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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.

29,347.—James Adair, of Pittsburgh, Pa., for an Improvement in Lamps:

I claim, first, The arrangement and combination of the adjustable tube, E, wick, F, containing the small central tube, g, tube, D, provided with the disk, a, and valve, b, at its bottom, and perforated below the disk, to communicate with the fountain, C, the thimble, G, and burner or tube, H, substantially as and for the purpose set forth.

Second, The hood, L, fitted to the perforated cylinder, I, and rendered adjustable by means of the cylinder, K, in connection with the deflecting lips, M, and the peculiar shaped orifice of the burner or tube, H, for the purpose specified.

[The object of this invention is to obtain a lamp by which volatile hydro-carbons may be burned for illuminating purposes without a chimney. The invention is more especially designed for burning coal oils of the heavier grades, which have not hitherto been successfully burned without a chimney, and, in fact, which cannot well be burned with a chimney when capillary attraction is chiefly depended upon for the supplying of the oil to the flame.]

29,348.—H. A. Alden, of Matteawan, N. Y., assignor to the New York Rubber Company, for an Improvement in Belt Lacing:

I claim, as a new and useful article of manufacture, strips of woven material coated with an india-rubber, gutta-percha, or other suitable cement, that while scarcely or not at all sticky to handle, is firmly adhesive on being subjected to pressure, substantially as specified and applied as a belt or band lacing, as described.

29,349.—Josiah Ashenfelder, of Philadelphia, Pa., for an Improved Journal Box for Railroad Cars:

I claim, first, Making the bottom of a journal-box, whether fixed, movable, or supplementary, to incline downward from the sides and under the axle, for the purpose of reducing the quantity of lubricating material to be employed and more effectually presenting it to the axle.

Second, The box, A, in combination with the adjustable back, B, bearing, D, loose bottom, E, cap, F, and collar, G, substantially as described and for the purpose of an easy removal of the parts for inspection, cleaning, and removal.

29,350.—M. H. Bacon, of Mystic, Conn., for an Improvement in Machines for Dressing Millstones:

I claim, first, The arrangement of the band wheel, G, sliding frame, E sleeve, E′, spring, J, and suitable means for adjusting the tension of J, and suspending the spindle, K, by turning G, substantially as set forth.

Second, Operating the stop, T, by the pawl, N, substantially in the manner shown, for the purpose of seizing and holding up the cutters by a slight motion of the wheel, G, whatever may be the tension of the spring.

Third, The slide, R, spring, U, slide, T, and grooved spindle, F K, in combination with the shifting device, M N, e r, or its equivalent, substantially as and for the purpose set forth.

Fourth, The arrangement of the spring, U, in connection with the double slide, R T, and band-wheel, G, substantially as shown for the purpose specified.

29,351.—H. L. Bennett, of Long Branch, N. J., for an Improvement in Machines for Covering Potatoes:

I claim the triangular moldboard, f, provided with the shares, k k and i, and adjustable, relatively to the beam, a, by the bars, g h, substantially as and for the purposes set forth.

And, in combination with the aforesaid triangular moldboard, I claim the harrow, l, attached to the bar, m, and to said moldboard, f, in the manner and for the purposes specified.

29,352.—Cornelius Bergen, of Farmer, N. Y., for an Improvement in Grain Separators:

I claim, first, The combination of the fingers, 4 4, receiving the grain from the first carrier, the rake, 5 6 7, and the carrier, 11, substantially as and for the purpose set forth.

Second, The arrangement of the rake, 5 6 7, in connection with the vibrating bearings, 8 8, and craft shaft, 9, in the order and manner described—that is to say, the crank shaft being placed between the rake-head, 6, and the vibrating bearings, by which a greater and more perfect agitation of the straw and clearance of the rake is secured by means of the greater vertical than horizontal motion given to the rake.

29,353.—L. R. Billard, of Norfolk, Va., for an Improvement in Ratchet Drills:

I claim the arrangement of the shank, B, the box, A, the screw, D, the ring, c, the spring, a, and the handle, H, the screw, D, passing into the shank, a portion of the shank passing into the box with the spring, a, intervening between them and the handle, H, being secured to the box, as represented, the whole being combined, constructed and operated, as and for the purpose specified.

29,354.—Wm. H. Bishop and A. H. Low, of Warren, Mass., for an Improvement in Devices to Prevent Horses from Cribbing:

We claim so combining the pivoted or hinged guard, D, with the strikers, I, through the arms, h, and clutch, r, as that any attempt to grasp the top of the guard will throw up the strikers, and give the horse a blow on the nose, and thus cause him to desist from any attempt at cribbing, as set forth and explained.

29,355.—J. H. Boardman, of New York City, for an Improvement in Steam Boilers:

I claim, first, The arrangement and combination of the circular central neck, E, horizontal boiler, A, vertical tubular boiler, F, and surrounding dropflue, G, operating substantially as and for the purpose set forth.

Second, The combination with the vertical tubular boiler, F, of a mud-box, K, constructed and operating substantially in the manner and for the purpose specified.

[This invention consists in connecting a horizontal cylinder and a vertical cylinder by means of a central neck in combination with a flue surrounding said vertical cylinder in such a manner that the vertical cylinder shall be suspended when set, and that the heat from the furnace passes under the horizontal cylinder which forms the top of the furnace, thence through and around the vertical cylinder, whereby a large amount of heating surface is obtained at a comparatively small expense. A mud-box at the bottom of the vertical cylinder serves to collect the impurities which may precipitate from the water.]

29,356.—Nathan Brasher, of Green Fork, Ind., for an Improvement in Bee-hives:

I claim the arrangement of the metallic ribs and metallic bottom within the moth drawer, as and for the purpose shown and described.

29,357.—James Brooks, of Romulus, N. Y., for an Improvement in Ditching Plows:

I claim the combination and arrangement of the guide bar and coulter share, substantially as described and set forth.

29,358.—T. H. Burridge, of St. Louis, Mo., for an Improvement in Steam Plows:

I claim the combination of the gang of plows, S S S, with the described drum and engine, in the manner described.

29,359.—J. W. Cliff, of Rochester, N. Y., for a Register Point:

I claim the application to Adams' printing-presses, or any other description of printing-presses to which they may be adapted, points that can be moved in any desired direction within a given space, by the means and in the manner described.

29,360.—Loring Coes and A. G. Coes, of Worcester, Mass., for an Improved Machine for Heading Screw Wrenches:

We claim, first, The combination of the anvil block, O, side dies, c c, gage, p, and hammer die, e, for the purpose of forming and heading the blanks of screw wrenches, substantially as described.

Second, We claim, in combination with the hammer die, e, and the anvil block, a gage for defining the relative positions of these parts, with regard to the blank, for the purpose of "paring" down the thin part of the jaw of the wrench blank, substantially as described.

Third, We claim, in combination with a hinged catch, g, the foot lever or treadle, K, for catching and holding up the hammer, substantially as described.

Fourth, We claim, in combination with the catch and its sliding-piece, l, a tripping arm on the cam, so that the hammer, when tripped, will not fall upon the cam, substantially as described.

29,361.—J. W. Covel, of Bangor, Me., for an Improved Harness Buckle:

I claim, as an improved article of manufacture, a buckle having a frame, a, loops, a c, and tongue, d, arranged and constructed as shown and described.

[The object of this invention is to obtain a buckle that will not weaken the harness in being applied to the same, and also one that will admit of a quicker adjustment than usual of the straps or parts which the buckle connects.]

29,362.—Florian Dahis and Frederick Doermer, of Brooklyn, N. Y., for an Improvement in Catamenial Bandages:

I claim a menstrual instrument composed of a cup, B, springs, D E, and a main or girdling spring, A, the parts being made and confined as shown and described.

29,363.—John Dain, of Utica, Ohio, for an Improvement in Compositions for Preservation of Timber:

I claim the mode of preserving wood from rotting, by means of the described composition being inserted therein, as described, or in any other way.

29,364.—J. H. Davis, of Woburn, Mass., for an Improvement in Warming Apparatus:

I claim the construction and use of the horizontal reverse draft flue K K, with its fixed partition, H, its swinging partition, N, and jointed lever, I, and two vertical partitions, S S, and their valve, U, together with the inclined partition, A, as combined with the radiator, R, when arranged and combined in the manner and for the purposes specified.

29,365.—Joseph Desnos, of Troy, N. Y., for an Improved Horse-shoe Machine:

I claim, first, The combination of the segmental roller, A, and friction roller, A′, with the cutters, B B′, the whole being arranged and operating together as described, to intermittingly feed in and cut off the heated iron bar.

Second, I also claim the combination of an intermittingly-revolving anvil, E, provided with a series of equi-distant female shoe dies or molds, f, each having a core, g, which projects beyond the mold, as described, with a vibrating die or hammer, D, and a pair of vibrating jaws, C C; the whole arranged and operating together substantially as described, to bend and swage the pieces of the heated iron bar into the form of the shoes.

Third, I also claim the reciprocating creasing die, H, when arranged and operating in combination with the intermittingly-revolving anvil, E, the hammer, D, and the jaws, C C, as described, to successively and automatically forge and crease the shoes.

Fourth, I also claim the combination of the vibrating nail hole punch, I, with the intermittingly-revolving anvil, E, creasing die, H, hammer, D, and jaws C C, all arranged and operating together substantially as described, for the purpose of successively bending, swaging, creasing and punching the shoes at one continuous mechanical operation.

Fifth, I also claim the vibrating tongue, J, when arranged and operating as described, to discharge the shoes from the molds of the intermittingly-revolving anvil.

29,366.—Levi Disbrow, of Oswego, N. Y., for an Improvement in Apparatuses for Destroying Vermin:

I claim the combination of the pipes, c and E, with the reservoir, B, rim, C, valve, a, and bellows, A, as and for the purposes set forth and described.

29,367.—Lockwood Drake and E. Hewett, of Marshall, Mich., for an Improvement in Smut Machines:

We claim the use of the auxiliary fan blower, P2, in combination with the semi-annular passage, O, when applied substantially in the manner and for the purposes described.

29,368.—Ezra Emmert, of Franklin Grove, Ill., for an Improvement in Cultivators:

I claim the combination, with an ordinary shovel plow or cultivator, A, of the rotary wheel, F, furnished with hoes, b, and operating in the manner and for the purpose specified.

[This invention consists in the combination, with an ordinary shovel plow or cultivator, of a wheel rotating on the side of the plow, and provided with hoes on its edge for the purpose of preventing the plow from covering the growing plants as it is drawn forward, and also for the purpose of giving steadiness to the plow and to enable the attendant to guide it more readily, and at the same time for the purpose of digging up and pulverizing the soil around the roots of the growing plants.]

29,369.—Benaiah Fitts, of Worcester, Mass., for an Improved Planing Machine:

I claim, first, The arrangement of the screw, O, the hanger, N, the box, M, and the spring, R, in combination with the dimension planer, when constructed and operating substantially as set forth.

Second, I claim so hanging or fastening the stand by which the pressure roll is attached to the cylinder frame, D, in such a manner that the pressure of the roll on the board will serve to hold or bind the cylinder frame more firmly to the sides or posts, substantially as described.

Third, I claim hanging the pressure bar, S, in such a manner that its pressure upon the board will cause it to hold the cylinder frame, D, more firmly to the slides or posts, substantially as set forth.

Fourth, I claim so forming and hanging the pressure bar, S, or its mechanical equivalent, that the backward motion of the carriage will raise the cylinder frame, D, so as not to plane or mark the board while running back.

29,370.—Elisha French, of Braintree, Mass., for an Improvement in Apparatuses for Rescuing Horses from Fire:

I claim the combination and arrangement of the rope, H, spring latch, D, connecting chain, f, halter ring, g, and sliding bolt, C, substantially as described and for the objects specified.

29,371.—Frederic Gardiner, of Gardiner, Maine, for an Improvement in Mowing Machines:

I claim, first, The combination of a hollow cutter bar, G, set inclined downward from its rear edge, circular plane edged overlapping cutters or shears, J J, cogged gearing, I I N, for actuating said cutters, J, longitudinal shoe, K, with slotted standards, c c, two caster wheels, L L, long vertical pinion, M, for receiving and transmitting the power, vertical guide pins, L′ L′, swing frame, O O′, toothed driving wheel, C′ D, and intermediate pinions, S T, substantially as and for the purposes set forth.

Second, So combining the cutter bar, G, with all its attachments, with the main frame, A, and the gearing thereof by means of vertical pins, L′ L′, and a swing frame, O, having a swiveling bar, O′, or by equivalent devices, that the cutting apparatus may be thrown out of gear; and also, when desirable, the cutter bar, with all its attachments, may be entirely disconnected from the main frame, substantially as set forth.

29,372.—P. W. Gates, of Chicago, Ill., for an Improvement in Casting Stamping Heads:

I claim the use of a hollow central chill in combination with an external chilled metal flask, in the manner substantially as and for the purposes described.

29,373.—Justus Griggs, of Utica, N. Y., for an Improved Machine for Making Screws:

I claim the employment of a movable gage plate, substantially as described, in combination with the transferring fingers, substantially as described, for gaging the screw blanks by the head when the blanks are inserted in the griping jaws, as set forth.

29,374.—Ira Hart, of Clarksburg, Va., for an Improvement in Machines for Threshing and Cleaning Grain:

I claim, first, The scrapers, k, which sweep the lower screen, when constructed with three sides and arranged as shown for the purpose set forth.

Second, The combination of a stationary adjustable straw-arrester, N, with a swinging one, M, in the cap, O, of the machine, as set forth.

29,375.—David Hinman, of Berea, Ohio, for an Improved Mode of Forming the Center for the Shaft of Grindstones:

I claim an apparatus for making the eye of a grindstone concentric with its periphery by means of the screws, D, studs, L, and the pin, K, which pin is placed in the rough eye of the stone, and in the center of the circle formed or bounded by the circumference of the stone, and filling the rough eye around the pin, K, with some plastic cement, through which the crankshaft is subsequently inserted, substantially as described and for the purposes specified.

29,376.—Wm. Hoffmire, of San Francisco, Cal., for an Improvement in Apparatuses for Boiling and Distilling:

I claim the combination of furnace, A, water jacket compartments, r s, circulating pipes, t u, and regulating cocks, O O, with two boilers, B C, and double cover, E, all constructed in the manner and for the purposes set forth.

29,377.—James Jackson, Jr., of Westerly, R. I., for an Improvement in Oil Cans:

I claim the oil passage, M, hollow space, N D, open at each end, and vent tube, E, combined and arranged substantially as and for the purpose set forth.

29,378.—E. C. Jenkins, Jr., of Springfield, Mass., for an Improvement in Skates:

I claim the two clamp plates made to fit within a recess in the upper part of the foot-rest (and to clasp the sole of the boot alone), in connection with a leather strap and buckle to pass over the foot and confine it down upon the foot-rest, the protecting plate, l, and the sustaining screws, k k′, the particular object of the clamp plates in my invention being to bring the foot of the wearer either to one side or the other of the center of the iron runner, and to prevent any lateral slipping of the foot on the foot-rest, in manner and for the purpose as described.

I also claim the peculiar construction of the underside of the runner, B, with its narrow groove, m, on its inner edge, and its wide, flat or convex bearing surface, n, essentially in manner and being made to operate as described.

29,379.—J. E. Johnson, of Brockport, N. Y., for an Improved Device for Heating Smoothing-irons:

I claim the arrangement of the revolving plate, H, and smoothing irons, K K, substantially as and for the purposes specified.

29,380.—W. F. Johnson and J. Doyle, of Wetumpka, Ala., for an Improved Blind Slat Machine:

We claim, first, The adjustable tooth rack, R, constructed substantially as shown, to wit, the teeth, i, being fitted loosely in a grooved plate, I, and adjusted through the medium of the eccentric segments, j′, bar, K, and bars, m′, or their equivalents, for the purpose of varying the length of the spaces between the mortises and holes of the slides, as set forth.

Second, The combination of the adjustable tooth rack, R, and the auger arbor, C, when operated simultaneously through the medium of the sliding bar, F, slotted plate, H, pawl, m, and treadle, G, arranged substantially as and for the purpose set forth.

Third, The reciprocating arbor, C, provided with awl, g″, in connection with an adjustable tooth rack, R, for the purpose specified.

Fourth, The endless belt, T, arranged relatively with a hopper, S, and provided with hooks, t′, in connection with the curved stripping plate, w′, for the purpose of taking the staples from the hopper and feeding them to the staple-driver, W, as described.

Fifth, The arrangement of the bar, X, to which the driver, W, is attached, cylinder, Z, provided with arms, x′, the stationary projections, x″, in the box, V, together with the spring, y′ z′, to give the lateral motion to the driver, to admit of the staples passing below it to be driven, as set forth.

29,381.—Wm. Johnson and H. Wansbraugh, of Cincinnati, Ohio, for an Improvement in Cooking Stoves:

We claim the arrangement of the grate, C, arching fire and oven plates, A B, flues, F G, and damper, H, constructed and combined in the manner and for the purposes set forth.

29,382.—J. H. Kalb, of Charleston, S. C., for an Improvement in Street Lights:

I claim the employment of the lamp, D, provided with gas burners, F F, and reflectors, G G, when the same is used in connection with the gas pipe, E, posts, A, and the rods or bar, C C, and the whole arranged as and for the purpose specified.

29,383.—W. A. Keeler, of New York City, for an Improvement in Preserving Food:

I claim the use of two casks with the intermediate filling of plaster, when they are so arranged that the inner cask shall be perfectly insulated by the plaster, substantially as and for the purpose specified.

29,384.—S. M. King, of Lancaster, Pa., for an Improved Steam Cross-cut Sawing Machine:

I claim, first, Pivoting the guide frame, a, which bears the steam cylinder, b, and the cross-head of the saw, at a point intermediate between the steam cylinder and the cross-head of the saw.

Second, In combination with such mode of pivoting the frame, I claim arranging the feed movement so that it shall operate at the point of suspension of frame, a, as set forth.

Third, Supporting the steam cylinder and the entire framework upon the two uprights, c c, as set forth.

29,385.—Jacob Kinzer, of Pittsburgh, Pa., for an Improvement Sausage-stuffer:

I claim constructing a sausage-stuffer with a body or box having its interior the shape of the sector of a cylinder, and having a pressing flap hinged or pivoted at the center of the cylinder of which the body is a sector, substantially in the manner and for the purposes described.

I also claim combining with a body and pressing flap, such as described, a nozzle opening into one of the radial sides of the sectional body or box at an acute angle thereto, so as to present a large opening for the passage of the meat without increasing the diameter of the nozzle, substantially as described.

29,386.—Ernst Kirsch, of New Haven, Conn., for an Improved Carriage Body:

I claim the construction of the crooked or curved body when no more than two pieces are used to compose the two sides of the body and the seat rail, while the fibers of the timber always run in the direction of the curves or sweeps, so that no part is in any degree cut across the grain of the timber, and the whole is constructed and fitted for use substantially as described.

29,387.—Henry Kurth, Florian Davis and Charles Robitaille, of Brooklyn, N. Y., for an Improved Tobacco Box:

We claim the arrangement and combination of the revolving bottom, B, sweep, d, stationary body, A, and partition, a, constructed and operating substantially as and for the purpose specified.

[This invention consists in arranging the bottom of the box together with a sweep attached to the same, in such a manner that the same rotates on a central pin, and that the tobacco in the box can be compressed between said sweep and a stationary radial partition, which is secured to the body of the box by a direct positive pressure.]

29,388.—E. W. Lacy, of Oak Park, Va., for an Improvement in Hemp Brakes:

I claim, first, The employment, in combination with the crushing rolls, C C', and striker roll, D, of an inclined reciprocating separator, F, the whole arranged and operating as specified, for the purpose set forth.

Second, I claim the combined arrangement of the crushing rolls, C C', striker roll, D, guide rest, E, inclined separator, F, and discharge apron, P, the whole constructed to operate as specified, for the purpose set forth.

29,389.—Z. W. Lee and E. D. Lee, of Blakely, Ga., for an Improvement in Cultivators:

We claim the combination of a plow beam, b, and three angle irons, e e' e e' e', with a cutter, c, plow share, d, plow brace, i, clamps, g, and wedges, h, when constructed and arranged in the manner and for the purposes set forth.

29,390.—A. C. Lewis, of Burlington, Mich., for an Improvement in Fruit-drying Apparatuses:

I claim the arrangement and combination, in the manner shown and described, of the elevating platform, C, fruit racks, J, bars, F, endless band, I, with the shaft, D, pulleys, E b b, lifting ropes, a c, and house, A, so that, by turning the shaft, D, the fruit will be raised and carried out of the house and exposed to the sun and air, and on reversing shaft, D, the fruit will be again deposited within the house, all as set forth.

[This invention consists in the employment or use of a series of fruit racks, combined and arranged in such relation with a suspended platform, an endless rope or band, a track or way and a suitable house or covering, that, by the turning of a shaft, the fruit racks may be automatically moved out on the track and exposed to the sun and air, and also automatically moved within the house under cover, as occasion may require.]

29,391.—W. C. Lostutter and S. Wolcott, of Rising Sun, Ind., for an Improvement in Cultivators:

We claim the arrangement of the adjustable clamp, G', swinging arm, G, guard, K, wing, L, beam, A, brace rod, E, standard, B, pivoted handle, D D, cross brace, D', sector plate, a, and strap, b, as and for the purpose shown and described.

[This invention consists in combining, in a novel manner, with a shovel or cultivator plow, an adjustable shield or wing, which is so attached to the beam of the plow that it will rise and fall and accommodate itself to the inequalities of the surface of the earth; said wing or guard is for the purpose of protecting the young and tender plants from being entirely covered up with earth loosened by the shovel; and where the plants are older, it is desirable to keep the earth raised by the shovel from being thrown about their roots, which would prevent a proper circulation of air and also the admission of moisture to their roots. The rear end of the plow beam is also constructed so that the weeds, &c., will not be clogged up by it, at the same time the requisite strength may be obtained.]

29,392.—A. D. Lufkin, of Cleveland, Ohio, for an Improvement in Preparing Hides:

I claim the composition made as set forth and for the purpose described.

29,393.—P. Martin, of New Orleans, La., for an Improvement in Cotton Seed Hullers:

I claim the employment of prismoidal reversible bar knives, a, in combination with the scored hulling cylinder, A, and scored concave, B, as and for the purpose shown and described.

[This invention is a novel manner of securing the teeth or hulling knives into the concave and cylinder so that they will be securely held in place, and so that they may be removed and reversed when one side becomes much worn. In this way they become self-sharpening, and can always be kept in a fit state for effecting the separation of the hullf from the kernels by a culling action.]

29,394.—Matthias M'Gonnigle, of Alleghany, Pa., for an Improvement in Bee-hives:

I claim, first, The use of the movable sides, d, when used in connection with the inner chamber or chambers of the beehives, as described, and for the purpose set forth.

Second, The use of the double and perforated cover, when arranged and constructed as described and for the purpose set forth.

29,395.—J. P. Mendenhall, of Farmington, Ill., for an Improved Car Coupling:

I claim the stock, A, provided with the projections, a a, and the cylindrical projection, b, having the head, c, at its end, in connection with the bar, B, having the bars, C C, attached to it by joints, d; the spring, D, being between them, and provided at their outer ends with the jaws, e e', and projections, h h, substantially as and for the purpose set forth.

[This invention has for its object the prevention of accidents on railroads produced by the throwing of the locomotive or any of the cars of a train from the track, a contingency of frequent occurrence, caused by obstructions on the track, the displacement of rails, &c.]

29,396.—George Munce, of St. Louis, Mo., for an Improved Apparatus for Cleaning Windows:

I claim the adjustable standard, E B, in combination with the platform, A, or its equivalent, when the same is operated substantially as described, for the purpose set forth.

29,397.—John Park, of Joliet, Ill., for an Improved Churn:

I claim, first, The arrangement of the bars, E E, on the under side of the hinged lid of the churn, in combination with the revolving shaft of beaters, in the manner and for the purpose described.

Second, The conical gudgeon, C, fitted in a conical seat and acted upon by the spring, D, in the manner and for the purpose described.

Third, The hair-catching strips, d, attached to the bars, E, in the manner and for the purpose described.

29,398.—J. M. Patterson, of Woodbury, N. J., for an Improved Construction of Lightning-rods:

I claim making the lightning-rod, D, and waterspout or leader, B, of one continuous piece of metal, so constructed and arranged that they will perform the double function of conductor and waterspout, as set forth.

29,399.—Edward Peach, of Utica, N. Y., for an Improvement in Awning Fixtures:

I claim the arrangement of the hinged struts, H, plate, G, hooks, i, awning, D, roller, C, spring, F, ratchet, e, and pawl, f, as and for the purpose shown and described.

[This invention has for its object the ready adjustment of awnings over the doors and windows of stores and dwellings, by a simple and efficient means that may be economically adapted and not be liable to get out of repair or become deranged by use.]

29,400.—J. G. Perry, of South Kingston R. I., for an Improved Meat-cutter:

I claim the employment of the knives and pendants combined substantially as described and for the purposes set forth.

29,401.—A. H. Phillippi, of Reading, Pa., for an Improvement in Gas Regulators for Railroad Cars:

What I claim is: In combination with the plane, disk, spring plates, a a', and their inclosed space, the valve, e, with its washer, f, flat space, g, and openings, h i, for the purpose of regulating the flow of gas from the receiver to the burners, whatever may be the pressure upon the gas, substantially as herein described and represented

29,402.—James Radley, of New York City, for an Improvement in Lamps for Locomotives:

I claim, first, The division of the oil reservoir, by means of horizontal diaphragms or partitions, into several shallow compartments or sub-divisions, substantially as described.

Second, The wash hole with its closing cap or plug, in combination with the horizontal compartments or sub-divisions of the reservoir, by means of which access is had, at once, to all the said compartments, substantially as set forth.

Third, In combination with the said horizontal compartments or subdivisions, the oil duct or tube by which the oil is conveyed into the lowermost sub-division of the reservoir, together with the air vents chamber and its checks by which the oil is retained while the air is permitted to pass out of or into the reservoir as required, substantially as described.

29,403.—J. C. Rainbow, of New Brighton, Pa., for an Improvement in Belt Trusses:

I claim the employment, in connection with the pads, A A, of the straps, d d h h n n k k l o o p p r r, and connecting and adjusting buckles; the whole combined and arranged substantially as specified, or one pad only, when two are not necessary.

[This invention consists in an arrangement of straps whereby the pads are kept in place with a properly-regulated pressure, without the use of springs, and the pressure is caused to adapt itself to the strain to which the body is subject during any exertion.]

29,404.—Joseph Renard, of Lyons, France, for an Improvement in the Preparation of Aniline Colors:

I claim combining with aniline the metallic salts specified or their equivalents, and treating the same in such a manner as to produce a red, in contradistinction to a purple or bluish coloring matter or dye, substantially as set forth.

29,405.—James Rogers, of Santa Clara county, Cal., for an Improved Machine for Forming Stove-pipes:

I claim, in combination with a stove-pipe-forming machine, a box, G, the diagonal corners, e e', are beveled, and a slip, H, arranged in the manner and for the purpose set forth.

29,406.—Frederick Roos and Fr. Spoehr, of New York City, for an Improved Padlock:

We claim, first, The employment, for the purpose of retaining the padlock to a door, of a hooked pin, A, passing through the keyhole of the ordinary lock and catching on the inner side of the same, substantially as and for the purpose specified.

Second, The arrangement and combination of the hooked pin, A, sliding barrel, C, locking plate, E, hollow stem, B, and spring catch, h, constructed and operating substantially in the manner and for the purpose set forth.

Third, The combination with the hollow stem, B, and spring catch, h, of a spring dog, i, arranged substantially as and for the purpose described.

Fourth, The arrangement of a pin, o, sliding in a hollow tube, q, and in combination with the dog, i, and catch, h, constructed and operating as and for the purpose specified.

29,407.—F. M. Ruschhaupt, of New York City, for an Improvement in Apparatuses for the Manufacture of Vinegar:

I claim the arrangement of the annular passages, c, tube, e, vessel, B, pipe, f, cask, C, and tube, g, in combination with the acidifiers, A, constructed and operating substantially in the manner and for the purpose set forth.

[This invention consists in connecting the stills or acidifiers with a closed cask or vessel containing water, in such a manner that, as the water is let out of the last-named vessel, the air is made to pass through the acidifiers with more or less rapidity, according to the quantity of water discharged from the cask in a certain time, so that the force of the current of air passing through the acidifiers can be controlled at pleasure.]

29,408.—S. T. Russell, of Ottawa, Ill., for an Improvement in Rotary Engines:

I claim, first, The combination of the flanged pistons, the piston boxes, the cavities, 10 and d d, in the cylinder, and the passages, 11 12 13 14 15, in the cylinder and wheel—the whole operating substantially as and for the purpose specified.

Second, The plates, G G, constructed and applied to the steam wheel substantially as described, and serving the double purpose of securing the same in the cylinder and of cams to operate the cut-off valves.

Third, The system of levers, T U T* U*, applied in combination with the plates, G G, and with the cut-off valves substantially as described, to effect the operation of the said valves.

Fourth, In connection with the two sets of induction and eduction ports in the cylinder, the connected reversing valves, N N' O* O*, constructed, applied and operated as described.

[This invention consists in an improved construction of, and mode of applying, the sliding pistons of a rotary engine, and in an improved system of steam and exhaust passages for effecting the movements of the pistons toward and from the axis of rotation of the engine. It also consists in certain improved means of operating a system of cut-off valves for the purpose of using the steam expansively in a rotary engine; and it further consists in an improved system of reversing valves.]

29,409.—J. B. Shafer, of Grafton, Va., for an Improved Railroad Cattle Car:

I claim the combination, with the car body, of a raising and lowering middle deck proper and suitable hoisting machinery thereto, in such manner as that the car may readily be converted from a double decker into a single-floor, cattle, or open-space, or freight car, free from division into stall apartments or projecting arrangement of partitions into stalls, substantially as specified.

Also, The combination, with the raising and lowering middle deck to the car, of independent stalls or stall partitions hinged or otherwise equivalently-connected to the car on opposite sides of it at opposite ends, and for operation in connection with the adjustable middle deck but distinct therefrom, substantially as and for the purpose or purposes specified.

29,410.—D. L. D. Sheldon, of San Francisco, Cal., for an Improvement in Hernial Spring Trusses:

I claim, as a new article of manufacture, an abdominal truss combining, in its construction, a pad with a cushion, A, and plate, C, a compress or ball, B, sliding plate, D, and spring, H, and applied in the manner and for the purpose set forth and described.

29,411.—Rufus Simonds, of Ludlow, Vt., and G. W. Goodspeed, of Winchendon, Mass., for an Improvement in Machines for Making Wooden Bowls:

We claim the attaching the radius arm, G, of the carriage, F, to a sliding or adjustable block, H, in connection with the auxiliary cutter, q, attached to the carriage; all being arranged in relation with the mandrel, C, and bolt, D', to operate as and for the purpose set forth.

29,412.—Christopher Smith, of Nauvoo, Ill., for an Improvement in Corn Planters:

I claim operating the feed bar, k, by means of the handles, d, clevis, f, and bent lever, g—all being constructed and arranged substantially as described for the purposes set forth.

29,413.—Jesse Speer, of Hazlehurst, Mass., for an Improvement in Cotton Cultivators:

I claim the combination of the wheel, a, hoe, h, and bar, I, arranged and operated as or substantially as and for the purpoee set forth.

29,414.—G. S. G. Spence, of Boston, Mass., for an Improved Boiling and Condensing Apparatus:

I claim the construction of the water joint by means of the combination of the side, a a', with the side, b b', in the manner and for the purpose substantially as set forth.

29,415.—W. W. Stannard, of Buffalo, N. Y., for an Improved Refrigerator:

I claim the arrangement of the air tube, F, passing through or near the ice box, B, and through the water tank, D, and opening into the preserving room at its lower end for the purposes and substantially as set forth.

29,416.—G. A. Stanley, of Cleveland, Ohio, for an Improvement in Apparatuses for Molding Candles:

I claim the special arrangement of the molds in a circular form, in combination with a frame or box suitable for the purpose, in the manner and for the purpose substantially as described.

29,417.—Henry Sweetapple, of Napa, Cal., for an Improvement in Fan Blowers:

I claim the combination of two rings, e e, of flexible material, with the air-chamber, a, and the sides, B B, of a fan blower, constructed as above set forth, in the manner and for the purpose described.

29,418.—E. C. Thompson and M. B. Wheaton, of New York City, for a Box for Silvering and Albumenizing Photographic Paper:

We claim silvering or albumenizing photographic paper by means of a box fitted so as to be revolved or inverted, for the purposes and as set forth.

20,419.—Wm. Thomson, of Buffalo, N. Y., for an Improved Nail Brush:

I claim the circular brush and cup combined substantially in the manner and for the purposes set forth.

29,420.—D. J. Vail, of Industry, Ill., for an Improvement in Seeding Machines:

I claim the arrangement of the curved, connected, covering shares, K K, furrow shares, I I, tube, I, colter, J, frame, A, and box, D, wheels, a a, seat, B, uprights, G G, slide, F, pins, g, seats, E, and bar, H, as and for the purpose shown and described.

[This invention relates to an improved seeding machine of that class used for planting seed in hills and having the same in check rows. The invention consists in a peculiar arrangement of means for operating the seed slides and enabling the operator to cause the seed to be dropped at the proper points to insure the hills being formed in check rows. It also consists in a novel arrangement of parts for properly furrowing the ground to receive the seed and for properly covering the same as dropped.]

29,421.—Isaac Van Bunschoten, of New York City, for an Improvement in Vapor Lamps:

I claim, first, The relative arrangement of a supply tube, V, inclined conducting tube, A, inclined return tube, B, a heater, D a, a tubular burner, I, regulating valve, H, and air passages, U U, substantially as and for the purposes set forth.

Second, The arrangement of the two inclined tubes, A B, with respect to the heater, D a, and single-screw plug, C, of the heater, D a, substantially as and for the purposes set forth.

Third, The arrangement of the conical screw plug or valve, H, constructed with the cylindrical screw nut, R, in combination with the lower end of the vapor burner, substantially as and for the purposes set forth.

29,422.—A. H. Wagner, of Staunton, Va., for an Improvement in Mills:

I claim the combination of the hoop, b, collar, R, and case, N'—the whole being constructed and arranged substantially as described.

29,423.—J. B. Wands, of Memphis, Tenn., for an Improved Fabric for Roofing, Belting, &c.:

I claim, as an improved article of manufacture, the within-described fabric made of canvas and the residuary gum of stearic acid, as set forth.

[This improved fabric consists of canvas or other woven goods saturated with what is known to manufacturers of stearic acid as "residuary gum," that is to say, the residuary pitchy matter resulting from the manufacture of such acid.]

29,424.—Chapman Warner, of Brooklyn, N. Y., for an Improvement in Pumps:

I claim adjusting the pump cylinder, A, at the proper hight by means of the pendants, q, slats, c, and their attachments, as and for the purposes described.

29,425.—F. W. Warner, of East Haddam, Conn., for an Improvement in Mowing Machines:

I claim the combination of the frame extending in front of the main axle with the draft frame, or thills, driver's seat and cutting apparatus, the front end of the frame, D, serving as a treadle to elevate the cutting apparatus, and the several parts being constructed and arranged in the manner described.

29,426.—Jonathan Warren, of Brooklyn, N. Y., for a Pen-holder:

I claim the employment of an elastic tube, C, constructed as described in combination with the pen-holder, A, for the purpose of forming a shield for the pen.

[This invention consists in the employment of an elastic tube in combination with an ordinary pen-holder in such a manner that said tube allows of sliding over the pen-holder or that the pen-holder can be slid back into the tube, thereby producing a cheap, self-adjusting and efficient shield or protection for the pen.]

27,427.—L. R. Wattles, of Newton, Mass., for an Improvement in Looms:

I claim my improvement in regulating the tension of the warp of a loom, the same consisting in so combining the yarn beam with friction apparatus, as described, that the gravitating power or weight of the yarn on the beam, as such power or weight may diminish during the unwinding of the yarn on the beam while the weaving process is being carried on, shall operate to decrease the friction on the beam.

I also claim the arrangement of the yarn beam and the lever of the above-described friction apparatus applied, by gearing or its equivalent, to the yarn beam as described.

29,428.—W. S. Williams, of Lynn, Mass., for an Improvement in Machines for Skiving Leather:

I claim the combination and arrangement, as described, of the bent wires, F F, swinging frame, D, slots, g g, and nuts, f f, for the object specified.

29,429.—Horace Wing, of Buffalo, N. Y., for an Improvement in Machines for Crimping Leather:

I claim the arrangement with the frame, A a b c, and crimping jaws, B B, of the pivoted crimping bar, E, which has a toothed segment, F, on its front end, and the continuously-revolving cog wheel, H, h the manner and for the purpose described.

29,430.—Nathan Ames, of Saugus Center, Mass., assignor to himself and E. M. Montague, of Boston, Mass., for an Index Door Plate:

I claim, first, The removable plate, I, of ivory, porcelain, slate or other material capable of being written upon with a pencil and the writing readily expunged, in combination with a suitable frame or door plate furnished with a glass protector, G, and confining said removable plate by means of a spring bolt, D, or its equivalent passing through the door, substantially as set forth and for the objects specified.

Second, In combination with the above door plate, a rotating disk, C, marked with the hours and parts of an hour, as shown in Fig. 2; said disk being confined in the center to a spindle, D, which passes through the door, substantially as and for the purpose described.

Third, The spring, S, arranged, combined and operating substantially as described.

29,431.—Thaddeus Fowler and De Grasse Fowler, of Northford, Conn., assignors to the United States Pin Company, of Seymour, Conn., for an Improved Machine for the Manufacture of Pins:

We claim, first, The spring finger, i, within the clamping jaws, for the purpose and as specified.

Second, The combination of the cutter, 7, and toe, 8, with the finger, i, for carrying the headed pin out of the clamping jaws and delivering the same into the notched pin wheels, o o, as set forth.

Third, A rolling bed, in combination with a stationary, resisting surface and cutter or cutters, when said cutter or cutters act on the same side of the shaft of the pin as the stationary surface against which the pin rolls in being pointed, for the purpose and as set forth.

Fourth, The notched pin wheels, o o, and revolving and rolling bed, n, constructed and operating substantially as set forth.

Fifth, The metallic strip, p, kept at a proper tension by the lever, 16, or its equivalent and pressing the belt, 17, on to the pins in combination with the rolling bed and notched plates, as and for the purposes specified.

Sixth, The arrangement of the reciprocating cutters, s s and t t, combined with the rolling bed as described and shown.

29,432.—G. E. Frew, of Brooklyn, N. Y., assignor to Wm. Richardson and John Richardson, of New York City, for a Pen and Pencil Case:

I claim the arrangement, as shown and described, of the spirally-slotted tube, C, pencil slide, B, upon the inside of tube, C, and pen-holder tube, E, upon the outside of tube, C, so that the same tube, C, and the same spiral slot will move both the pen and pencil in either direction as required—all as set forth.

[This invention consists in the employment of a pencil slide, a spirally-slotted tube and a pen slide attached to a longitudinally-slotted tube; the said parts are arranged, combined and placed within an external case in such a manner that a very portable, simple and durable extension pen and pencil case is obtained.]

29,433.—F. A. Goddard (assignor to himself and J. H. Kennaday), of Lexington, Ill., for an Improvement in Corn Planters:

I claim the arrangement of the shifting wheel, H, on shaft, G, with the permanent wheel, F, on the axle, C, in combination with the removable lever, S, in shaft, G, as and for the purpose set forth.

[The object of this invention is to obtain a simple and efficient machine that may be readily adapted for planting corn in drills or check rows—one that may be readily manipulated and be under the complete control of the driver.]

29,434.—E. L. Harlow (assignor to W. G. Brown), of Monmouth, Me., for an Improved Pegging Jack:

I claim the application or arrangement of the spring, F, with respect to the post, A, and the heel lever, D, and so as to operate substantially as specified.

29,435.—Lewis Jennings, of Brooklyn, N. Y., assignor to himself and R. Dickinson, of New York City, for an Improvement in Cotton-pickers:

I claim the employment of the spur wheel, D, in combination with belts, E, which pass between the spurs, s, so that as the spurs sink between the belts, the cotton will be stripped from the spurs and left upon the belts—all substantially as shown and described.

29,436.—Isaac Lindsley, of Providence, R. I., assignor to himself and D. F. Tompkins, of Newark, N. J., for an Improvement in Segars:

I claim the hydraulicising or condensation of tobacco to the highest possible extent into the form of a segar or other form suitable for smoking (Fig. 1), when the tobacco so hydraulicised or condensed shall have, running in and through the same, the distinct aperture, a (Fig. 2), or its equivalent, formed substantially in the manner and for the purposes described.

29,437.—J. A. Matthews (assignor to himself and S. H. Hemphill), of St. Louis, Mo., for an Improvement in Repeating Ordnance:

I claim, first, The use of the revolving breech, B, when it is arranged horizontally and operated by means of the circular rack, Q, pinion, Y, and shaft, r, arranged as shown and described.

Second, I claim the use of the cartridge-receiver, e, when it is arranged with reference to the revolving breech, B, in the manner described; and—

Third, I claim the use of the rammer, f, when it is arranged and operated with reference to the receiver, e, and breech, B, in the manner described.

29,438.—Samuel Man (assignor to H. T. Man), of Chicago, Ill., for an Improved Ore Separator:

I claim the construction and arrangement of the conical elevating and discharging wheel, m, to which is attached the receiving cylinder, B, having spiral flanges and longitudinal wings on both the internal and external surfaces, in combination with the stationary cylinder and trough, substantially as and for the purposes specified.

29,439.—Samuel Mills, of New York City, assignor to himself and F. Franck, of San Francisco, Cal., for an Improved Elevator and Lock for Window Sashes:

I claim the application and arrangement of the supporting guide, b, the rack, C, pinion, E, and stationary circular lock-plate, F, in combination with the spring crank handle and catch, by which the sash is elevated or depressed, and is safely secured in the position it is left from the hand, substantially as specified, for the purposes set forth.

29,440.—S. R. Plumb (assignor to the Peck Smith Manufacturing Company), of Southington, Conn., for an Improvement in Casting Cylinders for Meat-cutters:

I claim, first, Making a pattern having protuberances or projections extending to different points from the center, so as to withdraw the same from the mold while the hole is closed in the flask, by means of proper mechanism arranged within the pattern, substantially as set forth and described.

Second, I claim an improved manufacture of meat-cutter cylinders, &c., produced by means substantially such as set forth and described.

29,441.—Lyman Platt and Russel Wildman (assignors to themselves and J. S. Taylor), of Danbury, Conn., for an Improvement in Machinery for Forming Hat Bodies:

We claim, first, The forming of fur hats on the inner surface of an inverted perforated or wire cone suspended through a revolving ring into an exhaust chamber, in the manner specified.

Second, We also claim the combination of a picker, H, inverted perforated or wire cone, C, shield, K, and exhaust fan, E; the whole combined and operating as described, for the purpose as set forth.

Third, We also claim the expanding wire frame, constructed as described, for putting the lining within the formed hat, for the purpose described.

29,442.—O. W. Preston, Jr., and Wm. W. Farnham (assignors to themselves and Payne & Olcotts), of Corning, N. Y., for an Improvement in Straw and Stalk-cutters:

We claim, first, The employment or use, on a cutting wheel, C, of a straw and stalk-cutter of zig-zag ledges, h h, in connection with a slide bar, H, having a pawl, k, attached for the purpose of operating the feed rollers, I, substantially as set forth.

Second, Attaching the knives or cutters, E E, to a sliding bar, D, fitted to the wheel, C, in a way to be operated by the flanch, G, attached to frame, B, for the purpose of giving a drawing cut to the knives or cutters, substantially as described.

[This invention relates to certain improvements in that class of straw and stalk-cutters in which a rotary cutting wheel is employed. The invention consists in a novel feeding mechanism and a peculiar arrangement of the knives or cutters, whereby it is believed that the improvement is rendered more efficient than those of the same class hitherto constructed.]

29,443.—Reuben Shaler, of Madison, Conn., and C. B. Rogers, of Deep River, Conn., assignors to C. B. & J. Rogers, of Deep River aforesaid, and I. Champion, of Jersey City, N. J., for an Improved Foot-cleaner:

We claim the combination with a foot-scraper of the brushes, 4 4, or either of them, placed contingent to the ends or end of the scraper, upon axes or an axis placed crosswise of the line of the edge of the scraper, in such a manner that they or it may be rotated by the action of the foot in the operation of cleaning it, substantially as described.

29,444.—Thomas Shaw (assignor to himself and L. N. Brognard), of Philadelphia, Pa., for an Improved Feeding Apparatus for Steam Boilers:

I claim the arrangement of the body, A, chamber, B, disk, K, and lap, C, substantially as described, and the employment of the exhaust pipe, D, for the purpose specified.

29,445.—David Sherman, of Union Town, Md., and R. W. Fenwick, of Washington, D. C., assignors to D. Sherman and Bernard Mills, of said Union Town, for an Improved Churn:

We claim corrugating the surface of the nearly cylindrical churning chamber, diagonally or spirally, in the peculiar manner described, in combination with the blades, c c, of the dasher, which are set so as to stand across the diagonal or spiral corrugations, substantially as and for the purposes set forth.

29,446.—Joshua Turner, of Cambridgeport, Mass., assignor to himself and C. P. Hinds, of Boston, Mass., and Warren Tilton, of Beverly, Mass., for an Improved Oil-feeder:

I claim the improved flexible bottom oil-feeder, as made with the rod, D, extended from the flexible bottom and into and through the discharging pipe, C, substantially as specified.

29,447.—E. W. Tarbell (assignor to himself and E. A. Simonds), of Boston, Mass., for an Improved Steering Apparatus:

I claim the combination and arrangement of the two reversed screws, I I', and their lifting nuts, H H', supported in guide slots or their equivalents, with leading chains connected with the tiller, and with mechanism for simultaneously rotating the two screws by means of a hand wheel, as described.

29,448.—C. H. Willcox, of New York City, assignor to James Willcox, of Brooklyn, N. Y., for an Improvement in Sewing Machines:

I claim the method herein-described of securing the proper adjustment of the needle in the socket of its stock or holder, by means of an inner spline or locking-guide to the socket, in combination with a needle, grooved or slotted longitudinally at its shank, substantially in the manner and for the purposes set forth.

29,449.—C. M. Young (assignor to himself, E. H. Brown and E. Brown), of Sinclairsville, N. Y., for an Improvement in Stave-jointing Machines:

I claim the arrangement of the slide, F, curved rod, H, rod, I, and arms, J J, substantially as shown, to admit of the operating and the working of the planers, K, on the guides, L, at varying degrees of obliquity of the latter, for the purpose specified.

[The object of this invention is to obtain a machine by which staves may be jointed with a greater or less bilge, according to their width; or, in other words, have their edges cut with a greater or less degree of taper each way from their center outward, according to the bilge required; the latter being determined by the width of the stave—the wider the stave, the greater the taper, and vice versa.]

RE-ISSUES.

Hiram Aldridge, of Michigan City, Ind., for an Improved Shoe for Grain Separators. Patented May 24, 1859:

I claim, first, The combination and arrangement of an inclined lagged chaff and straw elevator, C I, primary inclined return sieve or board, F, and separator shoe, A, substantially as and for the purposes set forth.

Second, The combination of a secondary inclined extension tail or return board R, with the chaff elevator, C I, inclined sieve or primary return board, F, and separator shoe, A, substantially as and for the purposes set forth.

Third, The combination of an inclined lagged elevator, C I, with a separator shoe, A, when said elevator is placed in rear of and above the main cleaning sieve of the shoe in an inclined position, substantially as set forth.

Salmon Bidwell, of New York City (formerly of Chicago, Ill.), for an Improvement in Gas Regulators. Patented Sept. 21, 1858:

I claim a stop-cock, situated in, and controlling the passage-way from, the gas-holder or other source of supply to the variable chamber, in combination with the moving part of the variable chamber, substantially as described.

J. A. Cutting and L. H. Bradford, of Boston, Mass., for an Improvement in Photo-lithography. Patented March 16, 1858:

We claim the employment of a solution of gum arabic sensitized by bi-chromate of potash, or its equivalent, in combination with the surface of a lithographic stone or plate of zinc, when acted upon by light, as a resistant to the effects of a solution of soap and application of printers' ink, for the purpose of combining the soap and ink with the stone or plate of zinc, as substantially set forth in the specification.

We also claim the employment of sugar, or its equivalent, in combination with gum arabic and bi-chromate of potash, in connection with a lithographic stone or plate of zinc, for the purpose of modifying the adhesive quality of the coating to the stone or zinc in the parts not acted upon by the light, in the manner as set forth in the specification.

We also claim the employment of a solution of soap, or its equivalent, for the purpose of forming the printing surface with the stone or plate of zinc, in combination with the sensitized gum arabic, to produce the positive photographic picture, in the manner as set forth in the specification.

Wm. H. Gilmore (assignee of James Emerson), of Worcester, Mass., for an Improvement in Ships' Windlasses. Patented April 17, 1855:

I claim the combination applied to each chain wheel, H, and the shaft, B, the same consisting of the part pinions, G G', the guard sectors, I I, the pawls, J J, the levers, K K, and the studs, h' h''; the whole being made to operate together and to be operated by the shaft, B, substantially in the manner and for the purpose as specified.

I also claim the combination and arrangement of the gears, C D N O, and their ratchet and pawl mechanisms, or equivalents therefor, applied to the two shafts, B E, substantially in the manner and for the purposes as specified.

I also claim the arrangement of the auxiliary capstan, F, with the main capstan, a, and its shaft, E, when the latter is connected with and made to operate another shaft, B, by gears, C D, as described.

G. P. Gordon, of New York City, for an Improvement in Printing Presses. Patented August 5, 1851; re-issued April 8, 1856:

I claim, first, A bed vibrating to and from the impression, in combination with a rocking platen, rocking to and from the impression, for the purposes set forth, substantially as described.

Second, I claim rocking the inking roller arms or frame upon a center, so that the inking rollers may pass and repass over the form of types for each and every impression, whether said rocking frame be constructed in the precise manner described or in some equivalent way to produce a like result.

Third, I claim the bearers, or their equivalents, in combination with the rocking inking roller arms or frame, for the purpose of passing and repassing the inking rollers over the type or form in a line parallel with the face of the type, when each rocking roller frame shall carry the inking rollers forward and backward over the type for each and every impression.

Fourth, I claim vibrating the bed from the point of its receiving the inking rollers to the point of impression, as described.

Fifth, I claim the rocking inking roller arms or frame, in combination with a vibrating bed, substantially as specified.

Sixth, I claim constructing a printing press with a rocking platen, so that the pressman, while feeding and driving the press, may stand directly in front of said press for such purpose, and be enabled, without changing his position, to see the face of such rocking platen as it rocks or turns towards him for the reception of the sheet to be printed; the face of the type or form, as it moves to and from the impression; the ink-distributing cylinder, or its equivalent, from its being placed at the top of the press; and the inking rollers when inking the type or form, thereby enabling said pressman to detect any imperfection in the working of these parts of the press; all substantially as set forth.

G. P. Gordon, of New York City, for an Improvement in Printing Presses. Patented August 5, 1851; re-issued April 8, 1856:

I claim, first, Supporting upon a center or centers, a platen which shall rock or turn between the point necessary for the reception of the impression and the point necessary for the reception of the sheet to be printed, when the face of such rocking platens shall stand out of a horizontal position, or at an angle from a horizontal position, at the time the impression is given, substantially as set forth and for the purposes described, whether the same be accomplished in the precise manner specified or in some equivalent way.

Second, I claim the frisket-grippers, or their equivalents, for relieving the sheet from the type, in combination with a rocking platen.

Third, I claim giving to a rocking platen, when receiving the sheet to be printed or when receiving the impression, a period of rest during the continued motion of the other parts of the press.

ADDITIONAL IMPROVEMENT.

A. P. Winslow, of Cleveland, Ohio, for an Improvement in Roofs for Railroad Cars. Patented August 9, 1859:

I claim the I-shaped piece of timber, C, in combination with the roof, constructed substantially as described, for the purpose of more readily renewing the roofs of cars which, having been used, require to be renewed.

DESIGNS.

Daniel Hathaway (assignor to Fuller, Warren & Co.), of Troy, N. Y., for a Design for a Six-plate Stove.

Daniel Hathaway (assignor to Fuller, Warren & Co.), of Troy, N. Y., for a Design for a Coal Stove.

D. L. Meineke, of St. Louis, Mo., for a Design for a Trade Mark.

B. S. Pardee, of Mount Carmel, Conn., for a Design for Hub Bands.

N. S. Vedder (assignor to Tibbits & McCoun), of Troy, N. Y., for a Design for a Cooking Stove.

N. K. Sanders, of New York City, and N. S. Vedder, of Troy, N. Y., assignors to A. K. Sanders, of said New York City, for a Design for a Cooking Range.

W. W. Stanard (assignor to S. S. Jewett and F. B. Root), of Buffalo, N. Y., for a Design for a Cooking Stove (two cases).

W. W. Stanard (assignor to S. S. Jewett and F. B. Root), of Buffalo, N. Y., for a Design for a Parlor Stove.

NOTE.—In the foregoing list of claims, we recognize THIRTY-FIVE patents, or more than ONE-THIRD of the whole issue, which were solicited through this office.—EDS.

Notes and Queries

CORRESPONDENTS sending communications for publication in our columns are requested to avoid writing on both sides of a sheet of paper. This fault, though common to persons unaccustomed to writing for the press, gives great trouble to the printer (especially in long articles), and, when combined with illegibility of handwriting, often causes interesting contributions to be regretfully consigned to our waste-paper basket.

MECHANIC, of Mass.—The answer to your inquiry in the last number is entirely erroneous. The friction of large journals is greater than that of small journals.

SIMPSON & HOOKER, of New Berne, N. C., wish to know where they can obtain supplies of plow handles on the best terms.

ANGLICANUS, of ——.—Every printing office must have same standard for spelling, and we have adopted Webster. He gives the preference to center. It is true that this is immediately from the French, "centre," and Latin, "centrum;" but the primative root is the Greek verb, "centeo," to prick.

J. H., of Tenn.—We have no positive data in favor of the superiority of the tin-roofing to which you refer.

R. A. W., of Miss.—Your communication on boiler explosions contains a most excellent recommendation for safety, namely, "the feed pump ought always to be kept working." The same lesson you will find inculcated by us on page 194, Vol. I. (new series), of the SCIENTIFIC AMERICAN. The article on this subject, on the page referred to, has met the approval of every engineer with whom we have conversed.

S. S. R., of Tenn.—A gun barrel may be made of aluminum, but the present wholesale price in Europe is about $9 per pound, and it is less suitable for a gun barrel than steel or iron. Aluminum bronze, consisting of 90 parts of copper to 10 of aluminum, would make a better gun barrel in every respect than pure aluminum. The soldering of this metal has proved to be an exceedingly difficult process. We presume that Ball, Black & Co., of this city, keep it.

A McA. & Son, of N. Y.—Type metal is composed of 10 parts lead and 2 of antimony by weight. The antimony is added when the lead is melted. This should answer for your seals, if you are careful in casting it. Another composition for type-metal may suit your purpose better, as it expands when cooling. It consists of 9 parts lead, 2 of antimony and 1 of bismuth. Stereotype plates are formed of this alloy. Some persons employ tin as a substitute for the bismuth.

R. T., of Del.—It requires a certain amount of power to force air into a heated cylinder, because it exerts back pressure as its temperature increases. Air doubles its volume when heated to 491° Fah., and exerts a pressure of 15 lbs. on the square inch. A cast iron cylinder may be heated to 500° without injury. About 380 is a safe temperature to work hot air in a cylinder.

G. W., of Conn.—Common molding-sand, carefully sifted and mixed with one-fourth of its quantity of loam, is employed for brass molds. Old damp sand is preferred to fresh material, as it permits the patterns to be more easily removed from the molds. Fine flour is employed for facing the molds of common small articles; for the finest work, charcoal dust is employed. A fine face is sometimes given to molds by drying them over a slow fire of cork shavings, by which their surface receives a coating of smoke.

T. McG., Jr., of Ohio.—Enameled paper for cards is manufactured by L. I. Cohen, No. 184 William-street, this city, but the fancy enameled paper for pamphlet covers is mostly imported from Europe. We do not know a single factory in which it is made in this section of the country. The process of enameling is by friction-rubbing the surface of the paper with heated rolls.

S. C. S., of Mass.—We do not know where you can obtain a work for directing you in making cast letters of copper. This metal is very difficult to cast, because it is so pasty when in a molten state that it will not run into the cavities and sinuosities of molds. You should add some tin or zinc to it, if you wish a good casting.

W. T. B., of Mass.—We are perfectly agreed with you that the yellow substance that is frequently found on the top of cisterns and pools after showers of rain, and which is supposed to be sulphur, is vegetable pollen; we have noticed this fact at further length in another column.

C. F. B., of Vt.—Your communication is rather too much out of our line.

G. B., of Pa.—We shall be pleased to read your account of any facts which throw any light on vegetable physiology.

A. P., of N. Y.—"The same distance on each side of the meteor's track" is a typographical error. We wrote it "some distance," &c. Of course, it makes no difference whether the observers are the same distance or not, but the farther the better.

S. D. H., of Wis.—Heat is transmitted through a vacuum by radiation. A thermometer in vacuo would come to an equilibrium with the surrounding air, and would indicate its temperature.

H. C. B., of Mo.—So far as our personal experience goes, soldered tin roofs are not so liable to leak as those which are laid on in sheets, lapped over the edges; at the same time, much depends in both cases on the care taken to execute the work. Red lead and boiled linseed oil makes a good roofing paint for tin. A coating of fine white sand, dusted over fresh paint on a tin roof, serves the purpose of a partial non-conductor, to modify the action of solar heat, which tends to expand the joints of the tin plates.

E. N. J., of Conn.—Water can be heated up to 1,000°, and even above this heat, according to the pressure to which it is submitted. In a steam boiler the water is the same temperature as the steam, and ranges generally from 230° at 20½ lbs. pressure, and 320° at 88 lbs. pressure, and so on, according to the pressures. Water boils at quite a low temperature in a vacuum.

W. B. G., of N. Y.—We are not acquainted with any method of preparing paper for Bain's chemical telegraph, so that it may be used perfectly dried. When sponged slightly with some dilute glycerine, it will always remain moist for constant use. Blue and blanched marks can be produced on the same piece of paper with a current of electricity, sent first through an iron pen into the paper, then reversed and sent through a silver pointer. Black telegraphic characters can be produced on paper prepared with a solution of sumac or galls, by sending a current of electricity through an iron or steel pointer. The paper prepared for blue marks is treated with the prussiate of potash and a dilute nitric acid.

H. M. S., of N. Y.—The substance which you send us is hematite, one of the most valuable ores of iron.

W. F., of N. Y.—The necessity of a lightning-rod would not be materially increased by painting your tin roof. Hoop iron would make a good rod. Lead is a terrible poison, producing in many constitutions a train of frightful diseases—paralysis, neuralgia, colic, &c. The poison slowly accumulates in the system, and the diseases are almost absolutely incurable. Zinc paint is less injurious than lead paint.

B. H., of Cal.—To make a cheap filter for water, take a barrel with one head and bore the head full of gimlet holes; cover the bottom over these holes with a clean flannel, and pour in fine sand to the depth of six inches; fill with freshly burned charcoal to the depth of one or two feet, cover with a clean flannel and add weights to keep the contents in place. The sand and charcoal will require to be renewed occasionally.

MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, August 4, 1860:—

S. L. P., of N. Y., $55; C. A. R., of Ala., $30; T. S., of Cal., $100; J. W., of N. Y., $30; S. R. W., of R. I., $30; A. B. C., of Ga., $30; T. E. C. B., of Ky., $30; C. & M., of N. Y., $25; W. M. K., of N. Y., $25; J. H., of Ind., $25; A. W. J., of Conn., $35; J. L. G., of Ga., $30; C. H., of La., $32; J. F. F., of S. C., $25; G. W. & J. J. K., of Pa., $50; E. J. S., of N. Y., $30; J. B., of N. Y., $30; J. C., of La., $57; S. C. A., of Ark., $25; D. B., of Ill., $30; L. S. C., of N. Y., $55; J. H. S., of N. Y., $25; I. G., of Pa., $25; O. C., of Ill., $30; J. T. H., of Miss., $30; G. H., of Conn., $85; J. W. H., of N. C., $30; I. F., of Va., $30; Z. McD., of Ky., $20; C. H. B., of N. J., $10; E. A. P., of Mass., $30; G. B. M., of Mich., $25; J. & E., of Ill., $15; M. & B., of Miss., $55; B. & N., of Vt, $90; A. J. K., of Iowa, $28; J. K. B., of N. Y., $56; F. G., of Mich., $25; B. & B., of Ind., $30; E. G. P., of N. Y., $100; A. C., of Mass., $55; J. D. A., of Conn., $25; W. C., of Conn., $32; S. Y., of Ala., $25; O. P. A., of Mass., $25; H. O. & F. W. A., of La., $58; H. C. D., of Mich., $25; L. E., of Va., $75; G. W. S., of Conn., $30; J. S., of N. Y., $250; S. H., of L. I., $20; E. E., of Mass., $30; J. E., of Pa., $25; J. H., of Ind., $25; D. F., of Pa., $50; J. W. T., of Vt., $25; M. & L., of Mass., $25; M. A. R., of N. Y., $30; W. F. E., of Ohio, $30; T. B., of Conn., $20; T. H., of Cal., $75; R. G., Jr., of Fla., $30; C. L., of N. Y., $30; J. W., of N. Y., $25; and $50 by Adams & Co.'s express, for which an owner is wanted. The envelope containing the money is marked "Coatesville, Pa." Who sent it? The name of the sender is nowhere to be found on the envelope, and we have no letters in hand announcing the sending of such a parcel.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, August 4, 1860:—

L. S. C., of N. Y.; B. H., of N. Y.; I. G., of Pa.; J. H. S., of N. Y.; J. F. F., of S. C.; F. G., of Mich.; W. M. K., of N. Y.; J. E., of Pa.; G. B. M., of Mich.; E. A. P., of Mass.; J. Y., of Pa.; C. J., of N. Y. S. Y., of Ala.; J. W., of N. Y.; A. J. K., of Iowa; J. W. B., of N. Y. (two cases); B. & N., of La.; A. W. J., of Conn.; H. C. D., of Mich.; C. & M., of N. Y.; S. C. A., of Ark.; C. G., of La.; J. H. Y., of Ala. J. W. T., of Vt.; M. & L., of Mass.; C. H., of La. (two cases); J. H., of Ind.; McN. & L., of N. Y., J. D. A., of Conn.

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