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51,408.—Butter Worker.—J. P. Adams, Whitney's Point, N. Y.:

I claim the arrangement of the frame A, the spring, d, and the swinging frame, D, substantially as and for the purpose specified.

51,409.—Stove-pipe Damper.—J. C. and A. B. Allerton, Aztalan, Wis.:

I claim the arrangement of the damper, A, with the strips, c, formed at right angles thereto, connecting the offsets, D, with the center, C, in combination with the openings, f, f', being a new article of manufacture, as and for the purpose set forth.

51,410.—Lock Key Fastener.—James B. Ayer, Malden, Mass.:

I claim the supplementary escutcheon B, above described, provided with a hinged leaf capable of being raised and locked in a horizontal position, the several parts being made and applied substantially as above set forth.

[This invention has for its object the construction of an escutcheon for locks, which will prevent the lock from being picked from the outside, prevent the key from being turned from the outside by instruments applied to its heel, and will prevent persons from looking through the keyhole. It consists in a supplementary escutcheon, which is pivoted at its top to the ordinary escutcheon, or to the lock plate, and which has a lateral slot to receive the shank of the key, and a hinged leaf that when raised lies flatwise upon the lap of the key to prevent it from being turned, said leaf being moreover locked, when it is raised, by a sliding bolt that passes through the supplementary escutcheon into the ordinary escutcheon or lock plate.]

51,411.—Illuminating Public Clock.—Thos. Ives Bailey, Nashville, Tenn.:

First, I claim the combination of the tubular hands, J, K, tubular spindle, A, and flexible tubes, F, arranged to operate substantially as and for the purpose set forth.

Second, The plugs, B and M, and bosses, C, when used in the manner as and for the purpose described.

Third, The chamber, x, formed in the hour hand-socket, the ears, b, on the bosses, C, and the bracket or fixture, D, for the purpose specified.

51,412.—Automatic Stop Motion for Steam Engines.—H. B. Beckman, Newburyport, Mass.:

I claim the arrangement of the lever, g, springs, b, b', toes, a, and tappets, f, f', in connection with the ball, k, for the purposes herein described and represented.

51,413.—Machine for Separating Fibrous Plants.—Jas. R. Beckwith, New Orleans, La.:

First, I claim the use of self-acting nippers, in combination with suitable stripping jaws, constructed and operating substantially as and for the purpose described.

Second, The combination of the self-acting stripping teeth with the stripping jaws, substantially as and for the purposes set forth.

Third, The reciprocating table in combination with the stripping jaws and nippers, constructed and operating substantially as and for the purpose specified.

Fourth, The self-acting curved clearing arm, in combination with the nippers, constructed and operating substantially as and for the purpose set forth.

Fifth, The application of a self-acting spring dog, in combination with the stripping teeth, constructed and operating substantially as and for the purpose described.

Sixth, The use of a curved elbow lever, g', b', in combination with the stud, r, lever, F, chain, f', and spring dog, e', constructed and operating substantially as and for the purposes specified.

[This invention relates to a machine which is particularly intended to treat the leaves of Agave America, or other similar plants, or parts of plants, in which the fibers are covered with a pulpy substance, but which can also be used for separating fibers from other plants.]

51,414.—Watch Escapement.—Louis Billon, Brooklyn, N. Y. Antedated Aug. 28, 1865:

I claim the combination of the cylinder or rest-piece, C, the wheels, A and B, and table-roller, D, constructed and operating substantially as described for the purpose set forth.

51,415.—Water Meter.—Geo. F. Blake, Boston, Mass.:

First, I claim the arrangement of the water-ways in the manner described.

Second, Giving to the valves of both cylinders the same size, form, construction, and mode of operation, as and for the purpose specified.

Third, The rod J, arranged as described in relation to the cylinders, B, C, for the purposes set forth.

Fourth, The arrangement for conjoint operation of the valves, water-ways, ports and plungers, in the manner set forth, for the purpose of preventing the plungers from getting on centres, as specified.

51,416.—Weighing Apparatus.—Orville S. Bliss, Fairfield, Vt.:

I claim a weighing apparatus with two beams, having a single suspension and double connection, as described, extending one or both beams beyond the pivots at one end, and graduating such extension for a movable poise or poises.

51,417.—Gate Fastening.—Webb Broomhall, Circleville, Ohio:

I claim the catch plates attached to the vertical axis, adjusted by the bolt operated by the spring, and engaging in the rebate of the post, substantially as described and represented.

51,418.—Gage Cock.—John Broughton, New York City:

I claim the detachable body or globe, C, in combination with the shaft, B, of a gage cock, and with a valve, the stem of which is provided with wings, b, or their equivalents, substantially as and for the purpose set forth.

[This invention consists in making the body or globe of a gage cock detachable from that part containing the seat, and in applying to the stem of the valve a series of wings in such a manner that by removing said detachable globe, the operation of regrinding the valve is considerably facilitated, the wings on the stem serving as guides which keep the valve square in its seat while being ground.]

51,419.—Lubricator.—John Broughton, New York City:

First, I claim the combination of the reservoir, A, having a central discharge passage, C, with the open tubular spindle, D, when said spindle is provided with openings, f and g, and a solid pointed end fitting the passage, c, substantially as and for the purpose above described.

Second, I also claim the combination of the locking collar, H, with the reservoir, A, and tubular spindle, D, constructed and operated substantially as and for the purpose above described.

51,420.—Combined Rein and Back-strap Holder.—John Bullene, Chicago, Ill. Antedated Nov. 29, 1865:

I claim the arrangement and combination of the part, E and D, with the loop or part, h, substantially as described and for the purposes set forth.

51,421.—Machinery for Forming Sheet Metal Ware.—Mellen Bray, Boston, Mass.:

First, I claim the arrangement of the dies, plungers, and machinery for operating the same, all substantially as herein described, for cutting blanks from sheets of metal, and shaping the same into various articles of use at one operation.

Second, The method of giving to the holding surfaces a relief motion to prevent the increasing thickness of tin, caused by being drawn in by the forming die, from increasing the pressure of holding surface, and thereby tearing the tin asunder.

Third, In machinery for cutting and shaping metal, I claim operating the cutting dies by means of forming the toggle-joint, when actuated through the intermediary of connecting rods or links, by vibrating cams expandible, substantially as and for the purposes set forth.

Fourth, In machinery for cutting and shaping metals, I claim operating the forming die by means of levers forming the toggle-joint, when the same are actuated through the intermediary of an adjustable connecting rod, by a vibratory crank, the crank-pin of which is adjustable substantially as and for the purposes set forth.

51,422.—Bungs.—O. R. Burnham, New York City:

First, I claim the curved flange, E, with its edge, b, constructed substantially as and for the purpose above set forth.

Second, I also claim the combination in a bung of the three separate and independent joints formed respectively by the screw threads on its body, the shoulder, a, under its flange, E, and the circular edge, b, of the said flange, substantially as and for the purpose above described.

Third, I claim reducing the weight of metal required for a bung by constructing said bung with a cavity, F, substantially as described.

[This invention has for its object the production of a bung for barrels and other vessels, which will not be attended with leakage around its joints, and which may be applied to and removed from the bung hole with facility.]

51,423.—Broom or Brush.—Marcus I. Byrn, M. D., New York City:

First, I claim a broom or brush made of bundles of corn husks secured together at one end by glue or cement and placed within a metal head, and secured by wire or sewing, as set forth, and provided with a metal socket for the handle, as specified.

51,424.—Coal Stove.—Gardner Chilson, Boston, Mass.:

First, I claim the improved stove as made with the conical dome, the boiler chamber or smoke flue and the projecting cap or platform, arranged together and with the firepot, substantially as specified.

Second, I also claim the stove as made with the annular fender combined with the firepot, the dome, and the cap or platform, substantially as set forth.

Third, I also claim the improved conical dome, as made with annular corrugations, arranged as set forth.

51,425.—Trace Fastener.—D. H. Clock and F. D. Ryan, Newville, Ind.:

First, We claim the fixed pronged metallic plate, g, interlocking with the hinge-tug, in combination with the sliding clasp, j, having spring ends, m, arranged together and operating as and for the purpose specified.

51,426.—Hinge.—Jeremiah Close and Ira Buckman, Jr., Brooklyn, N. Y.:

We claim the center plate, B, having a hinge joint on both edges, in combination with the sleeves, d, n, the springs, f, f', and outside leaves, A, A', substantially as and for the purposes herein specified.

51,427.—Bed Bottom.—Henry A. Cooke, Charlestown, Mass.:

First, I claim the combination as well as the arrangement of the cams or inclines, d, f, the supporters, C, D, and their annular springs, E', with the bedstead frame and with the bed bottom, constructed of the longitudinal slats and the traverse bars, arranged together as specified.

Second, I also claim the combination of the two cross bars, b, b', their supporters, C, D, and their springs, E, with the series of longitudinal slats and with the bedstead frame, arranged as specified.

51,428.—Cultivator.—John Copeland, Quasqueton, Iowa:

I claim the two crossed levers, H, H', connected by a pin, a, and applied to the plow beams, B, B', to operate in the manner substantially as and for the purpose herein set forth.

I further claim the combination of the levers, H, H', perforated bar, J, lever, K, and pin, g, arranged to operate in the manner and for the purpose specified.

[This invention relates to a new and improved cultivator, of that class which are capable of being expanded or contracted in order to conform to the width of the spaces between the rows of plants under cultivation. The invention consists in a novel application of levers to the plow beams whereby the latter may be operated—expanded and contracted—with greater facility than hitherto, and while the device or implement is at work, and so that it will be under the complete control of the operator.]

51,429.—Bed Bottom.—M. C. Cronk, Auburn, N. Y.:

I claim the arrangement of the eye, C, the webbing, e, the bars, D, the rods, a, and the short rods, S, the whole constructed and operating as and for the purpose herein set forth.

51,430.—Apparatus for the Manufacture of Paper Pulp.—John W. Dixon, Philadelphia, Pa.:

I claim the combination of the pulp digester, A, the steam or hot water heating coil, F, G, H, I, K, and the circulating pump for throwing the digesting liquid continuously from the bottom to the top of the material to be pulped.

Second, The combination of the lower perforated diaphragm, the heating coil and the circulating pump and tubes.

Third, The combination of digester, A, and the circulating pump, 4, and the heating chamber, B, whereby the heated refuse liquid coming from the digester is made to heat the fresh water which is forced in to supply its place.

51,431.—Apparatus for the Manufacture of Paper Pulp.—John W. Dixon, Philadelphia, Pa.:

First, I claim the combination of the paper pulp digester, and the heating chamber in which the refuse liquid escaping from the digester is made to heat the fresh liquid to be forced into the digester.

Second, The combination of the paper pulp digester, the pump for circulating the digesting liquid, and the coil, F, for heating the liquid while circulating, and the chamber for heating the fresh liquid by the escaping refuse liquid, arranged and operating substantially as described.

51,432.—Process for Making Paper Pulp from Corn Stalks.—John W. Dixon, Philadelphia, Pa.:

I claim the process of making pulp from corn stalks, by digesting them in highly heated water under pressure, substantially as described.

51,433.—Process for Making Paper Pulp.—John W. Dixon, Philadelphia, Pa.:

I claim the process of treating wood, straw, and similar vegetable substances by forcing highly heated water under pressure to circulate continuously through the mass to be pulped by means of a pump as a process or preparatory process for making paper pulp, substantially as described.

51,434.—Seal Lock.—H. W. Dopp, Buffalo, N. Y.:

I claim the combination of bow, A, slot holes, B, b, and bolt, C, together with soft metallic seal, d, as and for the purpose described.

51,435.—Nail-plate Feeder.—Daniel Drawbaugh, Eberle's Mills, Pa.:

I claim the arrangement and combination of the revolving feeder, N, with its rods, R, wings, S, three flanges, T, dies, V, and oscillating upright, K, as herein described and for the purposes set forth.

51,436.—Cloth, the Weft of which is Made of Hair, Grass, Etc.—James Downie, Paterson, N. J.:

I claim a cloth formed with selvages, and woven with a hair or grass wool, made by overlapping the ends of the fibers of hair or grass upon each other, along or around and parallel with a central or guiding thread, and wound, bound or wrapped with a winding, binding or wrapping thread, substantially as described and to the effect set forth.

51,437.—Device for Casting Stereotype Plates.—W. F. Draper, Andover, Mass.:

I claim the arrangement of the bed, A, the frame, B, journaled on centers, 1, the platen, D, plates, C, C', and screw, F, operating substantially as and for the purpose described.

51,438.—Machine for Weighing Grain.—Elijah F. Dunaway, Cincinnati, Ohio:

First, I claim the combination of the scale boxes, D and E, with the rods, 7, 7', working the apron springs, 2, 2', and the upright rod, z, connecting with the extension of the scale beam, H, when arranged as herein described and for the purpose set forth.

Second, I also claim the arrangement and combination of the register wheels, R's, with their pins operating each other, check, W, and springs, X and Y, as herein described and for the purpose set forth.

Third, I also claim the combination of the rod, P, pawl, 2, and arm, N, when arranged as herein described and for the purpose set forth.

51,439.—Shoemaker's Burnisher.—Richard Egan, Brooklyn, N. Y.:

I claim, as a new article of manufacture, the shoemaker's burnisher, consisting of an invariable head, A, metallic socket, B, and handle, C, all substantially as herein described.

[This invention consists in making a burnishing tool for polishing the edges of soles and heels of boots and shoes, so that it is removable from its handle, and in so constructing the handle that it will not be easily injured when the burnisher is heated for use.]

51,440.—Many-barreled Fire-arms.—W. H. Elliot, Ithaca, N. Y.:

I claim, first, An oscillating firing pin, when pivoted to the hammer and operated by a cam, substantially as shown and described.

Second, So constructing and operating the cam and firing pin that they shall serve the purpose of ratchet and pawl, substantially as and for the purpose herein described.

51,441.—Gas Stove.—Luther Ewing, Brooklyn, N. Y. Antedated Nov. 30, 1865:

I claim the combination of the conical draught tube, B, cylinder, C, perforated or recirculated plates, b, b', and inclined bottom plate, d, of the concentric cylinders, F, G, H, all the said parts being constructed and arranged to operate as herein specified.

[This invention relates to a new and improved heat-radiating gas stove, and it consists in the employment or use of a series of cylinders, arranged one within the other, so as to form concentric flues or draught passages, in connection with a gas-burning apparatus, whereby it is believed that a large amount of heat will be obtained by a moderate consumption of gas.]

51,442.—Thermo-electric Battery.—Moses G. Farmer, Salem, and H. Julius Smith, Boston, Mass.:

We claim the improved thermo-electric battery, constructed substantially as herein described, viz: by the addition of some supporting material, more tenacious and less liable to be broken than the bar to which it is applied.

We also claim the employment of an insulating coating applied to the supporting rod or wire, for the purpose substantially as and for the purpose set forth.

51,443.—Spring Slat for Bed Bottoms.—James M. French, East Cambridge, Mass.:

I claim making a joint at each end of a bed slat, or attaching arms substantially as described, said joints being capable of receiving within them a piece of rubber or a spring, substantially as and for the purposes specified.

51,444.—Washing Machine.—Martin Gardner, Sr., Carlisle, Pa.:

I claim, first, The short shafts and their guides, connected and combined with the rubbing segment and its ways, so that the segment may be operated from the outside of the box, and be free to rise and fall with the inequality of the clothes being washed, substantially as described.

I also claim the adjusting or regulating of the extent of the descent of the rubbing segment, while it remains free to rise above the limit, by means of the hinged bearers, eccentrics, and turning and holding ratchet and dog, substantially as described.

51,445.—Grain-hulling Machine.—Smith Gardner and Amasa B. Howe, New York City:

We claim so arranging and mounting the disks, C, and arms, D, with the rods or supports, F, F', springs, E, E', and the keys in the rods or supports, that the pressure or resistance of the disks may be regulated and adjusted at pleasure throughout the series of disks, when the machine is in motion, substantially as shown and described.

51,446.—Construction of Screw-propeller Blades.—Charles C. Gates, Albany, N. Y.:

I claim the manner of forming the blades by their irregular curves and widths, and unequal thickness of staves, as combined and arranged as specified and for the purpose set forth.

51,447.—Hinge.—Edwin W. Gilmor, North Easton, Mass.:

I claim a hinge, constructed substantially as described, as a new manufacture.

51,448.—Sectional Steam Boiler.—Stephen J. Gold, Cornwall, Conn.:

First, I claim the construction of boiler sections with partial flues, substantially as set forth.

Second, Constructing the ends of said partial flues, with concave flanges or projections, substantially as and for the purpose set forth.

51,449.—Piston Packing.—Simeon Goodfellow, Troy, N. Y.:

I claim the combination and arrangement of the tapering pin, p, formed into screw thread and key square, the lever spring, n, and rings, e, f, all constructed and applied in the manner and for the purpose specified.

51,450.—Horse Rake.—Robert A. Graham, Greensburgh, Ind.:

First, I claim the diagonal rod, C, applied to the end beams, B, B', substantially as and for the purpose specified.

Second, I claim the employment or use of the swivel, E, in combination with the rod, C, substantially as specified.

Third, I claim the manner shown of attaching the rake shafts to the end pieces, whereby the rake may be folded, substantially as specified.

[This invention consists in the employment or use of two bent rods, secured diagonally across the end of the rake frame, and in using a swivel joint, whereby, when the rake is revolved, the chain will automatically change its position, so as to be in proper place for drawing the rake forward; and it also consists in a novel manner of connecting the rake shafts with the end pieces and frame, whereby the ties can be turned inward, or toward each other, so as to make a more compact implement when it is desired to store away the same.]

51,451.—Boring-hole Reamer.—Lyman Gray, Pittsburgh, Pa.

I claim a tapering hollow rod, D, open at the top, or largest end, when said large end, or open top, is surmounted by an arch, B, and socket for supporting the handle in the manner shown, and in combination therewith, the use of the scale of figures on the outside of the rod, and sliding gage attached thereto, operating substantially as represented, for the purposes herein set forth.

51,452.—Clothes Mangle.—Joseph B. Greenhut, Chicago, Ill.

I claim the combination of the central roller, B, driven by hand crank, and provided with the clamp, S, with the circular series of smaller rollers provided with their spring adjustments, substantially as described and represented.

51,453.—Register for Street Cars.—Joseph B. Greenhut, Chicago, Ill.

First, I claim the combination of the handle, I, and disk, J, with the ratchet, K, pawl, L, shaft, E, and hand, F, arranged as described for registering upon the dial, C, in the manner explained. Second, in combination with the above, I claim the arrangement of the gear, O, P, shaft, Q, and hand, R, for registering upon the dial, D, in the manner and for the purposes specified.

Third, I claim the combination of the locking bolt, V, spring, V, and hole, U, for preventing the movement of the hand, R, when the latter has come to its movement upon its dial.

Fourth, I claim the combination of the rack, a, pawl, b, claw, c, lever, d, and pin, e, with the hammer, X, substantially as and for the object set forth.

51,454.—Valve Gear for direct-acting Steam Engines.—William H. Guild and William F. Garrison, Williamsburg, N. Y.

First, I claim the cylinder, M, with ports, q' and n', communicating with the main valve chest and exhaust pipe and its two contained pistons, N, N', having ports, m, m', and connected with the valve, P, by means of the two arms, I, P, of the rock shaft, E, the whole arranged and operating substantially as herein specified. Second, in connection with the pistons, N, N', and the valve, C, connected by the arms of a rock shaft, E, running through the valve chest, we claim the lever, F, oscillating loosely on the said rock shaft, connected with the main piston rod, and furnished with projections, t', operating on the toes, S, S', of the rock shaft, all substantially as herein described.

51,455.—Grate Bar.—Warren E. Hill, Brooklyn, N. Y.

I claim the longitudinal space, E, in combination with the transverse passages, G, and adapted to allow the ascent of air between the sides, M, and N, and its discharge into the spaces at the sides of the bars, substantially in the manner and for the purpose herein specified.

51,456.—Tire-upsetting Machine.—Hiram L. Howard, Mendon, Mich.

I claim the combined arrangement of the clamping and upsetting jaws, A, B, cam lever, M, L, anti-friction roller, R, and stays, S, S', constructed and connected substantially as described, and the several parts arranged relatively with each other, and with the bench plank, C, or other bed sill, in the manner and for the purpose herein specified.

51,457.—Thill Coupling.—James W. Innis, Milroy, Ind.

I claim a thill coupling for wheel vehicles, composed of an eye, E, in which the thill iron, B, secured by a pin, b, the eye being provided with a pendant rod, D, which is fitted in a protuberance, C, on a clip, A, and secured therein by a spring catch, G, substantially as and for the purpose set forth.

[This invention consists in attaching the thill to the axle in such a manner as to obtain a firm and secure coupling, and one which will admit of the thills being very readily attached to and detached from the axle.]

51,458.—Machine for Cutting Wood Gear.—James Jackson, Woonsocket, R. I.

I claim First, The combination of the pivoted arms, G, G, reciprocating slides, L, rotary cutters, S, and belt, T, arranged and operating substantially as and for the purposes specified.

Second, The combination of the adjustable bars, H, U, and screw rods, I, V, with the pivoted arms, G, G, as and for the purposes set forth.

[This invention relates to a new and improved machine for cutting wooden teeth for bevel gears, whereby the work may be done in an expeditious and perfect manner, and the machine adapted for cutting teeth to suit wheels of different diameters.]

51,459.—Method of Preparing Gold for Dental Purposes.—E. G. Kearsley, New York City.

I claim a cake prepared from gold foil, substantially as and for the purpose herein described. Also, preparing gold for dental purposes, by beating it out in thin leaves and grinding or cutting it up in combination with molasses, honey or other suitable materials, substantially as herein set forth.

[This invention consists in beating the gold into fine leaves, and molding it into a cake by squeezing or other mechanical means, or, instead of this, it may be cut up in fine pieces and mixed with honey, molasses, or other suitable adhesive substance, and in this state formed into cakes of the required size and weight.]

51,460.—Washing Machine.—Patrick Killin, Mount Healthy, Ohio.

I claim, First, The adjustable washboard composed of parts, E, F, and spring, I, constructed as above described and for the purpose set forth.

Second, The endless belt, e, comprising bars, d, driving drums, D, constructed as shown and for the purpose set forth.

Third, The adjustable washboard, B, in arrangement with endless belt, e, and compressing bar, d, as described, and for the purpose set forth.

51,461.—Car Coupling.—George L. Kitson, Philadelphia, Pa.

I claim the combination of the sliding catch, B, with the spring, D, in connection with the pin, C, and groove, I, in said pin, C.

51,462.—Coloring and Polishing Wood.—E. Knabeschuch, New York City.

I claim coloring and polishing woods with aniline colors, substantially in the manner described.

51,463.—Animal Trap.—Sylvanus Knight, Adel, Iowa.

I claim the arrangement of the case, A, furnished with the openings, e and l, door, p, glass, x, and grooves, 13, pieces, b, c and o, door, m, tread, d, trigger, i, spring, t, drums, r and s, cord or chain, F, pins, i and q, and index 12 3 4 5 6 7 8 9, etc., when used in connection with the wheel consisting of axle, n, and wmg, r, the whole being constructed, arranged and operating substantially as herein described, and for the purpose set forth.

51,464.—Machine for Punching Paper for Telegraphs.—Marshall Lefferts, New York City.

First, I claim the escapement pawl, 14, operating substantially as specified in combination with the revolving friction pulley, 2, and shaft, g, for the purposes and substantially as specified.

Second, I claim the bent lever, 17, and connection, 15, to the escapement, 14 in combination with the keys, E, for the purposes and substantially as specified.

Third, I claim revolving the type wheel and shaft by a friction pulley, substantially as specified.

51,465.—Wrench.—J. Parker Lindsay, New Haven, Conn.

I claim making the bar, B, of the wrench with a rib, spline or feather, on its back edge or side, substantially as herein described and set forth.

51,466.—Skate.—John Lovatt, Newark, N. J.

First, I claim dividing the foot rest of a skate in the direction of its length into two parts or sections, which parts are so connected or attached to the supports therefor of the skate, that they can be either moved toward or away from each other, substantially in the manner described and for the purposes specified.

Second, in combination with the above, constructing or forming the outer edges or peripheries of the foot-rest sections and suitable points thereof, with raised clamps, g, g, substantially as and for the purpose described.

Third, in combination with the longitudinally divided skate foot-rest, having side clamps, g, g, of the fixed rest, pin or stud, G, for the front of the boot or shoe heel, substantially as and for the purpose specified.

51,467.—Lock.—L. H. Mayott, Springfield, Mass.

First, I claim in combination with a suitable case, A B F G, the pins, D, E, H, and pins, a, b, c, d, when arranged and operating substantially in the manner and for the purposes described.

Second, Providing the plate, H, with one or more holes, m, n, o, p, for the purpose of fastening the lock when the pins are pushed too far down as herein set forth.

51,468.—Bottom for Ice Cream Freezer.—Edward M. Manigle, Philadelphia, Pa.

I claim the herein described tinned, decarbonized, cast iron bottoms for ice cream freezers as a new article of manufacture.

51,469.—Sash Fastener.—Jacob B. Masser, Sunbury, Pa.

First, I claim the wedge-shaped serrated bolt, E, occupying a recess of similar shape in the case, D, and operating as described by expansion, to restrain its downward movement.

Second, I claim the arrangement of the locking wedge, E, in its combination with the shoulder of the recess, H, in the sash and the projection, I, of the case, D.

51,470.—File Holder.—W. C. McMill, Cincinnati, Ohio.

I claim as an improved article of manufacture, a file holder made and operating substantially as herein set forth.

51,471.—Machine for Starching and Glazing Cords, Braids, Etc.—Donald McInroy, New York City. Antedated, Dec. 9, 1865.

First, I claim the convoluted pipe, p, forming a dryer to the fabric drawn through between the pipes, as and for the purposes specified.

Second, I claim the hollow dryer, d, and ironer, e, applied as and for the purposes set forth.

Third, I claim the winding-up reel, i, actuated by the pulleys and regulated by the friction strap as specified.

51,472.—Grate.—Peter Murrey, Milwaukee, Wis.

I claim the combination of the supporting bars, D, D, and rocking bars, E, E, operating substantially as and for the purpose described.

51,473.—Combined Horse Rake and Hay Spreader.—George N. Palmer, Greene, N. Y.

First, I claim the combination and arrangement of the adjustable rear rake, H, in combination with the stationary rake head, I, and vibrating frame, F, F, for spreading or tedding hay, operating as herein described for the purpose set forth.

Second, I claim the spring bumpers, m, m, in combination with the balance frame, F, F, and the cams, e, e, e, on the rotating axle, c, for operating the tedding apparatus, substantially as and for the purposes specified.

51,474.—Pump.—F. S. Pease, Buffalo, N. Y.

I claim the elastic air chamber with its internal expanding spring, in combination with the arrangement of valves and passages, substantially as described.

51,475.—Operating Ordnance.—Charles Perley, New York City.

First, I claim the mode herein specified of elevating a gun or mortar from behind a breast work or protection previous to its discharge and the lowering of the same previous to loading, by a hydraulic ram and cylinder as specified.

Second, I claim a hydraulic recoil check, consisting of a plunger acting against liquid in a chamber, from which chamber there is an opening or escape substantially as specified.

Third, I claim projecting the gun forward by the pressure of a liquid upon a ram or plunger, substantially as specified.

Fourth, I claim adjusting or sighting a gun by means of hydraulic pressure acting upon a ram or plunger in a chamber, substantially as specified.

Fifth, I claim elevating the charge or projectile, by a ram or plunger acted on by hydraulic pressure, substantially as specified.

Sixth, I claim connecting the chamber in which the recoil plunger acts with the hydraulic cylinder substantially as specified, so that the pressure of liquid in the latter shall force the gun forward as set forth.

51,476.—Hinge.—E. N. Porter, Morrisville, Vt.

I claim the arrangement and combination of the block, J, arms, G, and spring, K, substantially as described and for the purposes set forth.

51,477.—Weather Prophet.—A. C. Rand, Union Mills, Pa.

I claim the use of the reed, a, or a hygrometer plant, in combination with the umbrella, C, and figure, A, arranged and operating substantially as and for the purpose herein shown and described.

[This invention consists in the application to a human figure of the reed of a hygrometer plant, in combination with a miniature umbrella which is connected to said reed and to the figure in such a manner that when the atmosphere is dry, the umbrella is turned down to the side of the figure, and when the atmosphere is wet the umbrella is turned up over the head of the figure, and by these means the state of the weather is indicated in a reliable manner.]

51,478.—Centering Circular Saw.—W. T. and L. H. Rand, N. H.

I claim in centering circular saws, the combination of radial pins suspended in slots cut in their arbors with a taper-pointed screw or its equivalent in the end of the arbor, substantially as shown.

51,479.—Fruit Slicer.—James H. Reed, Kent County, Del.

I claim the combination of the hollow mandrel, A, the movable knives and the collar, F, constructed and operating substantially as described and represented.

51,480.—Process for Preserving Eggs.—Richard S. Rhodes and Ebenezer Whyte, Chicago, Ill.

We claim the herein described process for preserving eggs from decay and pre-venting their vitality, substantially as specified and set forth.

51,481.—Steering Apparatus.—Price W. Robinson, New Bedford, Mass.

I claim, First, The parallel fixed, T-shaped guide bars for the traveling nuts, arranged substantially in the manner described.

Second, The knuckle jointed connecting arms, t, when used in combination with the revolving nuts working above the head of the rudder post, substantially as described.

51,482.—Cane Stripper.—Horace Rockwell, Roanoke, Ind.

I claim the instrument as and for the purpose described.

51,483.—Scissors Sharpener.—James J. Russ, Worcester, Mass.

I claim First, The adjustable polygonal shaped sharpener plate, d, in combination with the adjustable guide, p, arranged together and operating substantially in the manner described and for the purpose specified.

Second, The combination with the polygonal sharpener plate secured to a suitable stand of the adjustable guide, p, arranged together so as to be adjusted with regard to each other and to the stand substantially in the manner described and for the purpose specified.

[This invention relates to a novel and very useful implement for the sharpening of scissors, shears, and other similar cutting instruments, and consists in so securing upon one side of a suitable stand an adjustable polygonal or other suitable shaped sharpener plate that its edge will project above the top of the said stand, either more or less, according to the position in which it is set, in combination with which sharpening plate and upon and across the top of the stand is a raised guide for the scissors when its blade is drawn across the edge of the sharpening plate, which guide is also susceptible of adjustment therein, whereby it and the sharpener

Plate can be set to correspond with the level of the cutting edges of scissors, etc., be it more or less.]

51,484.—Shingle Machine.—Samuel T. Sanford, Fall River, Mass.

I claim, First, Giving to each saw or gang of saws, a lateral motion by guides in m, or their equivalents, substantially as and for the purpose described.

Second, The use of two gangs of saws in one and the same sash, one in front and the other in the rear, substantially as and for the purpose set forth.

[This invention relates to a machine in which two gangs of saws are used in one and the same sash, one in front of the other, in combination with slotted guides, one for each saw or for each gang of saws, in such a manner that by the action of said guides the front saws are caused to act in one, and the rear saws in another direction, thus producing two kerfs which intersect at an acute angle, and cutting a block of wood up in a number of shingles equal to the whole number of saws, less one, provided said block is thick enough to be acted upon simultaneously by the whole number of saws in the gate.]

51,485.—Combined Filter and Cooler.—Louis Scharff, Spring Mill, Pa.

I claim the vessels, A and A', connected by the tube, a, having the inlet pipe, b, and outlet, d, perforated partitions, E, and filtering media, x x x, a, combined and arranged as herein described.

51,486.—Horse Rake.—D. P. Sharp, Ithaca Township, N. Y.

I claim the combination of the eyes or sockets, d, d, with the metallic plates, c, and coiled teeth, E, all arranged to operate as and for the purposes specified.

I further claim the stops, d', when used in connection with the teeth applied to the rake head, substantially as and for the purpose specified.

[This invention relates to a new and useful improvement in horse rakes, and of that class in which wire teeth are used. The invention consists in a novel manner of attaching the teeth to the rake head, whereby an independent movement is allowed each tooth, and the teeth at the same time secured to the head in a firm and durable manner.]

51,487.—Suspended.

51,488.—Padlock.—Thomas Slight, Newark, N. J.

I claim the sliding bolt, C, in combination with a spring or springs, E, and one or more tumblers, D, pivoted to the bolt and provided with hooked ends, g, which are arranged in such relation with the eye of the shackle, and the rear or opposite ends arranged in such relation with the stump, b', to operate in the manner substantially as set forth.

[This invention relates to an improvement on a padlock for which Letters Patent were granted to this inventor, bearing date Oct. 14, 1851, and in which a bolt, tumblers, and springs are combined in such a manner that the springs will sustain both the tumblers and bolt in place, and carry them forward when drawn back by the key in unlocking, and also turn the shackle out when unlocked, and permit it to lock again without a key. The present invention consists in an improved arrangement of the tumblers, one or more, with bolt and springs, as hereinafter described, whereby the tumblers are made to serve as a more efficient guard or check than heretofore, and the lock rendered more difficult to pick or open illegitimately.]

51,489.—Burglar Alarm.—B. L. Stone, New York City.

I claim, First, Constructing the clamp, H, with a hinge joint, to enable it to be folded up close against the back or side of the case, substantially as specified.

Second, The device, E, j, k, l, m, or its equivalent, for holding the rod from operating after the clock work has been wound up, and while the alarm is being set.

Third, In combination with the above, the shaft, f, connected to the rods, e and h, arranged substantially in the manner and for the purposes herein mentioned.

51,490.—Horse Hay-fork.—Grove F. Strong, Onondaga, N. Y.

I claim, First, A horse hay-fork, suspended by a simple bail without braces, held in working position by latches at the ends of the fork head, substantially as shown.

Second, In combination with the bail or handle of a horse hay-fork, the latch bolts, g, constructed and operating substantially as shown.

Third, in combination with the bail or handle of a horse hay-fork, the lever, k, with the cross head, i, and connections, for the purpose of withdrawing the latches and liberating the fork.

Fourth, in combination with a horse hay-fork, the hooks, l, o, and ring, p, for the purpose of enabling the tripping cord to be used as a guide rope, substantially as described.

51,491.—Basket Machine.—J. B. Sweetland and E. C. Goodrich, Pontiac, Mich. Antedated Dec. 5, 1865.

We claim, First, The employment of spring catcher, a, a, used in connection with the head, B, substantially as and for the purpose herein specified.

Second, The employment of the adjustable staff or standard, B, when the same is used in the manner and for the purpose specified.

51,492.—Heater for Skates.—Owen W. Taft, New York City.

First, I claim so constructing the heating chamber and combining it with the foot plate that access can be had to its interior without removing the foot from the foot plate, as and for the purposes set forth.

Second, The rim or flange, a, extending all round the edge of the foot plate, substantially as and for the purpose described.

Third, The arrangement of the lamp, C, and heater, D, in combination with the heating chamber, B, and foot plate, A, constructed and operating substantially as and for the purpose specified.

51,493.—Bed-bug Trap.—Wm. Tapper, New York City.

I claim the arrangement and use of a braided frame made of split willow, or its equivalent, for the purpose of acting as a trap to catch bed bugs, in the manner substantially as described.

51,494.—Cultivator.—J. H. Thomas, P. P. Mast, and Thos. Harding, Springfield, Ohio.

First, We claim the independent short axles, E, provided with the projection, F, and secured to the main axle, B, in the manner shown and described.

Second, The combination of axles, E, rods, c, and lever, I, as shown and described.

Third, We claim the lever, G, in combination with the lever, I, rods, c, and axles, E, arranged and operating as set forth.

51,495.—Grain Separator.—Andrew J. Vandegrift, Cincinnati, Ohio.

First, I claim the attachment of wings to a fly wheel, in such a manner as to form a fan and fly wheel, in combination, having the same set of arms and hub in common, thus constituting, in combination, a device to perform the double office, acting as a regulator of motion, or distributor of power, and, at the same time, constituting an efficient exhaust fan, constructed in the manner and used for the purpose substantially as set forth.

Second, Peculiarly constructed lever, U, shaft, K, wheels, f, f, shaft, L, or their equivalents, when located at the mouth or lower end of flue, N, in such a manner as not to form a material obstruction to the air rushing into said flue, and to transmit motion to dish or disk, M, or its equivalent, without the necessity of extending a shaft up through tube, Q, when arranged in the manner and for the purpose substantially as set forth.

Third, Case, T, thumb screw, h, cross head, e, connecting rods, S, when arranged in hopper, p, in the manner and for the purpose substantially as set forth.

Fourth, Crank, A, shaft, B, wheel, C, piston, D, shaft, E, combined fan and fly wheel, F, pulley, H, pulley, I, bearing, U, shaft, G, gear wheels, I, shaft, L, plate or disk, M, curb, O, feed tube, Q,

slipjoint, B, with connection rods, S, S, cross head, G, thumb screw, H, and case, T, all arranged relatively with each other combined and operated in the manner and for the purpose set forth.

51,496.—Steam Engine.—Lawrison Towne, Providence, R. I.

I claim regulating the velocity of steam engines by combining a variable steam port with a liberating valve gear, substantially in the manner described.

51,497.—Pruning Knife.—L. O. Vaughan and P. W. T. Vaughan, De Kalb, Ill.

We claim the link, C, and friction rollers, e, e, in combination with the cutting blade, B, bed plate, A, and lever, a, substantially as herein shown and described.

[This invention consists in a novel arrangement of a cutting blade on a suitable bed plate, which has its outer end of a hooked shape, to receive the twig and retain it during the cutting operation.]

51,498.—Lock.—R. Vollschwitz, New York City:

I claim the case, C, with the mechanism for locking and unlocking, in combination with the lock plate, A, and bolt, B, all constructed and arranged substantially as and for the purpose described.

51,499.—Chalk Holder for Billiard Tables.—Henry M. Wall, Niles, Mich.:

I claim an improved device for holding chalk for billiard tables, and other purposes, consisting of the stock, A, provided with a suitably formed socket, B, in combination with the clamp holder, C, and adjusting screw, M, substantially as set forth.

51,500.—Machine for Raking and Bunching Hay.—Lorenzo Wallace, Leavenworth City, Kansas:

First, I claim the rake, C, in connection with the endless elevating apron, I, and cleavers, U, placed or arranged in a mounted frame, substantially as and for the purpose set forth.

Second, The receiver, J, suspended or hung upon pivots, when used in connection with the rake, C, and elevating apron, I, substantially as and for the purpose specified.

Third, The arrangement of the rake, C, in the manner shown, and connecting it with a lever frame, G, substantially as and for the purpose set forth.

Fourth, The beating device, composed of the bar, M, provided at one side with a rack, s, and having the cross bars, t, t, at its lower end, in connection with the frame, N, and slide, Q, attached to lever, O, and operated from one of the supporting wheels of the machine, substantially as and for the purpose specified.

Fifth, The discharger, J', applied to the machine underneath the receiver, J, having straps, m, attached, connected with levers, and arranged so as to operate in connection with the receiver, substantially as and for the purpose set forth.

[This invention relates to a new and improved machine for raking up and stacking hay in the field, and is designed to economize in the labor of harvesting hay.]

51,501.—Window Shade.—James W. Ward and Stephen D. Wilson, Richmond, Ind.:

We claim the construction of a window shade in which the slats or strips are formed of converging surfaces, producing edges, as and for the purposes set forth.

51,502.—Manufacture of Sugar.—H. Weller and J. E. Hatcher, Fultonham, Ohio:

First, We claim the passing the sirup, as the same leaves the evaporator or boiler, through a series of boxes or coolers, substantially as herein described, so that it is divested of the gum mixed with it previous to its admission to the granulating boxes.

Second, The combination and arrangement of the evaporator, B, cooler, C, D one or more, and granulating boxes, E, substantially as and for the purpose set forth.

[This invention is designed to facilitate the manufacture of sugar from Northern canes, and is apparently a simple and economical device for the purpose.]

51,503.—Horse Rake.—M. D. Wells, Morgantown, West Va.:

I claim the bar, F, attached by a spring, G, to the cross bar, H, of the shaft, B, B, and provided with a rod, I, at its rear end, in combination with the lever, C, all arranged and applied to the rake to operate substantially in the manner as and for the purpose set forth.

[This invention relates to a new and useful improvement in that class of horse rakes which discharge their load by a revolving movement, and it consists in the employment or use of a simple attachment for controlling or regulating the turning of the rake.]

51,504.—Apparatus for Ventilating Ships.—Oliver D. Wells, Westery, R. I.:

First, I claim the interior tight skin, C, D, arranged relatively to the timber framing, A, and to the tight planking or outer skin, B, substantially in the manner as and for the purpose herein set forth.

Second, I claim the tight partitions, J, formed in the sides of a vessel, substantially in the manner as and for the purpose herein set forth.

Third, I claim the air ways c, between the parts, D and A, arranged relatively to each other, and to suitable means of receiving and discharging the atmospheric air, substantially in the manner as and for the purpose herein set forth.

Fourth, I claim the passages l, formed longitudinally above and below the deck of a vessel, substantially in the manner as and for the purpose herein set forth.

Fifth, I claim the air ways, E, F, and valves, M, N, mounted in a vessel, and arranged relatively to each other and to suitable passages for the movement of air through the frame work of the vessel substantially in the manner as and for the purposes herein set forth.

51,505.—Corn Harvesters.—John S. Williams, Chicago, Ill.:

I claim the combination and arrangement of the box, U, the hinged tail piece, X, the arm, W, and foot lever, V, substantially as and for the purposes specified and described.

51,506.—Machine for Splitting Wood.—William L. Williams (assignor to himself and Thomas J. O'Conner), New York City:

I claim the rollers, I, applied to each side of the knives in splitting fire wood, in the manner as and for the purpose specified.

51,507.—Machine for Cutting Stalks and Stubble in the Field Preparatory to Plowing.—George W. Wilson, Galesburg, Ill.:

First, I claim the lifting and dropping of the knife, C, alternately by means of a series of rollers, a, a, and the elongated or other similarly constructed springs, D, B, substantially in the manner and for the purpose as herein set forth.

Second, I claim the arrangement of the lever, F, and hook g, in combination with the rollers, a, a, for throwing out of gear or disengaging the springs, to which the knife, C, is attached from the rollers, substantially in the manner as and for the purposes as herein set forth.

51,508.—Suspended.

51,509.—Clothes Sprinkler.—E. T. Colburn (assignor to himself and William P. and Isaac Gannett), Boston, Mass.:

I claim the clothes sprinkler, herein described, the same consisting of a water reservoir provided with hollow valve, stem or tube, arranged so as to operate substantially in the manner specified.

[This invention relates to a novel hand device or implement to be used for sprinkling clothes previous to being ironed, and it consists in combining with a closed vessel or reservoir for the water employed, having one of its ends finely perforated, a hollow valve stem or tube, so arranged therein that by opening the valve the vessel can be filled with water, the air escaping therefrom through its hollow stem or tube, when the valve being closed and so held, by depressing its stem with the thumb or finger of the hand in which the implement is held, the escape of the water from and the entrance of

air to the vessel is prevented, the water, when so desired, by simply shaking the vessel with the hand, then being thrown out of the same either in greater or lesser quantities, according to the force with which it is shaken.]

51,510.—Steam Generator.—James Connery (assignor to himself and William G. Pennypacker), Wilmington, Del.:

I claim the cylinder, B, with vertical pipes, E, and radiating pipes, b, in combination with the fire box, B, shell, A, annular water space, C, and heating tubes, e, constructed and operating substantially as and for the purpose described.

51,511.—Burglar Alarm.—A. W. Deerow (assignor to Edmund Hoole), Brooklyn, N. Y.:

I claim the tripping bolt, B, so arranged with reference to the striking mechanism as to operate in either a vertical or horizontal direction, substantially as herein set forth, for the purpose specified.

51,512.—Connecting Rod Couplings.—Hiram S. Dodge, Lockport, N. Y., assignor to J. W. Doty:

I claim the connecting rod coupling, composed of the spring jaws or raps, I, provided with conical flanges, D, fitting into corresponding sockets, H, H, in the strap or bar, B, the adjusting bolt, E, and latch, G, all constructed and arranged and applied as herein described.

51,513.—Composition Pavement.—Daniel C. Heller (assignor to himself and B. Frank Boyer), Reading, Pa.:

I claim a composition pavement, formed by combining plaster of paris, litharge, coal tar, lime, sand, and broken stone or equivalent, substantially in the manner herein described, and for the purpose set forth.

[The object of this invention is to furnish a composition pavement that will be dry, hard, not liable to be injured by heat or frost, and that will be water tight; and it consists in forming the foundation or lower layer of the pavement of broken stone, cemented together by coal tar and lime, and in forming the surface dressing of sand, coal tar, litharge, and plaster of paris. Each layer being closely packed and leveled by passing over it a heavy roller before the cement has had time to set.]

51,514.—Mop Head.—Peter R. Higby, Buffalo, N. Y., assignor to himself, William Smith, and Erastus W. Clark, Westmoreland, N. Y.:

I claim the combination of the frame, A, B, B, and the pivoted loop, C, constructed and operating substantially as described and represented.

51,515.—Funnel.—Charles Jones (assignor to himself and Charles Hodgetts), Brooklyn, N. Y.:

I claim a funnel struck up in dies from a single piece of metal and having a plane marginal surface adjoining the upper edge, and flutes or corrugations increasing in depth from the top downward, as herein described.

[This invention relates to an imported funnel of that class which are provided with corrugated or fluted ends or nozzles to admit of the escape of air from the vessel while being filled by means of the funnel.]

51,516.—Spring for Bedsteads.—David Manuel, Newton, Mass. (assignor to himself and William Manuel), Boston, Mass.:

I claim the combination as well as the arrangement of the eye, B, and the conoidal or conical spring, A, substantially as specified and as represented.

51,517.—Caliper.—Benjamin G. Martin (assignor to Benjamin G. Martin, Thomas M. Davis, Lloyd H. Walton, and Watson Sandford), Philadelphia, Pa.:

I claim the application of a plumbing bar, C, to a pair of calipers, having feet, b', b', constructed so as to form a straight line with each other when in contact, as and for the purpose described.

51,518.—Mash Tun for Brewers.—Benjamin G. Martin, Philadelphia, Pa., assignor to himself, Thomas M. Davis, L. H. Walton, and Watson Sandford. Antedated Nov. 30, 1865:

First, I claim the case, A, B, hopper, C, shaft, D, and paddle wheel, F, the same being constructed and arranged to operate together, in combination with the rakes, E, E, or their equivalents, substantially as and for the purpose specified.

Second, I claim the sparger, G, in combination with the supply pipe, g', or its equivalent, and the hopper, C, the same being constructed and arranged to operate together substantially as and for the purpose specified.

Third, I claim the application of distributing paddles, H, H, to the shaft, D, the said paddles being constructed and arranged to operate below the case, A, B, as and for the purpose described, when the mixing machine herein described is placed directly over any suitable mash-receiving tun, as described.

51,519.—Welt Trimmer.—John B. Reed (assignor to himself and David R. Tyler), Warren, Mass.:

I claim the welt trimmer, made substantially as described, viz: with the bevelled blade, B, having the cutting edge, a, guard, b, and the rasp, arranged on it and provided with a handle, as explained.

51,520.—Paper and Letter File.—Homer Riggs (assignor to himself and William Church), Oxford, Conn.:

I claim the herein-described metallic letter file, made adjustable as to extend, substantially as and for the purpose specified.

51,521.—Steam Generator.—James Samuels (assignor to himself and George W. Otis), Lynn, Mass.:

First, I claim the partition stays, J, arranged between the compartments, A, substantially as and for the purpose described.

Second, The combination and arrangement of the rings, B and I, compartments, A, rods, E, E, and nuts, F, F, substantially as and for the purpose described.

51,522.—Pump.—C. A. Stillman (assignor to C. B. Cottrell and Nathan Babcock, Westery, R. I.:

First, Making the valve chamber, C, and valve box, B, of tapering form, in contradistinction to the form of a true cylinder, so that the wear of the box, will be compensated, substantially as described.

Second, Forming a water space between the larger head of the valve box, B, and the adjacent end, h, of the valve chamber, C, substantially as and for the purpose above set forth.

Third, Hinging the valves on the upper or higher sides of their seats, substantially as and for the purpose above set forth.

51,523.—Mode of Raising Railroad Tracks.—James Temple (assignor to himself and H. P. Hottenstein), Selinsgrove, Pa.:

I claim, First, The combination of the vibrating rack bar, D, with the rack or pinion bar, E, constructed and operating substantially as described, for the purpose set forth.

Second, The combination of said parts, D and E, with pinion wheels, F, and frame, C, B, operating conjointly to produce the result above mentioned.

51,524.—Lock for Coats, Etc.—Charles B. Trimble (assignor to himself and Charles T. Allen), New York City. Antedated Nov. 30, 1865:

First, The safety coat lock herein described, the same consisting of a chain fixed at one end to and upon the wall or other suitable place, in combination with a suitable locking or holding device having the general features herein specified, the two being arranged and operating together substantially in the manner set forth.

51,525.—Scoop and Flour Sifter.—George S. Wendell (assignor to J. Horace Taylor), New York City:

I claim a combined scoop and sifter when arranged with the handle, C, located as described, having the shield plate, H, behind the wire screw, F, and with the hooks or rests, D, attached to said plate, H, substantially as set forth for the purpose mentioned.

51,526.—Lantern.—William Westlake, Chicago, Ill., assignor to Cross, Dane, and Westlake:

I claim connecting the body or lamp part of the lantern to the

guard, by means of the ring or rod of the guard and the spring catches, their equivalent, substantially as and for the purposes herein set forth.

51,527.—Die for Making Railroad Crossing Points.—Hugh Baines, Manchester, Eng.:

I claim constructing and operating dies, in the manner substantially as set forth, for the purpose of making railroad points.

51,528.—Preserving Timber.—Alexander Hamar, Hungary, Empire of Austria:

I claim preserving timber from decay, insects, and other destructive agents, by means of a solution prepared substantially as herein described, and applied in the manner herein set forth.

51,529.—Device for Reefing Fore and Aft Sails.—John Sunderland, Edg.:

I claim, First, The combination of the boss or socket, a, pin jaws, c, d, and chain, k, with the boom or gaff, as and for the purposes specified.

The guard, m, in combination with the chain passing round the boss or socket at the fore end or throat of the boom or gaff, as set forth.

Third, The combination of the travelers, r, with the mast hoops and sail, as and for the purpose described.

51,530.—Penman's Assistant.—William King, Hopewell, New Brunswick:

I claim an apparatus for supporting the arm while writing, composed of an arm plate, A, bar, B, and wrist pad, E, substantially in the manner herein shown and described.

Also the arrangement of the bracket, C, in combination with an arm plate, A, and bar, B, as set forth.

Also the spring, f, arranged under the bar, B, substantially in the manner as and for the purpose specified.

Also the combination of the spring g, with the wrist pad, E, substantially as and for the purpose described.

[This invention relates to a device for supporting and steadying the arm and body of a person while writing, said device being so arranged that it forms bearing points principally for the bony and neutral parts of the head and arm, leaving the muscles, blood vessels, and nerves connected with the movements of the pen, free from pressure or congestion.]

51,531.—Process for Smelting Iron.—Frederick Lang, Vienna, Austria, and Charles August Frey, Storre, Styria:

We claim the process substantially as herein described of preparing certain refractory ores and scoria cinders, produced in the manufacture of iron, preparatory to and facilitating the reduction thereof, as described.

51,532.—Spinning Wheel.—J. M. Flood, Fulton, Mo.:

I claim, First, the arm, M, pivoted to the bench, A, at x, in combination with the treadle, O, the belt or cord, B, the wheels, N, d, and weight, W, the whole constructed, arranged, and operated as described and set forth.

Second, I claim, the crank, E, the wheels, D, F, H, H' and I, the belts, D', G, and L, and the spindles, K, when combined and arranged as and for the purpose as set forth.

REISSUES.

2,124.—Machine for Pointing Wire.—Orin L. Hopson and Heman P. Brooks, Waterbury, Conn. Letters Patent No. 43,772. Dated Aug. 9, 1864:

We claim, First, A divided die, fitted and actuated substantially as specified, and operating by a series of compressions upon the article to be formed, to give to such article a smooth round shape, corresponding to the shape of the dies, as set forth.

Second, We claim the adjustable radial cams, k, in combination with the law, d, shaft, b, and dies, l, substantially as specified.

Third, We claim a divided die, in which round or cylindrical articles of metal are compressed, in combination with a screw or equivalent device to regulate the opening of the die, and the consequent amount of each successive reduction, as set forth.

2,125.—Sewing Machine.—John Bæhelder, Norwica, Conn. Patented May 8, 1849. Extended seven years. Reissued Sept. 22, 1863:

First, I claim, in combination, the supporting bed which supports the material horizontally in the machine, and is provided with a throat for the passage of the needle, and the constant yielding pressure holder, each having the functions and mode of operation hereinbefore specified.

Second, I claim, in combination, the supporting bed, the constant yielding pressure holder, and the reciprocating eye-pointed needle, each having the functions and mode of operation hereinbefore specified.

Third, I claim, in combination, the supporting bed, the constant yielding pressure holder, and the reciprocating needle carrier, each having the functions and mode of operation hereinbefore specified.

Fourth, I claim, in combination, the supporting bed, the yielding pressure holder, the reciprocating eye-pointed needle, and the perpetual feed which moves the material horizontally under and past the needle while it is supported by the supporting bed, each having the functions and mode of operation hereinbefore specified.

Fifth, I claim, in combination, the supporting bed, the yielding pressure holder, the reciprocating needle carrier, and the perpetual feed which moves the material horizontally upon and over the supporting bed, each having the functions and mode of operation hereinbefore specified.

Sixth, I claim, in combination, the holding surface which supports the material immediately about the needle horizontally under and past the needle, and the perpetual feed which moves the material horizontally under and past the needle upon and over such holding surface, each having the functions and mode of operation as hereinbefore specified.

Seventh, I claim, in combination, the holding surface which supports the material immediately about the needle horizontally under the thrust of the needle, the perpetual feed which moves the material horizontally under and past the needle upon and over such holding surface, and the receiving plate which receives the material from the feed during the operation of the machine in sewing a seam, each having the function and mode of operation hereinbefore specified.

Eighth, I claim, in combination, the horizontally holding surface immediately about the needle, the perpetual feed, the receiving plate, and the yielding pressure holder, each having the functions and mode of operation hereinbefore specified.

Ninth, I claim, in combination, the horizontally holding surface immediately about the needle, the perpetual feed, and the yielding pressure holder, each having the functions and mode of operation hereinbefore specified.

Tenth, I claim, in combination, the horizontally holding surface immediately about the needle, the perpetual feed, the yielding pressure holder, and a reciprocating eye-pointed needle, each having the functions and mode of operation hereinbefore specified.

Eleventh, I claim, in combination, the horizontally holding surface immediately about the needle, the perpetual feed, the yielding pressure holder, and the reciprocating needle carrier, each having the functions and mode of operation hereinbefore specified.

Twelfth, I claim, in combination, the horizontally holding surface immediately about the needle, the perpetual feed, the yielding pressure holder, the reciprocating needle carrier, and the perpetual feed, each having the functions and mode of operation hereinbefore specified.

Thirteenth, I claim, in combination, the horizontally holding surface immediately about the needle, the perpetual feed, and the reciprocating needle carrier, each having the functions and mode of operation hereinbefore specified.

Fourteenth, I claim, in combination, the perpetual feed, the receiving plate, and the yielding pressure holder, each having the functions and mode of operation hereinbefore specified.

Fifteenth, I claim, in combination, the perpetual feed, the receiving plate, and the yielding pressure holder, each having the functions and mode of operation hereinbefore specified.

DESIGNS.

2,228.—Burial Case.—Martin H. Crane and Samuel A. Traugh, Cincinnati, Ohio.

2,229, 2,230.—Cooking Stoves.—Conrad Harris and Paul W. Zolner, Cincinnati, Ohio.

2,231.—Arch of a Letter Press.—Francis Hovey, New York City.

2,232.—Advertising Carriage.—Oliver F. Sage, Boston Mass.

2,233.—Statuette.—George Starkey, New York City.