wheel. The invention further consists in a means employed for retaining the seed in proper position within the seed box, so that the distribution of the seed will not be affected by the inclination of the machine in moving over inclined ground.]

28,358.—Walter Fitzgerald, of Boston, Mass., for an Improved Pegging-machine Jack:

I claim the combination and arrangement, in a pegging machine, of the friction feed rolls, J and d, with the plate, o, which carries the shoe, and the guide gauge, q; all operating together, substantially as set forth.