

sions are produced upon the vessel in a lateral direction during every stroke of the engine or in every stroke of each piston when more than one engine or an engine with more than one cylinder is used. The object of this invention is to counteract the above-mentioned effect or tendency of the movements of the piston of an engine; and to this end it consists in the connection with such piston, of a weight which has a corresponding reciprocating motion, but always moves in an opposite direction to the piston, such weight being equal or nearly equal to the weight of the piston and its rod or rods and their connections with the crank, and moving the same distance or being heavier and moving a correspondingly less distance, or lighter and moving a correspondingly greater distance. John Ericsson, of New York city, is the inventor of this improvement.

**Time-piece.**—This invention consists in the employment, in place of the ordinary hands of a clock or watch, of dials containing the names of different localities, arranged in such relative position toward each other that, by the motion of the disk-shaped hands or hand-disks on the dial of the clock or watch the local times of all the places marked on the disks can be observed at any moment; also in the application of two or more sets of hands marked with the names of different localities and moving on one and the same arbor, in combination with the dial of a clock or watch, in such a manner that the local time of each of the places marked on the hands, and the difference of time between said places can be observed at a glance whenever desired. Finally, in the arrangement of adjustable indices or local hands inserted into or attached to the edges of the hand-disks in such a manner that the same indicate the local time of that place where the watch or clock is to be used. A. W. Hall, of Chicago, Ill., is the inventor of this improvement.

**CATTLE VALUATION.**—According to published statistics, it appears that the wholesale cost of live animals brought to New York for slaughter last year, exceeded \$30,000,000, and that more than half our beef comes from the single State of Illinois.

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It is important that all works of reference should be well bound. The SCIENTIFIC AMERICAN being the only publication in the country which records the doings of the United States Patent Office, it is preserved by a large class of its patrons, lawyers and others, for reference. Some complaints have been made that our past mode of binding in cloth is not serviceable, and a wish has been expressed that we would adopt the style of binding used on the old series, *i. e.*, heavy board sides covered with marble paper, and morocco backs and corners.

Believing that the latter style of binding will better please a large portion of our readers, we commenced on the expiration of Volume VII., to bind the sheets sent to us for the purpose in heavy board sides, covered with marble paper and leather backs and corners.

The price of binding in the above style is 75 cents. We shall be unable hereafter to furnish covers to the trade, but will be happy to receive orders for binding at the publication office. No. 37 Park Row, New York.

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ISSUED FROM THE UNITED STATES PATENT-OFFICE FOR THE WEEK ENDING FEBRUARY 16, 1864. Reported Officially for the Scientific American.

Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying 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.

**41,588.**—Amalgamating and collecting Gold and Silver.—Henry W. Adams, New York City, and W. S. Worthington, Newton, N. Y. Antedated Feb. 12, 1864:

We claim, first, The precipitating or discharging of the pulverized quartz in a shower into an atmosphere of hot vapor of quicksilver, substantially in the manner herein shown and described.

Second, The cylinder, C, provided with a screen, D, and arranged and operated as shown for the purpose specified.

Third, The stirrers, N, and pan, M, either or both; having a rotary motion in combination with the cylinder, B, rotary screen cylinder, C, and furnace or still, J, as and for the purpose specified.

Fourth, Operating the stirrers, N, or the pan, M, from the shaft, I, when said shaft is arranged as shown and provided with a wiper-wheel, H, to operate the screen cylinder, C.

Fifth, The means employed for preventing the escape of the vapor of quicksilver from the cylinder, B, to-wit: the annular water chamber, a, into which the lower end of the screen cylinder, C, is fitted and the funnel, L, at the lower end of the cylinder, B, extending into the pan, M, and below the surface of the water contained therein, substantially as set forth.

**41,589.**—Stuffing for Mattresses, &c.—Henry A. Alden, Matteawan, N. Y.:

I claim as a new manufacture the production of mattresses, chair-seatings and other articles of furniture, bedding, &c., in which the stuffing is composed of sponge prepared in the manner substantially as herein set forth.

**41,590.**—Metallic Cartridge.—Enos G. Allen, Boston, Mass.:

I claim forming a metallic flanged cartridge case, imperforate and charged with the fulminate at its flanged end, and at its outer end swayed over the equator of the ball or lead cap, so as to hold it close, and tapering so as to give certainty to the entry of this end into the barrel without obstruction, and secure a close fit to the chamber to prevent the escape of the gases therein; the said cartridge case containing buck, or other shot in its anterior portion, and powder in its posterior, the two to be separated by a wad of sufficient capacity and fitting with sufficient accuracy to prevent the escape of the explosive gas against the shot; all arranged precisely and specifically as described in the specification and drawing.

**41,591.**—Feed-water Heater for Locomotives.—Samuel F. Allen, Chicago, Ill.:

I claim the combination of the compound pipes, R, the exhaust pipes, T, the regulating valve, A, the directing tongues, e, the yokes, X, and the heater, G, substantially as herein set forth.

**41,592.**—Stove Pipe Thimble.—Thomas K. Anderson, Hornellsville, N. Y.:

I claim the tin or zinc cylinder, D, having a bright surface, and indented throughout its surface with protuberances in the manner as and for the purposes herein described.

**41,593.**—Harvester.—Samuel Augsburg, Trenton, Ohio:

I claim a detachable elevating device for lodged or tangled grain, mounted rigidly upon and supported by the fingers, C, and consisting of a horizontal arm, D, and inclined arm, F, occupying the same vertical plane, the latter being attached by its intermediate part to the front of the horizontal arm, D, and projecting in front, below and beyond the same, all as herein shown and described and for the purposes specified.

**41,594.**—Iron Bridge.—James J. Beard, Columbus, Ohio:

I claim the arrangement and combination of the segments, A, A, having bosses, a, a, on both sides with which to connect the bolts, c, c, and the pillars, d, d, for securing the beams or string-pieces, D, D, and supporting the structure in the manner as and for the purposes specified.

**41,595.**—Wagon Brake.—Erasmus Bennett, Clarksville, N. Y.:

I claim the sliding rods and pole, when used in connection with the arms, M, N, and rods, Q, R, connected with the rubbers, T, U, and eye, bolt, or pin, Z, all arranged and combined as set forth and for the purposes specified.

**41,596.**—Stove.—Wm. Bickel, Pottsville, Pa.:

I claim, first, A barred or perforated grate consisting of upper horizontal plates, a, a, vertical plates, b, b, lower horizontal plates, c, c, sliding in and out through apertures, e, all as herein shown and described and for the purposes specified.

Second, I claim the pipes, C, C, extending completely through the fire above the grate, B, open at both ends, and provided with a series of apertures, a, to provide a more free and full supply of air to the fuel when used in combination with registers to open or close either end of all the pipes, simultaneously as explained.

**41,597.**—Handle for Stamps.—Matthew C. Borgia, Philadelphia, Pa.:

I claim the gum-elastic tube or block, B, fitted to the die as set forth when the said tube or block is of such a size and shape as to form the entire handle of the stamp for the purpose specified.

**41,598.**—Draught Regulator for Stoves and Furnaces.—John Briggs, Roxbury, Mass.:

I claim the improved draught regulator consisting of the expansion drum, F, its lever, H, the valve, M, and the adjustable stop, I, and spring, c, the whole being applied to a furnace or heating apparatus, and constructed in manner and so as to operate substantially as described.

**41,599.**—Gas Regulator.—F. W. Brocksieper, Bridgeport, Conn.:

I claim the arrangement and application of the slotted adjusting screw, A, or its equivalent to the aperture in the valve, D, or in the valve seat along side of the same, in the manner and for the purpose substantially as herein set forth and described.

**41,600.**—Hames.—Robert D. Brown, Covington, Ind.:

I claim the cap, C, provided with the screw, D, in combination with the bow, A, provided with the plate, E, substantially as described.

**41,601.**—Neck Yoke.—Stillman P. Campbell, Rochester, Minn.:

I claim, first, The ferrule, C, provided with the projections, c, c, in combination with a ring, D, provided with a cross-plate and breast-strap rings as at d, substantially as described. Second, The martingale ring, e, in combination with the ring, D, and ferrule, c, substantially as described.

**41,602.**—Combination of a Wash-stand and Water-closet.—Wm. Campbell, Waterloo, Pa.:

I claim, first, A wash-stand constructed with a movable or sliding

top, G, a seat, e, and chamber compartment, A, arranged substantially as described. Second, So applying the movable top, G, to the body of the cabinet, that it can be made to serve as a support or desk for a person sitting in the seat, substantially as described.

**41,603.**—Plow.—Orman Coe, Port Washington, Wis.:

I claim, first, The curved tined pulverizer, arranged and supported in rear of the plow beam, A, in a plane obliquely to the line of draught, in combination with the plate, b, which forms a wide channel in the ground to allow the tines to enter freely, substantially as and for the purposes described. Second, Although I do not claim broadly a revolving pulverizer having teeth on its edge, I do claim such having flattened and curved teeth, substantially as shown and described.

Third, Arranging in rear of the coiler standard of a subsoil plow, the revolving curved toothed pulverizer, substantially as described.

**41,604.**—Dumping Cart or Wagon.—Isaiah B. Conklin, Pemberton, N. J.:

I claim the bar, F, pivoted to the shafts, C, and controlled by springs, f, and staples, G, when used in combination with the hooks, H, H, rigidly attached to the cart body, A, all as herein shown and described and for the purposes specified.

**41,605.**—Pocket Calendar.—D. E. Crosby, Brooklyn, N. Y.:

I claim the employment or use of a spring, c, or its equivalent in combination with the dial, B, and disk, A, as and for the purposes specified. [The object of this invention is to produce a perpetual calendar which can be conveniently carried in the pocket and which, when once set, is not liable to shift spontaneously.]

**41,606.**—Soap-dish.—John Cundy, Philadelphia, Pa.:

I claim the wooden bowl, A, having an inclined ledge, d, and two compartments separated from each other by a movable or detachable perforated plate, B, of metal, all as set forth.

**41,607.**—Uterine Supporter.—D. M. Drake & S. L. Hockert, Pittsburg, Pa.:

We claim the arrangement of the curved wires, A, A, passing through vertical holes in the front brace, B, and held in position by means of set screws, P, P, when used in combination with the inular or pubic pads, N, N, having a lateral or adjusting motion in the long slots, n, n, and with the central hole, L, and tightening screw, for holding different instruments in the manner and for the purposes herein set forth.

**41,608.**—Bottle-filling Machine.—Wm. F. Davidson, Cincinnati, Ohio:

I claim, first, The provision of the valve guarded inlet, K, L, and flexible or other suction pipe, M, in the described combination with a bottle-filling syringe, substantially as set forth. Second, The provision of a stopper or valve, C, at the ventage of a bottle-filling syringe said valve being made to close and open automatically, in conjunction with the action of the piston, substantially as set forth.

**41,609.**—Grain-cleaner.—Wm. S. Deisher, Hamburg, Pa.:

I claim the employment of the scattering teeth, I, I, I, within the blast spout and at the edge of the curb opening, g, in the manner and for the purposes herein shown and described.

I also claim the employment of the adjustable angular guiding slides, Q, when arranged to operate in conjunction with the blast spout, F, and tubes, I, in the manner herein shown and described. I also claim the combination of the circular double-acting valve, L, with the discharge spouts, k, k', all arranged in the manner herein shown and described; so that the fan may be rotated in either direction and so that the blast of air through the spout, F, may be always readily controlled, as set forth.

[This invention consists in a novel dress for the stones as herein after described, whereby the grain is acted upon in a more thorough manner than hitherto, and more perfectly cleaned and scoured. The invention also consists in a novel and improved grain separating device and fan attachment, whereby it is believed that several advantages are obtained over the ordinary means employed for that purpose.]

**41,610.**—Tool for making Buckles.—Robert Durning, Lawrenceville, Pa.:

I claim the employment or use, in the manufacture of harness and other similar buckles, of a series of tools constructed substantially as shown, for the purpose of opening the eyes of the tongues of the buckles, and closing the same in the buckles and for forming the tubular friction rollers and also adjusting them on the buckles as herein set forth. [This invention relates to an improvement in the manner or process of manufacturing buckles, such as are made with wrought-iron tongues and provided with friction rollers and are employed for harnesses and for similar purposes. The invention consists in the employment or use of certain means or tools which may be used separately, by hand or so arranged as to be operated by mechanical means with any suitable power, and so constructed as to respectively open the eye of the tongue and close the same on the bar of the buckle, to form the tubular friction roller, and to adjust the same on the roller bar of the buckle, whereby buckles of the class specified may be manufactured much cheaper than at present, and in a superior manner.]

**41,611.**—Operating Ordnance.—James B. Eads, St. Louis, Mo.:

I claim, first, The raising or lowering of the gun slides or frame on which the gun carriage moves in a line so as to keep the axis of the gun in a line parallel therewith, and in such manner that the breech and trunnions of the gun are moved up or down whilst the muzzle of the gun is kept at nearly a fixed point, for the purpose of giving the necessary vertical range or aim of the gun, and thus obviating the use of a port-hole larger than the muzzle of the gun, substantially as described. Second, I also claim the pivoting of the platform, A, that carries the gun or guns, and the mechanism for operating it or them on a hollow pin or pivot, for the purpose of admitting, or of admitting and discharging the steam, air, water, or other element for operating the mechanism that raises or lowers, or moves the gun to or from the port, substantially as described.

**41,612.**—Steam Engine.—John Ericsson, New York City:

I claim the employment of a reciprocating weight so connected with the piston of a steam or other engine as to move always in the opposite direction to the motion of the piston, and so proportioned as to operate substantially as herein specified.

**41,613.**—Horse Rake.—Levi W. Fredrick, Ray, Ind.:

I claim the thills constructed of the parts, D D F, arranged as shown, when used in combination with and applied to the revolving rake, substantially as herein described. [This invention relates to certain improvements in what are generally known as revolving horse-rakes. The invention consists in mounting the rake on wheels and arranging it in such a manner that it may be manipulated by the driver or attendant with the greatest facility, in order to discharge the load and also to enable the rake to pass over obstructions which may be in its path. The invention further consists in a novel construction and arrangement of the thills, whereby the revolving movement of the rake in discharging its load is greatly facilitated, the implement preserved from much wear and tear, and the labor of the horse materially diminished.]

**41,614.**—Cultivator.—Wilkinson Furnas, Ononwa, Iowa:

I claim the arrangement of the treadles, I, I, frame, b, beams, D, and guards, G, with the frame, A, levers, H, and serrated bars, m, all constructed and operating together in the manner herein shown and described. [This invention relates to those parts which serve to adjust the plows to the width of different rows, to give to them a lateral motion