



ISSUED FROM THE UNITED STATES PATENT-OFFICE

FOR THE WEEK ENDING AUGUST 1, 1865.

Reported Officially for the Scientific American.

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49,061.—Shoe Fastening.—John Adams, Kokomo, Ind.: I claim the entire fastening composed of two sections, one section having two plates, three tangs and a shaft (with three notches), the other section having two plates, a pin and lever and three tangs; all of which, as made and combined, I claim as my invention, to be used in place of buckle, eyelets, laces, etc., on shoes and harness.

49,062.—Egg Boiler.—Frederick Ashley, New York City: I claim as a new article of manufacture an egg boiler having a suitable indicating glass, arranged and operating substantially as and for the purpose specified.

[This invention relates to a novel and very useful egg boiler, by which the expiration of the time usually allowed for boiling eggs is plainly indicated, the advantages of which are obvious.]

49,063.—Steam Pump.—J. B. Atwater, Chicago, Ill.: I claim the combination and arrangement of the chambers, a, b, valves, c, d, pipes, E, G, and cocks, g, g', constructed and operating substantially as described.

49,064.—Lamp.—Lewis J. Atwood, Waterbury, Conn.: In a lamp burner with the chimney holder projecting beyond the perforated burner shell, I claim the chimney holder to the shell by a hinge whose center is at or near the edge of the shell, so that the side of said shell shall form a stop to the chimney holder when the chimney is turned back, as specified.

49,065.—Oil Well Drill.—Elias Baker, Pittsburgh, Pa.: I claim First, A drill for boring oil or other deep wells constructed of a plurality of flat or chisel-shaped cutters, one or more of which are movable up and down past the other cutters or cutting faces of the drill, substantially as and for the purpose above described. Second, I also claim so constructing a drill, having both fixed and movable cutting faces, as that the head of the main drill stock shall on its descent deliver a blow on the stocks of the movable cutters, substantially as and for the purpose above described. Third, I also claim forming a reamer on the end of one or both of the stocks, B B', of the drill, substantially as above described.

49,066.—Paint Composition.—James Ball and John Parker Ford, Zanesville, Ohio: We claim the addition of litharge, red lead, borax and sugar of lead to coal tar, thereby giving body and drying qualities to the composition, and making a durable covering to a roof or other wood work to which it may be applied.

49,067.—Sheep Chair.—Orlando Barker and George E. Blakelee, Huntington, Ohio: We claim the above described sheep chair, constructed as and for the purposes herein set forth.

49,068.—Safety Valve for Steam Generators.—S. G. Barker, Dunmore, Pa.: I claim First, The application of two or more valves, b, b, in combination with one and the same lever, E, and with a spring or weight, S, second, The adjustable fulcrum, F, in combination with the lever, E, valves, b, b', and spring or weight, constructed and operating substantially as and for the purpose specified.

49,069.—Manufacture of Paper Stock.—Henry Betts, Norwalk, Conn.: I claim the application of the fibers of the stalks and also of the roots of the plant known as sedge to the manufacture of paper, whether the same be used separately or in combination with other ingredients, substantially as herein set forth.

49,070.—Rotary Engine.—Dana Bickford, Boston, Mass.: I claim the combination of the brace, g, and its receiving and stopping passage, h, with each piston, D, arranged in and so as to operate with a cylinder, B, cam, C, and a case, A, substantially as specified. I also claim the combination and arrangement of the passage, l, in the head or side plate of the case, A, with the cylinder, B, and its pistons, D, D, arranged within the said case, as and for the purpose specified.

49,071.—Animal Poke.—Abner W. Bishop, York, Ohio: I claim the application of the spring, E, to upper side of lever which, by reason of the combination of the yoke, G, and belts, D and C, and lever, B, the pms, F, F, protrude and withdraw, as the nature of the case requires.

49,072.—Mucilage and Marking Brush.—Edward H. Boswell, Philadelphia, Pa.: I claim a rubber or other elastic band applied to the brush and cover of a mucilage, marking or other bottle, for the purposes herein specified.

[This invention consists in the use of an elastic band applied to the stem of the brush and to the cover of a mucilage, marking or other bottle, for the purpose of always keeping the brush elevated above the contents of the bottle, except when forced down for the purpose of taking up some of the fluid for use.]

49,073.—Conical Turning Gage.—Milton Bowker, Fitchburg, Mass.: I claim a combination composed of the self-adjusting bar, D, the platen and giber, C, the friction roller, G, the scroll spring, F, the check pin, H, the hand, E, or the dial plate, B, the whole being arranged substantially in the manner and for the purpose herein described and set forth.

49,074.—Helices for Magnets.—Leverett Bradley, New York City: I claim a helix composed of two or more connected spirals or tiers of uncovered wire, with sufficient space between the several turns of the wire to perfectly separate them from each other, and with the different tiers of wires forming the helix also separated (except at the ends) by the interposition of some non-conductor of electricity.

49,075.—Cultivator.—James Brewer, Albany, Ill.: First, I claim the combination of the corn guards, l, the stirrups and the swiveling standards, S, with the frame, when arranged and operating as described. Second, The combination of the swiveling front plows and the frame, with the adjustable sliding collars, the drag chains, the lifting chains, the tension screws and the tilting lever, when constructed, arranged and operating as described.

Third, The combination of the plow standards and frame with the adjusting bracket, O, and swiveling or crank hinge, P, when constructed, arranged and operating as described, for the purpose of

varying the angle of the plow to the furrow, while allowing the plows both vertical and lateral play, as set forth.

Fourth, The combination of the triangular frame, the adjustable driver's seat, the lifting lever, the outer plows, the adjustable inner plows, the shields, the stirrups and the lifting chains, when arranged and operating substantially in the manner and for the purpose described.

49,076.—Shoe.—David Brown and Wm. S. Wooton, Kokomo, Ind.: We claim the combination of the slit, f, at the back of the boot, the double wings or gores, l, l, attached at the respective sides of the said slit, and the flap, o, attached at the top of the counter, and the outer edges of the gores, l, l, passing completely around the boot top and fastening above the instep in front, all as herein represented and described.

[This invention relates to a very important improvement in boots or shoes, which enables them to be put on and taken off of the feet with great facility and ease, while, at the same time, there are no apertures in the upper through which moisture can reach the feet.]

49,077.—Reaping Machine.—J. O. Brown, A. Ingham and F. L. Lomont, Massillon, Ohio: We claim, First, The link, b, and standard, F, in combination with the strip, a, and platform, H, hinged together, substantially as and for the purpose set forth.

Second, We claim the arms, c, c', pivoted or hinged to the shoes, in combination with the platform, H, substantially as and for the purpose set forth.

49,078.—Fare Box.—A. H. Bugher, Cincinnati, Ohio: I claim the checking and registering device, composed of the slot, D, resilient tongue, N, and bell, O, when arranged and constructed as herein described.

49,079.—Fare Box.—A. H. Bugher, Cincinnati, Ohio: I claim providing the back of check boxes with a concavity, E, as and for the purpose herein set forth.

49,080.—Fare Box.—A. H. Bugher, Cincinnati, Ohio: I claim in locks a key-hole guard or scutcheon, J, provided with a flaring stud or button, M, adapted to operate in connection with the curb, L, for the reception of a wax seal, arranged as herein set forth.

49,081.—Fetter for Animals.—M. F. Burlingame, Willett, N. Y.: I claim in combination with the hinged ring, A, the cap, C, and its spring, the whole constructed and operated substantially as and for the purposes set forth.

49,082.—Car Brake.—Wm. L. Burt, Boston, Mass.: I claim the combination and arrangement of the rods, G, H, with the brake heads, the lever, b', and the windlass mechanisms for operating such lever. I also claim the arrangement and combination of the adjusting screws and nuts, b, c, with the lever, F, and the rods, G, H, applied to the brake heads, as specified.

49,083.—Horse Hay Fork.—J. R. Cadwell, Dexter, Mich.: First, Constructing the fork with a head, A, and tines, a, and with an upper grasping tine or tines, C', substantially as and for the purpose set forth. Second, Making the handle, C, of a hay fork, which is constructed with a head, A, and tines, a, to serve the two-fold purpose of a handle and of a grasping tine, substantially as described.

Third, Extending a combined handle and tine, C, C' from a pivot on the head, A, of the fork, to the head, A, of a fork, substantially in the manner and for the purpose described. Fourth, The combination of the tines, a, head, A, pivot, e, combined handle and tine, C, C' and pivoted loop, D, substantially in the manner and for the purpose described.

Fifth, The combined handle and tine, C, C', formed substantially as recited in Fig. 4, in combination with the fork, A, a, substantially as set forth. Sixth, The combination with a fork, constructed with a head, A, and tines, a, of one or more upper grasping tines, C, and a locking and tripping device, substantially as and for the purpose set forth.

Seventh, So constructing or applying one or more grasping tines or teeth to a fork that the ends, or said grasping teeth swing down below and in front of the tines, a, of the fork and thus serve the two-fold purpose of confining the hay upon the tines, a, and of a guard for protecting the tines, a, substantially as set forth.

49,084.—Hand Stamp.—Dexter H. Chamberlain, Roxbury, Mass.: I claim supporting the arm, C, which carries the type block, in such manner as to allow of its adjustment, substantially as and for the purpose set forth. I also claim supporting the type block by a pin, t, passing into or projecting from it, substantially as described.

I also claim the slotted bearings, z, through which the inking ribbon, e, is slipped upon the rods, z, substantially in the manner and for the purpose set forth.

49,085.—Door Bolt.—Chas. Chevallier, Brooklyn, N. Y.: I claim a bolt, the shank of which forms a toothed rack, and which operates in combination with a folding lever, C, spring catch, D, and button, E, substantially as and for the purpose set forth.

[This invention consists in a bolt provided with a toothed rack, which gears in a toothed segment at the end of a folding lever, in combination with a spring catch, in such a manner that when the tooth is pushed out the folding lever lays flush with the front plate of the case which contains the bolt, and is locked by a spring catch, thereby keeping the bolt firmly in position, and preventing it from dropping down spontaneously, or from being pushed down or raised by unauthorized persons; and when it is desired to withdraw the bolt from its socket the spring catch can be made to release the pulley lever by pressing a button in the front plate, and said folding lever forms a convenient handle, by which the bolt can be withdrawn from its socket with considerable force.]

49,086.—Railroad Car Spring.—Wm. F. Converse, Harrison, Ohio: I claim the collet, G, in the described combination, with a centrally clamped disc spring.

49,087.—Gang Plow.—C. W. Corr, Carlisle, Ill.: I claim the crank axles, C, provided with the hole, or its equivalent, as shown and described. Second, I claim receiving the plows by means of the clip, b, and brace, F, substantially as shown and described.

Third, I claim the combination of the plow standards, a, stirrups, d, and lever, N, all arranged to operate as and for the purpose set forth. Fourth, I claim attaching the independent crank axle, C, one above and one below the main frame, as shown and described.

Fifth, I claim the stirrup or guide, V, in combination with the bolt p, and stud, p', for the purpose of adjusting the tongue laterally, and, at the same time permit it to have a vertical movement, as and for the purpose set forth.

Sixth, I claim the foot lever, W, arranged to operate in connection with the tongue and main frame, with its front end working in the slotted bolt, X, as and for the purpose set forth.

Seventh, I claim the slotted bolt, X, in combination with the slotted weight, x, for the purpose of adjusting the parts, as shown and described.

49,088.—Cider Mill.—J. A. Crever and F. H. Kerney, Cincinnati, Ohio: We claim the employment in a crushing and expressing mill of a cylindrical concave, D, revolving to partial contact with a smaller and interior cylinder or roller, F, in the manner and for the objects substantially as set forth.

49,089.—Lamp Chimney.—Wm. H. Culp, Hammondsville, Ohio: First, I claim the glass shade, A, metallic chimney, B, metallic rim, C, and guards, D, the whole being constructed, arranged and operating as described. Second, The metallic rim, C, constructed, arranged and operating substantially as described.

49,090.—Carriage Jack.—G. L. Cummings, New York City. Antedated July 26, 1865: First, I claim the combination of the frame, A, elbow lever, D, friction roller, e, and sliding bar, C, all constructed, arranged and employed in the particular manner herein described, so that the

short arm of the lever can be thrown into or beyond a vertical position, and thus sustain the weight without fastening the hand lever. Second, The combination of the adjustable rest, E, and vertically moving slide, C, when constructed and arranged to operate as herein specified.

49,091.—Shuttle Driver for Sewing Machine.—Volney Cutter, Cincinnati, Ohio: I claim the spring, e, and its central bearing pin, in combination with the pivots, c, horns or tappets, a, a, and pins, e, e, as described, and for the purpose explained.

[This invention consists in the employment or use of yielding horns or tappets in shuttle drivers of sewing machines, in such a manner that the shuttle, instead of striking against a solid body at either end of its stroke, comes in contact with said yielding horns or tappets, and injury to the shuttle driver is avoided.]

49,092.—Shuttle for Sewing Machine, Etc.—Volney Cutter, Cincinnati, Ohio: I claim the combination and arrangement of the spiral springs with the bearings of the bobbin journal, for the purpose of producing the requisite friction, to prevent the thread from being paid out faster than it is needed, as specified.

[This invention consists in providing spring bearings for both journals of the bobbin of a shuttle, and it is designed chiefly for use in sewing machines.]

49,093.—Ink Stand.—Samuel Darling, Bangor Maine: I claim the combination of the concave socket, a, and the friction spring, C, with the ink fountain, A, and its stand, B, such ink fountain being capable of being revolved within the said socket, as and for the purpose herein before explained.

I also claim the combination of the niche, f, the fountain, A, the stand, B, and the spring, C, whereby the spring is made to answer the two fold purpose of a cover to the ink and a means of holding the fountain in its seat, under circumstances as above specified.

I also claim the combination of the groove, n, and the studs, o, p, or their mechanical equivalents, with the pressure spring, C, and the fountain, A, so applied to the stand as to be capable of being revolved therein, substantially as specified.

I also claim the arrangement of the ventilating stopper, k, and the vent hole, i, for its reception with the ink, f, and the fountain, A, the whole being substantially as set forth.

49,094.—Vise.—H. B. Dart, Westfield, Mass.: I claim a vise, provided with the usual parallel jaws, and with the oblique-faced or V-recessed jaws, combined and arranged substantially as set forth.

[This invention consists in combining with an ordinary vise, having parallel jaws, for grasping plane surfaces, a pair of jaws, having faces provided with V-shaped recesses or notches to grasp cylindrical articles, such as tubing, rods, etc., by which two implements are contained in one and the valve of the ordinary vise greatly augmented.]

49,095.—Reciprocating Propeller.—Moses Depuy, Pittsburgh, Pa.: I claim the employment and use of a swinging propeller, attached to and operating directly on a line, or nearly so, with the piston of the engine, without the intervention of a crank, combined with a sliding trans working in an overhang attached to the outside of a vessel, when constructed, arranged and operating substantially in the manner and for the purpose herein set forth.

49,096.—Harness Motion for Power Loom.—C. Buckworth, Mount Carmel, Conn.: First, I claim the employment of a loose cross arm, c', upon the rock shaft, c, in combination with the knives, a, a, and fixed cross arm, c, substantially as described.

Second, The double-acting pitman rods, F, F', the former being connected to the rock shaft, c, and the latter being connected to the loose arm, c', substantially as described.

Third, The slotted adjustable guide, a, in combination with the projection, a, on the knife, a', substantially as described.

Fourth, The specified construction, arrangement and combination of the closers, b, b', and knives, a, a', when the latter are operated as described, for the purpose set forth.

49,097.—Hydraulic Jack.—Richard Dudgeon, New York City: First, I claim the arrangement and construction of the cistern pump chamber and ram cylinder, in the manner herein described and for the purposes set forth.

Second, I claim the relative arrangement of the pump chamber, cistern, and upper aperture of the cistern, whereby the pump chamber, although situated within the cistern and made in one piece with it, may nevertheless be bored out and have its plunger applied and removed as set forth.

Third, I claim the combination and arrangement of the rod, with the plunger for tilting the valve, substantially as described.

Fourth, I claim the arrangement of the pump cylinder within the cistern and between two apertures closed by bonnets as described, so that the eduction valve may be applied and removed from the underside of the cistern and the pump plunger may be applied and removed from the upper side of the cistern, as set forth.

49,098.—Refrigerator or House for Preserving Animal and Vegetable Substances.—J. Hyde Fisher, Chicago, Ill.: I claim the spaces, a, a, at the sides of the flooring, D, between the upper and lower compartments, B, C, of the house in combination with the aprons, H, H, flue, F, and ventilator, G, all arranged substantially as and for the purpose set forth.

I also claim the inclosed water-proof flooring, D, provided with side strips, a, and a spout, E, for the purpose specified.

49,099.—Diagrams for Testing the Value of Mutilated Currency Notes.—Leander Fox, New York City: I claim the transparent diagrams lined and spaced as herein described, and for the purposes set to.

49,100.—Lock for Piano.—E. L. Gaylord, Terryville, Conn.: I claim the two segment bolts arranged so as to work from a common center and operated through the medium of the tumbler connected with them, substantially in the manner as and for the purpose herein set forth.

49,101.—Lock.—Charles T. Gibson, Baltimore, Md.: I claim, First, A lock which is provided with a movable casing bar, C, and tongue, S, adapted for securus a hasp, or its equivalent, upon the frame of the lock outside of the case thereof, substantially as described.

Second, The swinging bar, C, in combination with a tongue, S, and extension, B, of the lock case substantially as described.

Third, Constructing the laterally swinging bar, C, with a tongue, d, on its free end, in combination with a spring bolt, e, substantially as described.

Fourth, Applying the tongue, S, which receives the hasp, D, to the extension, B, of the lock frame, in combination with a bar, C, and latch or bolt, e, substantially as described.

49,102.—Feathering Paddle Wheel.—Albert Gilman, Charlestown, Mass.: I claim the stationary ring guide or track, c, c, fastened to the side of the vessel for the purposes set forth, substantially as described.

In combination with the rock ng or rotating paddles, provided with arms, a, rigidly fastened to the paddle axles, b, I claim the fixed or stationary ring guide or track, c, c, in which the pins or pivots of the arms travel to govern the position of the paddles.

49,103.—Stirrup.—John S. Gould, Allegheny, Pa.: I claim the combination of the roller, A, with the joints, B, constructed, arranged and operating substantially as herein described, and for the purpose set forth.

49,104.—Cotton Chopper, Cultivator and Drill.—Joel A. Hall, Keokuk, Iowa: I claim, First, In connection with a frame, A, the adjustable handles, B, C, arranged and operated as above described and for the purpose set forth.

Second, The clamp frame, f, hoe, g, and adjusting segment, g, combined as above described.

Third, The combination of the plow-share, or point, v, guide blade, w, and pivoted wings, x, x', substantially as and for the purpose set forth.

Fourth, The plow-share, v, cutting blades, x and x', adjusting rod, y, y' and y'', arranged as above described and for the purpose set forth.

Fifth. The arrangement of the hopper, r, distributing spout, s, with the cultivator, in the manner and for the purpose described.

49,105.—Brick Mold.—James A. Hamer, Reading, and Thomas Lippincott, Philadelphia, Pa.:

I claim the combination and arrangement of the levers J, J, and the rods, H and I, with the side pieces, B, B, and end pieces, C, C of the combined mold for the expansion and contraction of the said pieces, B, B, and partitions, D, D and D', D', substantially in the manner and for the purposes above set forth.

Second, Combining the rods, K, with the end pieces, C, and side pieces, B, for opening and closing the said end pieces, substantially as described and for the purpose specified.

Third, The combination of the lock strips, M, with the side pieces, B, B, and partitions, D, D, substantially in the manner and for the purpose above described.

Fourth, The combination of the levers, J, J, with the lock strips, M, by means of the cams, n, sliding pieces, O, P, and bell cranks, a, substantially as described and for the purpose specified.

49,106.—Process for Disintegrating Vegetable Fibers.—Charles Heaton, New York City:

I claim the process herein described of treating vegetable fiber, by subjecting it for a short time to a high degree of heat without the presence of alkali, and afterward immersing it in an alkaline solution at a lower temperature.

[The object of this invention is to separate gummy, silicious and other surrounding matter from vegetable fiber in a simple and expeditious way, part of the means used for this purpose being mechanical and part chemical, in conjunction with heat.]

49,107.—Railway Chair.—John L. Hills, New York City. Antedated July 21, 1865:

I claim in combination with the wrought iron chairs, C, a b, the brace bar, E, extending from chair to chair, and held in notches between the abutting ends of the rails, as herein shown and described.

49,108.—Tempering Steel Springs.—William Hughes, Bloomington, Ill.:

First, I claim the within described process of hardening cast-steel springs, by first coating them with soap, or its equivalent, before heating, and cooling them off, as before described.

Second, The hydrated solution above set forth, and composed of the ingredients herein specified, for the purpose of hardening springs of either cast or spring steel.

49,109.—Wood-bending Machine.—Philip Hurm, Hamilton, Ohio:

I claim the former, A, stirrups, E, key, F, shear bars, D, I, bolt, J, pins, G, and wedges, O, arranged and operating together substantially as described.

49,110.—Trace Trimmer.—William L. Hutchinson, Burlington, Iowa:

I claim a device for trimming traces and other straps, constructed and operating substantially as herein shown and described.

[The object of this improvement is to facilitate the trimming or dressing of leather traces and other straps, and for harness and other purposes. The invention consists in the combination of two springs—namely, a lateral and a vertical self-adjusting spring—with an adjustable cutter or knife, the construction being such that on simply drawing the trace or strap between the springs it will be very smoothly and rapidly trimmed upon its edges.]

49,111.—Cultivator.—Hanford Ingraham, Naples, N. Y.:

I claim the transverse beams, A, and B, and center forward beam, a, in connection with the knee braces, C, as constructed and arranged substantially in the manner and for the purpose set forth.

49,112.—Light Wagon.—H. L. Isham, Plattsburg, N. Y.:

First, I claim the securing of the ends of the leaves, a, of the springs to the bolster and axle, in the manner substantially as herein set forth.

Second, In combination with the leaves, a, secured as hereinbefore specified, I further claim the safety straps, G, attached to the bolster by dovetail plates, d', and grooves, c', in the manner described.

49,113.—Padlock.—H. Jackson, New York City:

I claim the sliding frame, C, provided with the bolt, D, and lever, E, with the spring, F, bearing against the latter, the lever being notched at its upper edge to catch against the projection, e, at the upper part of the case, substantially as and for the purpose set forth.

I further claim the pivoted catch, G, connected with the frame, C, as shown, to operate simultaneously therewith, for the purpose specified.

49,114.—Water Wheel.—Andrew Jamison, Taylorstown, Pa.:

I claim constructing the buckets of an overshot water wheel in two parts, F, F', the former, F, being so arranged as to contain or hold the water so that it can act upon the wheel by gravity, while the latter, F', are provided with openings, c, and so arranged as to admit of the water acting upon or against them by impact, and then allowing it to pass into the inner parts, F, of the buckets below, substantially as described.

[This invention relates to a new and useful improvement in overshot water wheels, and it consists in constructing the buckets in such a manner that they will receive the force of the water, and the wheel be driven by the impact as well as by the gravity of the water.]

49,115.—Blacking-box Holder.—Charles E. L. Jelliffe, Williamsburgh, N. Y.:

I claim a blacking box having a handle or holder attached thereto, substantially in the manner described and for the purpose specified.]

[This invention relates to a novel and very useful device for a holder for boot-black boxes, the object of which is to prevent the hands from becoming soiled when the blacking is used.]

49,116.—Valve Cock.—Nathaniel Jenkins, Boston, Mass.:

I claim the employment of an adjustable stop or regulator, N, or its equivalent, in combination with the follower of a valve cock, substantially as set forth and for the purpose set forth.

49,117.—Grain Drill.—David J. Jones, Sadsbury, Pa.:

First, I claim the slides, M, with their openings, y, y, adjustable plates, N, combined with the hoppers, I, and operated substantially as and for the purpose specified.

Second, The crank axle, E', levers, P, slides, M, combined and operating substantially as described.

Third, The levers, F, with the pins, m, and the slides, M, with the notches, x, constructed and operating in combination with the levers, K, substantially as and for the purpose set forth.

Fourth, The drums, I, with their cords, b and d, operating in combination with the drill feet, G, and beveling plates, J, substantially as specified.

Fifth, I claim an operation for depositing grain, seeds, etc., in the ground, in such quantities and at such intervals as may be desirable.

Sixth, The drum foot, G, hung to the frame, and combined with the cord, t, as and for the purpose specified.

49,118.—Boot and Shoe.—Isaiah T. Jones, Sandwich, Mass.:

I claim bevelling under the inner surface of the part, B, so as to aid in filling the filling, D, and to allow the pegs or equivalent fastenings, E, to be placed very near the edge, in combination with the tub lugs or parts, B', extending inward from B, under the filling piece, D, substantially as and for the purpose herein set forth.

49,119.—Machine for Making Paper Board.—John F. Jones, Rochester, N. Y.:

First, I claim the combination of an open wire mesh or perforated cylinder, B, wire apron, E, and pressure rollers, D, D, for forming paper board in a continuous or indefinite length, substantially as set forth.

Second, In paper-making machines, the combination of the suction box or boxes composed of the rollers, I, I and K, operating substantially in the manner and for the purpose herein set forth.

49,120.—Sofa Bedstead.—Francis Keller, New York City:

I claim the combination of the back, C, seat, a, flaps, E, hooks, e, hinges, C', when constructed and arranged as and for the purposes herein specified.

[This invention relates to an improved sofa bedstead, and it consists in a peculiar construction of the same, or in an improved arrangement of its parts, whereby a better bed is obtained than usual in such devices, and a more convenient and desirable article of the kind obtained.]

49,121.—Corn Planter.—Philip H. Kimball, Prophets-town, Ill.:

First, I claim the peculiarly shaped runners or shoes, L, L, constructed and arranged specifically as described, for opening a furrow and covering the seed therein, substantially as herein set forth.

Second, I claim so combining the runners, L, L, of my machine with the weighted levers, N, N, connected to the framework thereof, as that each runner and coverer may, under an adjustable degree of pressure, act and operate independently of the other, substantially in the manner and for the purpose herein set forth.

I claim in combination with the said slide, N, of my improved corn planter, the pinions, h, h, operating against the edge thereof, substantially as and for the purpose herein set forth.

Fourth, I claim, in combination with the pivoted roller scrapers, A, and the platform and driver's seat of my improved corn-planting machine, as described, the foot lever, R, for the purpose of operating said scrapers, substantially in the manner herein set forth.

49,122.—Machine for Round and Polishing Balls.—John Loper Knowlton, Philadelphia, Pa.:

First, I claim the method herein described of imparting to the ball while being ground or turned, an intermittent rotary motion in two or more directions by means of four (more or less) longitudinally sliding rotors, mandrils, D, D', radiating from a common center and pivoted to the cranker ends, or any other equivalent means, constructed and operating substantially as and for the purpose set forth.

Second, The combination of four (more or less) chucks, E, E', made to grasp the work at stated intervals with a grinding wheel or milling tool, applied and operating substantially as and for the purpose described.

Third, The combination of the segmental rack, C, pinion, d, shaft, e, and weighted lever, f, g, arranged and operating in connection with the pivoted frame, G, and polishing wheel, F, in the manner described, to regulate the pressure of the said wheel against the ball to be polished.

Fourth, The cams, o, o, and toes, s, t, in combination with the carriers, C, C, chucks, E, E', and weighted levers, s, s, or their equivalent, constructed and operating substantially as and for the purpose described.

49,123.—Drill for Well Boring.—O. B. Latham, Seneca Falls, N. Y.:

I claim the adjustable reamer, C, in two sections, the screw, e, plates, c, the key shafts, in combination with the drill and shank, arranged and operating conjointly, substantially as and for the purpose set forth.

49,124.—Journal Box.—Henry A. Lee, Worcester, Mass.:

I claim the application to journal boxes of the set screws, D, within one of the cheeks or halves of which the journal box is composed, substantially in the manner and for the purposes specified.

49,125.—Steam Boiler.—David Lister, Carbondale, Pa.:

I claim a pipe B, arranged near to the bottom of the tank, the surface of a steam boiler from which the sediment is to be removed and perforated with a number of holes, a, in the manner and for the purpose substantially as herein shown and described.

49,126.—Revolving Car.—Daniel Lott, Lottsville, Pa.:

I claim the rolling receptacle, A, mounted by a horizontal shaft, B, upon wheels, C, with the axle, a, in the manner and for the purpose of a frame in which the ends of the said shaft are journaled.

49,127.—Musical Instrument.—Thomas Loud, Philadelphia, Pa.:

I claim the use of a rail placed in front of the key board of a reed organ, melodeon, or other instrument, and provided with the disc or device usually employed therein for covering the chamber containing the reeds or other devices used for producing musical sounds, arranged and operating substantially as herein described and for the purposes specified.

[This invention relates to the mode of opening and closing the swells of melodeons, reed organs, etc., and consists in a simple and novel arrangement of parts whereby it can be accomplished while the feet are employed in working the bellows, and without removing the hands from the keys, the importance and advantage of which are self-evident to all performers on such instruments.]

49,128.—Screw Wrench.—Horace W. Love, Brooklyn, N. Y.:

I claim a single diagonal adjustable screw wrench, constructed and capable of operating substantially as described.

49,129.—Drill.—John M. May, Janesville, Wis.:

First, I claim beveling the bit or cutting edge of a drill all on one side or chiefly on one side to give the drill a slightly rotating motion in a horizontal direction at each blow of the drill, substantially as described.

Second, A swivel formed of parts, E, E' and G, when used to allow a drill or a punch drill to revolve in the path of a horizontal direction, substantially as described.

Third, Using a spring guide to catch pieces of rock, and other substances that fall into a drilled well and obstruct the operation of a drill, substantially as and for the purpose described.

Fourth, screw or strainer when used in a pump drill, substantially as and for the purposes described.

49,130.—Breech-loading Fire-arm.—Edward Maynard, Washington, D. C.:

First, I claim the formation of an outlet, in or through the cone seat or recess of the breech-loading instrument, to permit the free escape of gases leaking from the cartridge or gun barrel at the explosion of the charge therein, substantially in the manner herein set forth.

Second, The use and combination of a central recoil rod, B, with a movable cone seat, A, and the loading aperture of a breech-loading gun, substantially in the manner and for the purpose herein set forth.

49,131.—Manufacture of Felted Fabrics.—Edwin D. McCracken, New York City:

I claim the use of the fiber of cane or reed in combination with wool or fur, or with both wool and fur, in the manufacture of felted goods, substantially as herein described.

49,132.—Surgeon's Operating Table.—Thomas Mellroy, New York City:

First, I claim the table hinged to and supported upon the frame, A, and provided with a hinged portion, B', and hinged leg extensions, E, E', each section, to wit: B, B' and E, being provided with devices for vertical adjustment, substantially as described.

Second, I claim the laterally adjustable leg extension, by means of the pivot joint, F, to support the leg in its laterally directed position.

In combination with the table, B, I claim the hinged back support, I, J, with its device for vertical adjustment, substantially as described.

49,133.—Machine for Cutting Screws.—John A. Merriam, Chicago, Ill.:

First, I claim closing dies by the use of the lateral sliding bearings, K, acting directly upon the dies by means of inclines, operating substantially as and for the purposes herein specified.

Second, The sliding bearings, K, the levers, l, and the dies, g, all arranged and operating substantially as and for the purposes herein set forth.

Third, The latch or strap, p, in combination with the sliding bearings, K, and the dies, g, substantially as herein shown and described, for the purpose set forth.

49,134.—Mode of Hoisting and Lowering Window Sash.—John M. Merryman and Kilby Ferguson, Indianapolis, Ind.:

First, In combination with the upper and lower moveable sash of a window, a cord winlass and pulleys, or equivalent devices, so that the said sash may be raised or lowered at pleasure, and perfectly balanced, when the winlass is fixed within the window casing.

Second, The combination of a cord, winlass and pulley, with the upper and lower sash of a window, or equivalent devices, so that the

said sash may be raised or lowered at pleasure, and perfectly balanced when the winlass is attached to the lower sash.

Third, In combination with a hoisting and lowering device applied to one edge of a window sash, the friction roller, M, M, applied to diagonally opposite corners of said sash for the purpose set forth.

Fourth, In combination with the winlass, A, for raising and lowering window sash, and the ratchet and pawl, B, R, the friction brake, N, substantially as described.

Fifth, The lock P, or its equivalent, in combination with the ratchet and pawl of the winlass, A, for the purpose of facilitating the working of the upper sash, and for locking the window with the said upper sash at any desired point of elevation.

49,135.—Washing Machine.—John H. Monsees, Smith City, Mo.:

I claim the particular combination and arrangement herein described, of the tub A, oblique plunger, C, oscillating arms, B, supporting bars, d, lever frame, D, inclined abutment, c', and guard boards, D' D'', as and for the purposes herein specified.

[This invention relates to a new improved clothes washing machine, of that class in which a swinging plunger is used, and the clothes subjected to a pressure or squeezing action. The object of the invention is to obtain a washing machine of the class specified, which will be simple in construction, and possess advantages over others of the same class, as hereinafter referred to.]

49,136.—Summer Stove.—Francis Morandi, Boston, Mass.:

I claim, first, In portable summer stoves or furnaces, arranging a perforated cover, K, upon the smoke pipe so as to enable one to discharge the smoke into, and use the stove with a kitchen stove or range, without requiring any change in the latter, substantially as described.

Second, I also claim fixing a platform or heating surface, H, upon the horizontal part of the smoke pipe, substantially as and for the purpose described.

Third, I also claim the combination of a summer stove or furnace, with a platform or heating surface, H, on the pipe, substantially as described.

[The object of this invention is to provide a portable, convenient and economical summer stove, for domestic and other uses. It consists in a fire chamber or furnace, which can be connected either with another stove, so as to discharge the products of combustion into its flues, or else with a chimney or other flue; the fire chamber being provided with a boiler hole, and the discharge pipe being made to support a hot air or combustion chamber whose top forms a heating surface on which vessels may be set, as upon any other heating surface.]

49,137.—Car Spring.—Wm. Neubauer, Philadelphia, Pa.:

I claim constructing a spring when made of plates, or sheets of metal, with the resilient parts, on angles from the central position of the spring plates, which compose the combined spring, and decreasing the length of the said resilient parts of each plate, in order, from the outer plates, for the purpose of increasing the strength of the spring and imparting increased elasticity to the same, substantially as described.

I also claim varying the angles of the resilient parts of the spring in such a manner that there shall be spaces, B, extending over the whole surface of the spring plates, between their points of contact, substantially as represented, for the purpose of giving increased elasticity to the spring, substantially as above described.

49,138.—Churn.—Abel Newbrough, Madisonville, Ky.:

I claim the frame, F, pulleys, P, P', belt, D, the crank, B, and staff, A, and adjustment as shown at b, the several parts being constructed and arranged in relation to the churn, C, as and for the purpose specified.

49,139.—Lathe for Turning Heads of Nails, Tacks, Etc.—Wm. H. Nichols and Horatio H. Abbe, Chatham, Conn.:

I claim, first, The employment or use of the cap, J, attached to the arm, K, arranged substantially as shown, in such relation with the mandrel, C, to admit of the head being readily adjusted on the mandrel, as set forth.

Second, The combination of the cap, J, milling tool, T, cutter, Q, and thimble, H, all arranged and combined with a mandrel, C, to form a new and improved lathe, for the purpose specified.

[This invention relates, first, to a new and improved means for chucking the beads to be turned and ornamented; second, to a milling tool for milling the head; third, to a cutter for turning the head, and fourth, to a thimble for discharging the finished head from the mandrel; all being constructed and arranged in such a manner that the device may be operated with the greatest facility by children equally as well as by adults.]

49,140.—Molding Crucible.—George Nimmo, Jersey City, N. J.:

I claim, first, Manufacturing crucibles in a plaster mold, in the manner and for the purpose specified.

Second, I claim lever l, and rib, n, applied in the manner specified, to form the interior of a crucible contained within a revolving mold, as set forth.

Third, I claim the combination of the revolving chuck, c, plaster mold, d, lever, l, and rib, n, as and for the purposes specified.

Fourth, I claim mounting the lever, l, and rib, n, in the frame, g, in the manner specified, in combination with the counterpoise, k, fulcrum, o, an stop, p, for determining the size of the interior of the crucible, as specified.

49,141.—Manufacture of Crucibles.—Geo. Nimmo, Jersey City, N. J.:

I claim a crucible or pot of plumbago, with a lining or coating of clay, or clay and sand, or similar material, for the purposes and as specified.

49,142.—Pipe Coupling.—James Old, Pittsburgh, Pa.:

I claim the mode of connecting tubes or pipes of wrought iron or other metal (when so thin as not to admit of cutting screw threads sufficiently coarse to be easily united), by means of the use of a screw coupling, the male and female parts of which are united to the opposite ends of the pipe or tubing, by a very fine screw in the pipe or tube and coupling, and soldered around the pipe or tube and coupling, substantially as hereinbefore described.

49,143.—Breeching Strap Fastening.—A. W. Olds, Green Oak, Mich.:

I claim securing the breeching straps to shaft-socket carriages by means of a hook in one end of which the strap is looped, in combination with a fixed pin or staple of the shaft on which the hook is hung, arranged together and operating substantially in the manner described and for the purpose specified.

I also claim in combination with the above, the use of a spring, substantially as and for the purpose specified.

49,144.—Bottle Stopper.—Robert T. Osgood, Orland, Maine:

I claim a concave cap covering the whole upper portion of a common cork stopper with a pointed spiral wire attached to and within the cavity of said cap firmly, for the purpose of passing down into, but not through said cork, to aid in extracting it, and to prevent the breaking of the same, as are herein substantially set forth.

49,145.—Stand for Ladies' Figure.—Joseph R. Palmenberg, New York City:

I claim the arrangement and construction of a stand for ladies' figures, and similar articles, made in parts in the manner described and for the purpose substantially as set forth.

49,146.—Preserving Wood, Etc.—George Palmer, Littlestown, Pa.:

I claim, first, The apparatus and mode of applying the same for heating the inner and outer surface of timber, sufficiently to open the pores of the wood, and extract the sap and gaseous matter, as herein described for the purposes specified.

Second, I claim opening the pores of timber, by applying heat, in the manner herein described, so that oily, resinous, or bituminous substances will penetrate the wood to its fullest capacity.

49,147.—Composition for Frames, Bottles, Etc.—John T. Peet, Cincinnati, Ohio:

I claim the use of asphaltum, or resin, with any suitable powder, to the end and for the purposes substantially as set forth.

49,148.—Lubricator.—Theodore G. Pelton, Lyons, Iowa, and James Brewer, Albany, Ill.:

We claim, First, Making the valve stem for oil cups in two parts, when constructed, arranged, and operating substantially in the manner described.

Second, In combination with the valve stem, constructed substantially as described, the spiral spring, L, and collar or pin, P, as and for the purpose set forth.

Third, In combination with the stem, constructed substantially as described, the grooves, m, as and for the purpose specified.

49,149.—Lock for Piano.—A. F. Pfeifer, Newark, N. J.:

I claim a lock provided with a supplemental bolt, E, pivoted to a sliding bolt, B, and arranged to operate in connection therewith in the manner substantially as described.

[This invention relates to a new and improved lock for desks, pianos, chests, the cases of sewing machines, etc., and it consists in the employment or use of a bolt pivoted to a sliding bolt, and arranged in such a manner as to turn over and catch into the plate which is attached to the lid or cover of the article to which the lock is applied, and at the same time be capable of turning back so as to pass out of the plate when the lock is unlocked.]

49,150.—Cotton Seed Planter.—Brown Platt, Pana, Ill., and Norman Platt, St. Louis, Mo.:

We claim, First, The shaft, M, armed with the pins, W, or their equivalent, revolving in the box, L, during the process of planting, in combination with the belt, D, and the pulley, J, or their equivalent, and the roller, I, all acting for the purpose of stirring up the mass of seed contained in the box, L, and preventing the same from remaining or becoming a compact mass.

Second, We claim conveying the seed out of the box or reservoir upon a belt studded with metallic pins, or their equivalent.

Third, We claim the armed wheel, N, revolving immediately in front of the belt as it turns over the pulley, J, to pull the seed off of it.

Fourth, We claim the roller, I, attached to the box in the upper part of the orifice through which the belt passes through its front end, to prevent seed clogging at that point.

49,151.—Apparatus for Mashing, Boiling and Fermenting Grain.—E. F. Prentiss and R. A. Robertson, Philadelphia, Pa.:

We claim, First, The combination of the perforated malt supply pipe, a, the surrounding casing, b, and the double-rotating mixer, c, for mashing the malt, the whole arranged and operating substantially as shown and described.

Second, The combination of the adjustable pipe, d2, with the pipe, d, leading to the center of the bottom of the mash tub, and the distributor, d1, for the double purpose of admitting water to said tub when necessary, and for drawing off the wort therefrom.

Third, The sparger, c, perforated as described and for the purpose specified.

Fourth, The combination and arrangement of the cistern, B, pipe, f, column, g, and the perforated false bottom, i, in the manner and for the purpose substantially as described.

Fifth, The employment of the conical perforated false bottom, i, and chimney, j, arranged and constructed substantially in the manner and for the purpose described.

Sixth, The combination of the boiler, B, pipe, f, and column, g, the latter having pipes, k, and k', for the entrance and exit of steam or heated water, or cold water, for alternately heating and cooling the contents of B, the whole constructed, arranged and operating in the manner and for the purpose substantially as shown and described.

Seventh, The combination of the solid wooden float, O, with the return pipe, r, these parts being constructed, arranged and operating substantially as shown and described.

Eighth, The employment of the cooling and heating vessel, D, in connection with the mercury cup, n2, the inverted cup, n3, and the system of levers, the several parts being constructed as shown, and the whole arranged and operating substantially in the manner and for the purpose described.

Ninth, The combination and arrangement of the mash tub, A, boiling and cooling cistern, B, and fermenting tun, C, in the manner described, for the purpose of mashing, boiling, cooling and fermenting malt liquors.

49,152.—Composition for Lining Petroleum Barrels.—Robert Price, Jersey City, N. J.:

I claim the preparation of barrels or other vessels for containing and transporting petroleum oil or similar substances, substantially as described and for the purposes set forth.

49,153.—Coal Stove.—D. S. Quimby, Brooklyn, N. Y.:

I claim the arrangement of the hot-air flue, o, p, and box, q, in combination with the heater, a, and flues, i, k, l, as specified.

I also claim the register, r, fitted as specified, in combination with the hot-air box, q, and pipe, p, for the purposes specified.

49,154.—Watch Regulator.—George P. Reed, Roxbury, Mass.:

I claim the application of the curved spring, c, and its adjusting screw, f, to the pointer, b, in combination with the application of the hair-spring pins or studs to the said spring, c, the whole being substantially as and for the purpose explained.

49,155.—Watch Escapement.—Geo. P. Reed, Roxbury, Mass.:

I claim the combination of the movable detent, e, and the spring, L, and stop, p, with the lever, D, carrying a fixed detent, o, and arranged in manner and so as to operate with the scape wheel and the impulse pallet of the balance wheel, substantially as specified.

49,156.—Manufacture of Axes.—Henry C. Reynolds, Manchester, N. H.:

I claim reducing the edge of the ax to the form desired when it is finished for use, and refining the steel at the same heat; the steel is welded to the ax, by means of dies, a and b, constructed and operated substantially as herein described.

49,157.—Azimuth Compass.—E. S. Ritchie, Brookline, Mass.:

I claim the combination of the light-converging cylindrical segmental lens, E, or its equivalent, with the limb or annulus, A, or its equivalent, and its sights, to be used on a magnetic compass, in manner substantially as specified.

I also claim the combination of the adjustable screen or shutter, M, or its equivalent, with the light-converging lens, E, combined with the fore sight of the annulus, A, or its equivalent, and for use substantially as hereinbefore specified.

I also claim the combination of the reflector, F, and the light-converging lens, E, or its equivalent, with the annulus, A, or its equivalent, and its fore sight, or fore and back sights, to be employed on a compass, in manner substantially as hereinbefore explained.

I also claim the combination of the indicators, g, g, with the auxiliary sight, s, and the annulus, A, or its equivalent, its fore sight or fore and back sights, and the light-converging lens, F, the same being as specified.

I also claim the combination of the indicators, f, g, with the two lenses, e, f, or the same, and the auxiliary sight, s, and with the annulus, A, or its equivalent, its fore sight, or fore and back sights, and the light-converging lens, E, the same being as specified.

I also claim the combination of the indicators, f, g, with the two lenses, e, f, the prism, H, and the annulus, A, or its equivalent, its fore sight, or fore and back sights, and the light-converging lens, E, the same being as specified.

I also claim the combination of the index mark, h, or its equivalent, with the light-converging lens, E, the annulus, A, and the fore sight, C, or the equivalent thereof, the whole being arranged substantially in manner and for the purpose specified.

49,158.—Machine for Tapsitting, Cutting and Punching Iron.—J. J. Rose, Elmwood, Ill.:

I claim combining in a complete and portable machine a device for shearing metal, a device for punching metal, and a device for upsetting files, the several devices being constructed and arranged substantially as described.

[This invention consists in a novel arrangement of levers with clamps, a punch and a cutting device, whereby tires for wheels may be shrunk, and iron cut and punched, the whole forming a compact and portable machine convenient for a smith shop.]

49,159.—Sash Fastener.—A. H. Rowe, Hartford, Conn.:

I claim the revolving slotted cam, C, in combination with the case, A, and spring bolt, B, constructed and operating substantially as and for the purpose set forth.

[This invention consists in a revolving slotted cam, arranged in a circular case, in combination with a radially-sliding spring bolt, in

such a manner that when the device is applied to a sash by turning the cam in one direction, the spring bolt is drawn in and the sash unfastened, allowing it to move up or down, and by releasing the cam the bolt is allowed to drop into suitable sockets made in the side of the window frame, at suitable intervals, and in this position it is locked by the cam, and the possibility of a spontaneous unfastening of the sash is avoided.]

49,160.—Photographic Lens.—Joseph Schnitzer, New York City:

I claim, First, A lens, A, constructed of a triplet front lens, B, and doublet back lens, C, substantially as herein set forth.

Second, The correcting lenses, h, i, and the disk, F, or its equivalent, applied in combination with a lens, A, substantially as and for the purpose specified.

Third, The disk, F, or its equivalent, furnished with one or more correcting lenses, h, i, in combination with the diaphragm, G, and lens, A, constructed and operating substantially as and for the purpose described.

[The object of this invention is a photographic lens, which combines with a short focus an angle of eighty degrees, more or less, and which is so arranged that its focus can be adjusted, and that the same instrument can be used for pictures of different size.]

49,161.—Cutter for Wood-turning Lathe.—James Shannon, Cohoes, N. Y. Antedated July 30, 1865:

I claim the construction of a cutting tool, by the combination of a gouge or gouges, G, with a toothed cutter, B, formed as described, and attached to a revolving disc, substantially as set forth in the within specification.

49,162.—Railway Frog.—Theodore Sharts, Albany, N. Y.:

I claim the employment or use of a movable or detachable tongue, and a frog, in the manner substantially as and for the purpose herein set forth.

[This invention relates to a new and improved frog for single-track railroads, and it has for its object the dispensing with the ordinary switch, and, consequently, with a switchman.]

49,163.—Key-bolt Connection of Car Trucks.—J. J. Sherman, Albany, N. Y.:

I claim, First, The elastic key-bolt connection for railway carriages, when arranged and applied to operate against lateral or other horizontal impulse, substantially as described.

Second, Surrounding the pivot or key-bolt connections with india-rubber or other elastic substance, confined within metallic cups or boxes, in such manner as to admit of a horizontal motion of said key-bolt, but no vertical motion, substantially as described.

49,164.—Horse Rake.—S. M. Sherman, Fort Dodge, Iowa:

I claim the combination of the S-formed wooden teeth, E, bars, e, e, arms, f, f, link, F, and lever, G, all as specified.

[This invention consists in constructing the teeth of the rake of wood, bent or curved in S-form, and arranged or applied in such a manner as to form a cheap and durable horse rake, and which will operate perfectly, and be capable of being manipulated with the greatest facility.]

49,165.—Coal Stove.—James Spear, Philadelphia, Pa.:

I claim the damper, C, with a hole in the center, or its equivalent, placed inside a stove, having direct draft, and arranged and operated in the manner and for the purpose herein set forth.

49,166.—Ditching Machine.—Nathan Starbuck, Wilmington, Ohio:

I claim the wheel, E, provided with flanges, c, projecting beyond the rim, a, in combination with the plow, P, and scraper, J, substantially as and for the purpose specified.

I also claim the inclined planes, L, L, attached to the scraper bar, H, when used in combination with the wheel, E, plow, P, and scraper, J, for the purpose set forth.

I further claim placing the wheel, plow and scraper within a frame, C, placed or arranged within a frame, A, substantially as and for the purpose specified.

[This invention relates to a new and improved machine for excavating ditches, and it consists in the employment or use of a wheel provided with flanges for cutting the sides of the ditch, a plow for raising the earth between the cuts made by the wheel, and a scraper and inclined planes for taking the earth from the wheel and discharging it to the sides of the ditch.]

49,167.—Window Glass.—Thomas D. Stetson, New York City:

I claim as a new article of manufacture double or duplex glass tightly joined at or near the edges and adapted to serve in the manner herein set forth.

49,168.—Adding Machine.—T. T. Strode, Mortonville, Pa.:

I claim the revolving disk, A, marked with figures on its circumference and provided with a cam groove, c, and with cavities, p, in combination with the slotted dial, C, and index, D, constructed and operating substantially as and for the purpose set forth.

49,169.—Calendar Clock.—T. T. Strode, Mortonville, Pa.:

I claim the slide, B, marked with the names of the months and provided with openings, h, to operate in combination with the wheel, A, marked with figures from 1 to 31, and provided with concentric grooves, e, substantially in the manner and for the purpose herein set forth.

49,170.—Closing Hand-hole Plates in Steam Boilers.—Joseph R. Taylor and Horace A. Towne, Centralia, Ill.:

We claim the plug, B, inserted in the boiler plate, in combination with the cap, C, and clamp, D, substantially in the manner and for the purpose herein shown and described.

[This invention consists in the use, for closing hand holes in steam boilers, of a plug secured permanently in the boilers and bored out to give access to the interior of the same, in combination with a cap fitting on the surface of the plug with V or bell joint, and held down by a movable screw clamp, in such a manner that by taking or receiving said screw clamps the cap can be removed, and when the cap is replaced, a tight joint can be produced without the use of india-rubber or other costly packings.]

49,171.—Method of Preventing the Breaking of Glass by Exposure to Heat.—Eli Thayer, Worcester, Mass.:

I claim the non-conducting lining when applied to the surface of glass exposed to fire or to a high heat, substantially as set forth.

49,172.—Steam Generator.—Eli Thayer, Worcester, Mass.:

First, I claim the tubular supporters of grates, substantially as set forth.

Second, In combination with their supporters, I claim the extension or continuation of the pipe or pipes into the combustion chamber, substantially as set forth.

Third, The combination of these supporters with the screen grates or bars, resting upon them, and also with the sediment extractor.

49,173.—Slide Brake.—Levi H. Thomas, Waterbury, Vt.:

First, I claim the vibrating self-adjusting bar, attached to the sliding frame, the same being connected with the levers and so operating the grooves or dogs that they will adjust themselves to the density of the substance they come in contact with.

Second, I claim placing the pins, f, f, in such a position with the movable hooks, e, e, as to always insure their taking hold to break the force of the load when pressing forward.

49,174.—Steel Trap.—Levi H. Thomas, M. D., Waterbury, Vt.:

I claim the jointed pan so constructed and arranged as to embrace both ends of the jaws, and hold them closed.

Second, I claim holding the trap set, the pan forming the catches under the angles of the jaws.

Third, I claim placing springs within the circumference of the jaws acting directly upon the pan, whereby they hold the trap either set or sprung.

Fourth, I claim the mode of constructing animal traps, whereby the pan forms the levers for setting.

Fifth, I claim the jointed double pan, in combination with the spring and jaws, the same being constructed and operating in the manner herein described for the purposes specified.

49,175.—Manufacture of Wrought Iron.—Robert Thomas and Giles Edwards, Columbiana, Ala.:

We claim extracting wrought iron direct from its ore or from the oxide of iron, by subjecting a layer of pulverized ore, which is mixed with carbonaceous matter, to the action of heat and baling the metal as rapidly as it is set free from the surface of said layer, substantially as described.

Second, Conducting the within-described process, substantially as described, upon an inclined or porous surface, substantially as set forth.

49,176.—Egg Beater.—Howard Tilden, Boston, Mass.:

I claim a case or box provided with a rotating wheel midway between the ends, with floats arranged diagonally to its axis, substantially as described, so that the wheel will be turned by the contents of the box as it flows from end to end, when the box is shaken.

49,177.—Drill for Wells.—J. H. S. Tuck, Cambridge Ohio:

I claim locking drills for boring oil or other wells to their rods or shafts, substantially as and for the purpose above described.

49,178.—Cutting and Grasping Shears.—Samuel W. Valentine, Boston, Mass.:

I claim a cutting and grasping shears having a yielding hold fast, for the purpose substantially as set forth.

49,179.—Burning Hydro-carbon Oils.—Delevan D. Van Norman, Lester B. Brown and Enoch R. Morrison, Petroleum Centre, Pa.:

First, We claim placing in the furnace or fire box of a steam boiler a retort for generating gas from petroleum or other hydro-carbon liquids, the retort being surrounded by a steam chamber, from which superheated steam may be used with a small portion of carbureted hydrogen gas for fuel.

Second, We claim placing a copper or other metal coil of pipe in the bottom of the retort, through which superheated steam is admitted, to hasten and evolve the gas from hydro-carbon liquids.

Third, We claim one or more pipes leading from near the top of the retort down under the bottom of the same, for the purpose of intensifying the heat in the retort, and thereby dispensing with fire in the pan after the steam in the boiler is at working pressure.

Fourth, We claim the smoke jacket surrounding the retort and steam chamber, in combination with the fire pan, whereby the smoke of the burning liquid is brought in contact with gas and steam, and is entirely consumed.

Fifth, We claim the float valve placed in the retort for controlling the supply of petroleum or other liquids for generating gas, in the manner herein set forth.

Sixth, We claim the manner of separating the water from the crude oil, by pressing a coil of steam pipe through the tank, as described.

Seventh, We claim the perforated coil or circular, q, in the top pipe of the retort, for the purpose of letting a small portion of steam into the top of the gas-generating retort, G, to commingle with the gas as it escapes for ignition.

Eighth, We claim the arrangement of iron or other suitable metallic pipes for superheating steam in the furnace of a steam boiler, as herein described, in combination with the gas-generating retort.

Ninth, We claim the construction and arrangement of the steam-pressure governor valve, in combination with the spring balance, as and for the purposes set forth.

49,180.—Dogs for Lathes.—Wm. Vine, Norwalk, Conn.:

First, I claim the arrangement of the two adjustable plates, A and B, in the manner and for the purpose substantially as herein described.

Second, The arrangement of the corrugated faces, or their equivalent, substantially as set forth.

49,181.—Cutting Soles of Boots and Shoes.—J. H. Walker, Worcester, Mass.:

First, I claim cutting and bevelling the rear end of tap soles at one and the same operation, substantially as set forth.

Second, I claim the use and employment of the double curved knife, with an irregular edge, b, c, substantially as and for the purposes set forth.

49,182.—Picker Staff Connection in Looms.—Warner Weiland, Deakam, Mass.:

I claim the arrangement, substantially as described, of the picker staff and the socket, the bearings and the pin of its carrier.

49,183.—Harvester.—Thomas Welch, Churchville, N. Y.:

First, I claim the combination and arrangement of the box, D, constructed, as shown and described, with the crank pin, C, socket, d, wheel, or its equivalent, and driving shaft, A, of reapers and mowers, for the purposes specified.

Second, The joints, I and J, constructed and arranged as shown and described, in combination with the crank box, D, and cutter bar, E, for the purpose set forth.

49,184.—Reaping and Mowing Machine.—Thos. Welch, Churchville, N. Y.:

I claim the arrangement of the ratchet, R, fixed, D, the ground wheels, B, in combination with the adjustable spring pawls, P, rigidly attached to the main axle, A, substantially as and for the purposes described.

Second, The primary pawl bar, C, rigidly attached to the main axle, A, in combination with the adjustable or sliding auxiliary bar, C', the independent spring pawls, p, and steady pin, g, constructed, arranged and operating in the manner and for the purposes shown and described.

Third, I claim the employment or use of the circular stock, J, and its slide, S, the latter having a ratchet edge, and both being arranged and operating in the manner shown and for the purposes specified.

Fourth, The roller, T, in combination with the circular slide, S, as shown, and for the purposes set forth.

Fifth, In combination with the stock, J, and brace, L, the brace bar, M, arranged in the manner and for the purposes set forth.

Sixth, The lever, t, and ratchet wheel, w, constructed and arranged as shown, in combination with the circular ratchet slide, s, and locking latch, r.

49,185.—Crank Pin Boxes.—Thomas Welch, Churchville, N. Y.:

First, I claim the combination and arrangement in harvesters of the set screw, S, and boxes, B and D, with the head, A, the bearing face between the latter and box, D, being made convex, substantially in the manner and for the purposes set forth.

Second, In combination with the crank head or box, A, of harvesters, the chambered cap, C, constructed, arranged and operating substantially in the manner and for the purposes shown and described.

49,186.—Harvesting Machine.—Milton A. Wheaton, Snisun City, Cal.:

First, I claim, in combination with the cam teeth, B, the employment or use of the friction rollers, D, D', and the jointed vibrating rods, E, E', or their equivalents, for the purpose specified and set forth.

Second, I claim the employment or use of the collars, H, H', or their equivalent, with the depression and projection, substantially as and for the purpose specified.

49,187.—Stamping and Crushing Mill.—J. D. Whippley and J. J. Storer, Boston, Mass.:

We claim, in combination with the radial arms, or disks, of a grinding, crushing or pulverizing mill, the employment of a plate, paddle, or beater, A, constructed of chilled cast iron, incorporated in a casting, with wrought iron or other suitable malleable metal, substantially as set forth and for the purposes described.

49,188.—Gas Regulator.—Joseph S. Wood, Philadelphia, Pa.:

First, I claim passing the gas through the valve, H, by means of the openings, h, h', substantially as described.

Second, I claim the valve, H, in combination with the stop, K, substantially as described.

Third, I claim the combination of valve, H, stop, K, and set screw, m, substantially as described.

49,189.—Bed Bottom.—William Workman and C. F. Swain, Ripon, Wis.:

We claim connecting the straps, C, having the slats, B, attached

thereto, or the slats themselves, to the rods or projections, c, in such a manner as to keep said slats extended, and employed in combination therewith the springs, a, a, and cross pieces, A, A, substantially as and for the purpose herein set forth.

49,190.—Straw Cutter.—George T. Wright, Cincinnati, Ohio:

I claim the arrangement of the ratchet wheel, O, pawl, P, in combination with the slotted arm, R, and perforated disc, S, for graduating the rotation of the feed rollers, K, in the manner described.

49,191.—Machine for Cutting Rings from Ivory.—Chas. H. Bassett (assignor to The Birmingham Button Company), Birmingham, Conn.:

I claim forming rings from any material out of which buttons or other circular articles are cut, by cutting them from that portion of the material which is exterior to the button, and at the same operation with the cutting of the button, by the means substantially as described.

49,192.—Process of Varnishing and Polishing Wood.—George Bricker, Sr., Newville, Pa., assignor to himself and George B. Hammer, Harrisburg, Pa.:

I claim the process herein described of varnishing and polishing woods substantially as set forth.

49,193.—Beater Press.—L. C. Field (assignor to himself, J. P. Frost and W. S. Bellows), Galesburg, Ill.:

I claim, First, The two levers, F, F, employed in combination with the rope, H, beater, D, and notches, g and r, in the manner and for the purpose set forth.

I also claim the standers, n, n, on the beater, D, when used in combination with the levers, F, F, and rope, H, for the purpose specified.

I also claim the windlass, E, composed of two drums, d h, when used in combination with the eccentric, j, to operate either the levers or beaters, at the will of the attendant, as described.

I also claim the ways or track, l, at the bottom of the press box and arranged substantially as shown for the discharge of the bale from the press box.

49,194.—Reaping Machine.—Henry Fisher (assignor to C. Aultman & Co.), Canton, Ohio:

I claim swinging and dumping table, G, operated automatically, such as herein described and represented.

I also claim in combination with a swinging and dumping table, the hinged section, d, at its front edge, as and for the purpose substantially as herein described.

I also claim in combination with a swinging and dumping or dropping table, a shield, or holder, operating in connection therewith, as and for the purpose described.

49,195.—Starting Cars.—A. F. French (assignor to himself and Ed. Chas. Terrill), Franklin, Vt.:

I claim the lever, F, pawl, c, in combination with the ratchet wheel, d, draught pole, D, and with the axle or wheel of a street car or other vehicle, constructed and operating substantially as and for the purpose set forth.

[This invention consists in the application of a lever pawl and ratchet, in combination with the draught rod or draught chair, and with the axle of a stretcher or other vehicle, in such a manner that in starting the car the strain exerted by the draught animal or animals is increased by the purchase of the lever, and the operation of starting the car or other vehicle is rendered comparatively easy, and can be effected with much less exertion for the draught animal or animals than by the ordinary arrangement.]

49,196.—Steering Apparatus.—Nathan Richardson (assignor to himself and Eli F. Stacy), Gloucester, Mass.:

I claim in a steering apparatus made with a worm gear on the rudder head, and operated by means of worms or endless screws meshing therein, the arrangement of said screws outside of the periphery of said gear and substantially in the plane, as and for the purpose specified.

I also arranging the endless screws with reference to the gear on the rudder head, so that by forcing the screws toward the center of the rudder head it will be prevented from lateral motions.

49,197.—Life Boat.—A. L. Shears, Flint, Mich., assignor to himself and H. T. Woodman, Dubuque, Iowa.

I claim the general arrangement of the boat herein described of the air chambers or spaces for storage of provisions, etc., water, scuppers and thwarts susceptible of being raised or lowered at pleasure for communication with the air chambers of the boat, arranged together and operating substantially in the manner and for the purpose specified.

[This invention relates to some important improvements in life boats, whereby their efficiency is much increased, and the safety of its passengers more insured than with such boats as heretofore constructed.]

49,198.—Salve.—Wm. Slape, Salem, N. J., assignor to himself and H. S. Marsh, Philadelphia, Pa.:

I claim a salve composed of the within-named ingredients, composed substantially, as set forth.

49,199.—Steam Boiler.—Wm. Mont Storm (assignor to himself and R. Charlton Mitchell), New York City:

First, I claim the relative arrangement of the parts of my steam boiler, substantially as follows, viz: In a cylindrical horizontal shell, the arrangement of two independent furnaces, located at its middle, with grate bars running transversely to its length, said furnaces being separated by a water space or "leg," and their products of combustion respectively, passing right and left through flues (preferably small tubes), to chambers, i, j, and thence through some proper conduit to their final exit, all substantially as described.

Second, I claim in conjunction with the other general arrangement of the parts of this boiler, the application of a series of auxiliary draft-heating tubes running the entire length of the horizontal shell from its end to its furnaces respectively, in the manner and for the reason given.

Third, I claim the hollow head or "tonipon," with its conduits for circulation, substantially in the manner and for the purpose described.

Fourth, I claim the application of the sleeve, m, m, through the steam drum and chimney, for the objects described.

49,200.—Flour Sifter.—George W. Tileston (assignor to Asa Wilmot) New Haven, Conn.:

I claim as a new article of manufacture, a flour or meal sifter, consisting of a curvilinear vibrating sieve, and a crushing or pulverizing roller, when the whole is constructed and fitted to produce the result, substantially as herein described.

49,201.—Composition for Paint.—James C. Wendrem, Albany, N. Y., assignor to Wheeler, Mellick & Co., Albany, N. Y., and Edward Wackerhagen, Greenville, N. Y.:

I claim the composition specified for mixing with pigments to form a paint.

49,202.—Barrel for Holding Petroleum.—George W. Williamson, Gouldsborough, Pa., assignor to himself and D. W. Lee, Wilkesbarre, Pa.:

I claim, First, Filling the space between double barrels, designed to contain petroleum or other volatile fluids, with a solution composed of water, chalk or its equivalent, substantially as described.

Second, With a solution composed of water and chalk or other mineral equivalents.

Third, With a solution composed of water and glue or other glutinous equivalent.

49,203.—Machine for Refitting Stop Valves.—Samuel Wing, Monson, Mass., assignor to himself and George R. Toplift, Brooklyn, N. Y.:

I claim, First, The concave mill, B, provided with an internal yielding center, c, and arranged in suitable bearings, a, in combination with the adjustable center, C, constructed and operating substantially as and for the purpose set forth.

Second, The guide, E, and conical mill, D, applied in combination with each other, substantially as and for the purpose described.

49,204.—Cultivator and Planter.—E. M. Wright (assignor to himself and A. C. Diboll) Wilmington, Ohio:

I claim, First, The construction and arrangement of the under

cultivator frames composed respectively of long central beams, D, D, fixed but adjustable in position and of short side pieces or beams, E, E, hinged and movable or adjustable to and from the said central beams, substantially as and for the purposes herein specified.

Second, I also claim the governing wheel, o, arranged and operating substantially as and for the purpose herein specified.

Third, I also claim the combination of the governing wheel, o, and the side pieces or beams, E, E, of the under frames, through the means of the levers, Q, Q, connecting bars, p p, rods or bars, P P, all substantially as herein specified.

Fourth, I also claim operating the seed-dropping wheels, U U, by the governing wheel, O, under the control of the driver, by means of the lever-armed rock shaft, S, and flexible connecting rods, s s and t, or their equivalents, substantially as herein specified.

Fifth, I also claim the projecting ledge, v, in the spiral seed separator, substantially as and for the purpose herein set forth.

Sixth, I also claim the friction plate, r, between the brush, w', and its fastening wedge, for the purpose specified.

Seventh, I also claim the construction of the drill teeth or shovels, with sockets or mortises fitting over their standards, for the purpose specified.

49,205.—Machine for Hulling Grain.—Christophe Ours Bullot (assignor to Bullot & Company), Santa Rosa de los Andes, Chili:

I claim the decorticating apparatus herein described, the same consisting of the grinding disks, G, L, feeding screw, E, fans, M P, and air pipes or conductors, N, O, arranged to operate in the manner described.

[This invention consists in subjecting the corn or other grain to be decorticated to the influence of moisture for a few minutes previous to exposing the same to the decorticating apparatus, which is composed of two pairs of wooden grinding disks; the grinding surface of the first being covered over with wire gauze, and the other with leather or other flexible material, and those of the second pair being covered with leather or other flexible material only, in combination with suitable conduits and fanblowers.]

49,206.—Suspended.

49,207.—Lock for Satchel.—Bernard Steinmetz, Paris, France:

I claim the arrangement of a spring lever, D, in combination with a tumbling bolt, V, acted upon by a spring, s, and operated by means of a key, when combined with the jaw frames of a carpet bag, satchel, etc., and operating in the manner and for the purpose substantially as described and set forth.

49,208.—Wrench.—James White, Cleveland, Ohio:

I claim the stop, L, operating as described, in combination with the disk, F, and adjustable jaws of the wrench, whereby they can be used at any desirable angle, and in either way, without removing the wrench from the nut, as specified.

REISSUES.

2,040.—Box for Hats and Bonnets.—Oliver A. Dailey, Washington, D. C. Patented March 14, 1865:

I claim a hat box made of paper, cloth, leather, or the equivalent thereof, with respect to lightness, and strengthened by the use of ribs, substantially as described.

2,041.—Seed Coverer for Grain Drills.—John S. Gage, Dowagiac, Mich. Patented Aug. 26, 1862:

I claim, First, The seed coverer as herein described, constructed with two concave or converging arched palms, a, a, which are shaped on their rear and bottom edges as represented, and are connected by an intermediate portion, e, so as to have a space, b, between them, the said coverer being made of one piece of metal only, and adapted to be applied to the nearly horizontal arms, A, A, of the seeding machines, so as to operate upon the sides and top of the ridge or row, as herein specified.

Second, Providing the coverer with a lug, c, adapted to receive a weight, substantially as described.

2,042.—Tackle Hook.—Joseph W. Norcross, Middletown, Conn.:

I claim the strap or brace, B, which forms the upper section of the lower eye of the hook, A, and is made to swivel on the neck of said hook, and connected to its points, substantially in the manner and for the purposes set forth.

2,043.—Lightning Arrester for Telegraphs.—George A. Stearns, Rochester, N. Y. Patented June 21, 1864:

I claim the protection of electric telegraph lines from the disturbing influences of atmospheric electricity by means of a small, fine guard-wire, inserted in the main or line circuit thereof, in such a manner as to complete said circuit, when such guard wire is used in combination with a mesallic surface or with a series of metallic points, connected with the earth and placed in close proximity to the line at or in advance of said guard wire, all substantially in the manner herein set forth.

I claim also establishing communication between the main or line circuit of an electric telegraph and the earth, for the discharge of atmospheric electricity from the line by the use of charcoal, powdered glass, powdered amber, sulphur or other equivalent substances brought in contact with said line and connected with the ground, substantially in the manner herein set forth.

2,044.—Machine for Sheeting Plug Tobacco.—W. J. Vøn Horn and Wm. Alexander, Louisiana, Mo. Patented December 27, 1859:

First, We claim the combination and arrangement of the two belts, C and G, or their equivalents, with a cylinder, B, and a series of pressing rollers, F, arranged and operating substantially as and for the purposes herein specified and shown.

Second, We claim in combination with said cylinder, pressing rollers and belts C G, the employment of the feeding table, J, all arranged and operating substantially as shown and described.

Third, We claim the employment of the rollers, L, provided with the circular knives, a, and the corresponding channels or grooves, substantially as and for the purposes delineated and described.

Fourth, We claim the employment of the rollers, M, M, provided with the longitudinal cutters, N, arranged and operating as and for the purposes set forth.

Fifth, We claim the combination and arrangement of the two pairs of rollers, L and M, provided respectively with the cutters, a and N, arranged and operating substantially as and for the purposes herein set forth and shown.

Sixth, We claim the combination and arrangement of the cylinder, B, rollers, F, table, J, belts, C, G, cutting rollers, L and M, constructed and operating substantially as and for the purposes herein specified and described.

2,045.—Sawing Machine.—A. E. and J. V. Warner, Norwalk, Ohio. Patented May 30, 1865:

We claim the above-described arrangement of operating a circular saw, in combination with a cross-cut saw, or separately, substantially as and for the purposes set forth.

2,046.—Skeleton Skirt.—S. H. Doughty, Clinton Township, N. J., assignee by mesne assignments of Jas. Draper. Patented Oct. 4, 1859. Reissued Dec. 27, 1859:

I claim the new manufacture of skeleton skirt, substantially as described, consisting of a series of tapes woven in the direction of their length, in alternate sections, as single and as double tapes, with the hoops inserted in the loops formed by wearing the tapes as double tapes, and there secured to prevent the tapes from sliding laterally on the hoops.

JULY 25.

2,034.—Turndown enameled Paper Collar.—James H. Hoffman, New York City. Patented Jan. 24, 1855:

I claim the new article of manufacture consisting of a turndown or folded enameled paper collar, substantially as described.

2,035.—Carpet Bag Frame.—Samuel Lagowitz, New York City. Patented July 7, 1863:

I claim the cover, B, made of elastic wood and attached to one end of the jaws, A, by stays or brackets, all as herein shown and described.

2,036.—House for Preserving Fruit, Etc.—Benjamin M. Nyce, Cleveland, Ohio. Patented November 2, 1858. Reissued October 23, 1860; again May 16, 1865:

I claim the insulated and cooled preserving chamber, J, provided

with absorbents of moisture, substantially as set forth, either with or without the agitator, K.

2,037.—Preserving Fruit and other Perishable Substances.—Benjamin M. Nyce, Cleveland, Ohio. Patented November 2, 1858. Reissued October 23, 1860; again May 16, 1865:

I claim the method of preserving fruit in a chamber whose walls, doors and floors are practically air tight, and so proof against the ingress of heat and moisture, as to maintain by the aid of ice, on a metal floor above a uniform temperature of from 34° to 37° F., throughout the year, and by the use of absorbents within said chamber producing any desired degree of dryness.

2,038.—Preserving Fruit and Other Perishable Substances.—Benjamin M. Nyce, Cleveland, Ohio. Patented November 2, 1858. Reissued October 23, 1860; again May 16, 1865:

I claim the above described outside air tight casings of walls, when used in combination with a chamber chilled by ice on a metallic floor, on its upper part, with absorbents of moisture, within said chamber.

2,039.—Steam Engine Governor.—Thomas Silver, New York City. Patented April 26, 1859:

I claim the combination of a spring with a momentum wheel, and adjustable speed limiting vanes, the whole constructed with the combination of the peculiarly adjusted sectors, pinion and links, as fully described and set forth.

DESIGNS.

2,149.—Bass Relief for Bust of Abraham Lincoln.—Elizabeth V. Gantner, Philadelphia, Pa.

2,150.—Stove.—Gardner Chilson, Boston, Mass.

2,151.—Trade Mark.—D. L. Gold and J. B. Adams, Springfield, Ill.

2,152.—Carpet Pattern.—E. J. Ney (assignor to the Lowell Manufacturing Co.), Lowell, Mass.

2,153.—Plate of a Cook Stove.—Garretson Smith and Henry Brown, Philadelphia, Pa., assignors to Marshbank & McConkey, Lancaster, Pa.

2,154, 2,155.—Stove Base.—N. S. Vedder (assignor to Cox, Church & Co.), Troy, N. Y. Two Patents.

2,156.—Cook Stove.—N. S. Vedder (assignor to Cox, Church & Co.), Troy, N. Y.

2,157.—Top of a Stove.—N. S. Vedder (assignor to Cox, Church & Co.), Troy, N. Y.

2,158.—Cook Stove.—Russell Wheeler and S. A. Bailey, Utica, N. Y.

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[See Judge Holt's letter on another page.]

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