

ISSUED FROM THE U. S. PATENT OFFICE  
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**58,566.—GATE.**—P. M. Ackerman, Webster, N. Y.  
First, I claim suspending the sliding gate upon the swinging crane, substantially in the manner and for the purposes herein shown and described.  
Second, The swinging crane or frame constructed, arranged and operating substantially as herein shown, and for the purposes set forth, in combination with the sliding gate.

**58,567.—MANUFACTURE OF GUNPOWDER.**—F. S. Allen, New York City.

I claim the within described process of saturating paper or other substance with an explosive compound by boiling the same together, substantially as set forth.

**58,568.—BORING MACHINE.**—Robert Allison, Port Carbon, Pa.

First, I claim a portable boring machine for boring or reaming shaft holes in cog wheels, spiders, pulleys, etc., constructed and operated substantially as herein described and represented.

Second, I claim the base plate or rings, A, in combination with the vertical boring arbor, B, and guide bar, M, substantially as and for the purposes herein specified.

Third, I claim the vertical boring arbor, B, in combination with the base plate, A, clamping bar, M, or its equivalent and the feeding apparatus, arranged and operated substantially in the manner and for the purposes herein set forth.

Fourth, I claim the guide bar, M, in combination with the base plate, A, and the boring arbor, B, arranged and applied substantially as and for the purposes herein described.

**58,569.—MODE OF SECURING CROSS-CUT SAWS TO THEIR HANDLES.**—Emanuel Andrews, Williamsport, Pa.

I claim, First, The removable stop, E, and series of holding pieces, B<sub>3</sub>, arranged for joint operation in fastening and liberating a saw plate, A, substantially as and for the purpose herein specified.

Second, A saw handle, B, and so arranged as to allow the removal and introduction of the saw blade, A, by a turning and lateral movement without the necessity for passing the end of the blade through the bolt, all substantially as and for the purpose herein specified.

**58,570.—VEGETABLE CUTTER.**—Francis Arnold, Haddam Neck, Conn.

I claim the wheel, D, with knives cast upon one of its faces and with openings through which the pieces of vegetables and roots pass when said wheel is used with a frame, constructed substantially as herein set forth and for the purposes described.

**58,571.—STAGING.**—Wm. Arrouquier, Worcester, Mass.

I claim the combination and arrangement with pieces, C, C', of the supporting pieces, D, D, braces, E, E, and adjustable bottom pieces, F, F, with their rods, G, for supporting the foot boards, H, I, from the window of a building, as shown and described.

**58,572.—PEN HOLDER.**—Edwin Dwight Babbitt, New York City.

I claim a pen holder constructed substantially as herein shown and described.

**58,573.—HORSE SHOE.**—Halsey H. Baker, New Market, N. Y.

First, I claim the attachment of the collar, B, to the shoe, A, by means of lips, f, formed upon the tongues, h, of the said collar hooked upon the shoulders, b', by the driving into its place of the filling of the calk, substantially as herein set forth for the purposes specified.

Second, The wedge-shaped projections, f, so arranged in combination with the tongues, h, and lips, l, of the collar, B, as to insure the right locking of the lip, l, upon the shoulders, b', by the act of driving the filling of the calk into its place, substantially as herein set forth for the purpose specified.

Third, The opening or openings, e, so arranged in relation with the shoulders, b' and with the tongues, h, and lips, l, of the collar, B, as to enable the said lips, l, to be disengaged from the shoulder, b', substantially as herein set forth for the purpose specified.

Fourth, The ice calks, D, arranged in relation with the collar, B, and with the wood or other suitable filling of the calks, substantially as herein set forth for the purpose specified.

Fifth, The combination of the layer or thickness, m, of india-rubber or other elastic material with the collar, B, and shoe, A, substantially as herein set forth for the purpose specified.

**58,574.—METALLIC BAND FASTENING.**—Arthur Barbarin, New Orleans, La.

I claim the herein described device for fastening metallic bands, the same consisting of a segmental plate recessed so as to have a C-shaped and constructed and arranged for operation as set forth, so that the partial revolution of the plate shall effect the release or loosening of the band, substantially in the manner herein specified.

**58,575.—DUMPING WAGON.**—Harvey Barton, Black Earth, Wis.

I claim the combination of the drops, A, B, C, rock shafts, D, pawls, E, F, G, plates, H, I, J, levers, d, e, f, and springs, K, L, N, substantially as shown and described.

**58,576.—HOUSE BELL.**—Hiram Barton, East Hampton, Conn.

I claim the arrangement and combination of the vibrating cap plate spring and stop with the bell and hammer, constructed and operating substantially as described.

**58,577.—MACHINERY FOR MAKING NAILS AND TACKS.**—O. L. Bassett, T. R. Bearse, and W. B. Wilber, Taunton, Mass.

First, We claim the combination of a carrier or bearer for the tack blank with any one of the cutters, be they more or less in number, used for cutting the tack blanks when arranged and so as to operate together, substantially in the manner and for the purpose specified.

Second, The carrier or bearer for conveying the tack blanks to the die to be headed, attached to either one or the other of the arms to which the cutters are attached, in combination with a forked or other suitable lever, arranged with regard to the said carrier and so as to operate upon it in conjunction with the said cutter arm, substantially as and for the purpose described.

**58,578.—CULTIVATOR.**—Thomas Beale, New Milford, Ill.

I claim the bars, A, having the bar, B, pivoted to them, with the spade or shovel, C, attached to the front end of the latter,

in combination with the bar, E, connected to the bar, F, which is pivoted to A, and connected to the pivoted bar, E, through the medium of the rod, h, and guide bar, D, and the scraper and hilling device, G, pivoted to the front ends of the bars, A, A', and operated from one of the pendants, c, by the rod, H, substantially as and for the purpose set forth.

**58,579.—SAND PUMP.**—James Benson, Bellair, Ohio.

I claim the hinged ball, I, operating in combination with the linked piston rod, E, of the sand pump herein described, as and for the purpose specified.

**58,580.—GONG BELL.**—Isaac A. Bevin, Chatham, Conn.

I claim the construction of the gong-striking apparatus, substantially as herein shown and described, so that the pull will act between the spring and the striker, all as set forth.

**58,581.—SHOVEL PLOW.**—Jesse C. Boyd, Milroy, Ind.

I claim the beams, A, A, in combination with the upright shovels and handles when connected to the beam, C, by means of the swivels, H, H, and attached to the beam, B, by slotted bars, F, F, and set screw, t, arranged substantially as specified.

**58,582.—BASE BURNING STOVE.**—Nathaniel A. Boynton, New York City.

I claim the combination of an outer case or exterior cylinder with an interior cylinder or case which is a reservoir of fuel above the fire-pot, the space between the outer case and the reservoir forming a combustion chamber with which the reservoir is in free communication at its upper portion.

**58,583.—GALLOON TRIMMING FOR UNDER GARMENTS.**—Ernst Brett, New York City.

I claim a galloon trimming for under garments and similar articles, formed with a corded and scalloped edge to a fluted or corrugated fabric woven with a heading or center, as specified.

**58,584.—GALLOON TRIMMING FOR GARMENTS.**—Ernst Brett, New York City.

I claim the galloon trimming for linen and cotton garments formed with flutes or corrugations connected in the manner and for the purposes set forth.

**58,585.—BEEHIVE.**—L. C. Bristol and C. T. Alverston, Victor, N. Y.

We claim the relative arrangement of the ventilators, C, with the ventilators, a, and double hives, A, B, as shown and described and for the purposes set forth.

**58,586.—SAWING MACHINE.**—Nathaniel Brockway, Cambria, N. Y.

I claim the segment, l, and gibs, j, and saw, m, in combination, for the purposes described.

**58,587.—SAFETY-VALVE TENDER.**—Charles F. Brown, Ashly, Mass.

I claim the valve D, with its appendages, the inner cylinder, B, the frame, F, the outer cylinder, G, and hanger, K, or their equivalents, when in combination with the boiler and safety valve of a steam engine, substantially as and for the purposes set forth and described.

**58,588.—SEED PLANTER.**—C. P. Brown, Shortsville, N. Y.

First, I claim the arrangement of the wind guard, g, or its equivalent, with the delivery wheel, W, substantially as and for the purpose set forth.

Second, The adjustable clamping bar, E, in combination with the wheel, W, and the case, C, substantially as shown and described and for the purpose specified.

Third, The arrangement of a series of complete hoppers in the bottom of the grain box of seed drills in combination with the distributors, substantially as and for the purposes herein shown and described.

**58,589.—POWER LOOM FOR WEAVING CONCAVE AND CONVEX SURFACES.**—William Breitenstein, New York City.

I claim operating the sectional take-up roller by levers which are set by the Jacquard and operate to take up the woven cloth by the beat of the lay or the motion of some equivalent part of the loom, substantially as and for the purpose specified.

I also claim, in combination with the sectional take-up roller, the series of pressure rollers and the frame in which they are hung with its connections so that while each can yield independently of the whole they can be lifted from the take-up roller at once, or the tension of the springs increased, substantially as and for the purpose specified.

I also claim the thread pullers in combination with the Jacquard and the intermediate mechanism by which the Jacquard is made to determine when the said thread pullers shall be thrown in or out of action, substantially as and for the purpose specified.

And I also claim, connecting the finger of the thread puller by means of a spring with the mechanism by which it is operated, so that it shall liberate the thread so soon as it shall have been pulled with sufficient tension, substantially as specified.

I also claim the adjustable bar on the lay, in combination with the levers that operate the sectional take-up, and the bar which gages the extent to which the said levers shall be pulled by the Jacquard, substantially as and for the purpose specified.

And I also claim the shuttle carriers for operating the shuttle, or the equivalents thereof, as distinguished from the fly-shuttle system, in combination with the sectional take-up, or the equivalent thereof, substantially as and for the purpose described.

**58,590.—APPLICATION OF BEDSTEADS TO APARTMENTS.**—Julia P. Brown, Boston, Mass.

I claim an apartment, constructed with bedstead-receiving recess, formed in or at its ceiling, or upper part, and having a bedstead applied to such recess, by counterbalancing devices, substantially as and for the purpose described.

**58,591.—DYEING HAT BODIES.**—Alfred C. Brush, Norwalk, Conn., and George C. White, Danbury, Conn.

We claim the process of dyeing hat bodies, substantially as hereinbefore set forth, by applying the dye or coloring matter to them after the sizing has been commenced, and before it is completed.

**58,592.—MEASURING FAUCET.**—H. L. and J. A. Buckwalter, Kimberton, Penn. Antedated Sept. 30, 1866.

First, The arrangement of the regulating screw, M, grooves, N, eccentric, B, and cylinder, A, constructed and operating in the manner and for the purpose herein described.

Second, We also claim the register wheel, with two projecting cogs, m, m, and a brood cog, o, to stop the revolution of the spindle of the faucet, and an open space, n, to allow the spindle to revolve freely when a measurement is not required, substantially as shown.

Third, We also claim the arrangement in relation to the foregoing of the follower, G, constructed as described, with the keepers, 3, 3, of the cylinder, A, and spindle, J, in the manner and for the purpose herein described.

**58,593.—TALLY BOX FOR MEASURING GRAIN.**—Andrew J. Burke, Grundy Center, Iowa.

I claim the arrangement of the ratchet wheel, C, operated by the pawl, f, and provided with the index, r, the pinion, O, gearing into the wheel, D, on shaft, e, the latter being provided with the index, t, and pinion, n, operating the index, l, by means of the wheel, s, secured to the tubular shaft, l, all operating as and for the purpose set forth.

**58,594.—TELEGRAPH INSULATOR.**—W. H. Burnap and J. D. Brassington, New York City.

First, We claim a non-conducting ring or disk, fitted in the base of a hollow shell insulator below the point at which the pin is secured, substantially as and for the purpose herein set forth.

Second, We claim the non-conducting disk, M, m, fitted with springs, P, P, and adapted to be confined in the base of the shell, A, substantially in the manner and for the purpose herein set forth.

Third, We claim the within described combination and arrangement of the shell, A, H, of insulating material, J, inverted cup, O, and removable non-conducting disk, M, as and for the purpose herein set forth.

**58,595.—ELEVATOR BUCKET.**—Charles Camp, Buffalo, N. Y.

I claim, First, The elastic or flexible elevator bucket composed of the materials described, or the equivalent thereof.

Second, In combination therewith, I claim the metallic rim, A, as and for the purpose specified.

**58,596.—DOUGH MIXER.**—Charles Chavanne, New Orleans, La.

I claim the revolving of the bowl, E, and the arms, a, a, a, in the different directions, at the same time, and the scraper, M, as set forth and fully described.

**58,597.—DOUBLE SHOVEL PLOW.**—John Clarridge, Panncoastburgh, Ohio.

I claim the combination and arrangement of the arms, L and M, the toothed blocks, N and P, and the wedges or keys, O and R, with the beams, B and A, the plow head, G, and the handle, I, substantially as herein described and for the purpose set forth.

**58,598.—SINGLE-ROW CORN PLANTER.**—John Clarridge, Panncoastburgh, Ohio.

First, I claim the combination and arrangement of the elevator, I, shafts, H and F, pulleys, E and C, band, D, drive wheel, B, and spout, J, with each other, with the hopper, G, and with the frame, A, of the machine, substantially as herein described and for the purpose set forth.

Second, The combination of valve, T, lever, X, and slide rod, A', with each other, with the hollow plow shank, K, and with the handle, B', substantially as described and for the purpose set forth.

Third, The combination of the concavo-convex head, k', of the hollow shank, K, with the concave bed plate, a<sub>5</sub>, substantially as herein described and for the purpose set forth.

**58,599.—MACHINE FOR MAKING MOLDING.**—Thos. J. Close, Philadelphia, Pa.

I claim, First, The cone-shaped hopper formed by combining the inner case, J, and outer case, K, with each other, and with the frame, A, of the machine, substantially as herein described and for the purpose set forth.

Second, The combination with the hopper, J, K, of the conveyer, W, substantially as described and for the purpose set forth.

Third, The combination of the die wheel, A', constructed substantially as described, with the conveyer, W, and with the frame, A, of the machine, substantially as described and for the purpose set forth.

Fourth, The combination with the conveyer, W, of an adjustable slide or scraper, B', constructed and arranged substantially as described and for the purpose set forth.

Fifth, The combination with the hopper, J, K, of the screw, H, I, constructed and arranged substantially as described and for the purpose set forth.

Sixth, The combination of the valve, E, arm, F', levers, G' I', and cam, K' L', with each other, with the hopper, J, K, and with the frame, A, of the machine, substantially as described and for the purpose set forth.

Seventh, The combination of the rubber or cleaner, P', and scraper, T', with each other, and with the conveyer, W, substantially as described and for the purpose set forth.

Eighth, The combination of the oil cup, B', with the hopper, J, K, and with the die wheel, A', substantially as described and for the purpose set forth.

**58,600.—FAUCET.**—Thomas M. Coffin, Plymouth, Mass.

I claim, as a new article of manufacture, the faucet herein described, consisting of the barrel, A, provided with a valve seat, a', an an annular nozzle, C, the neck, D, connected to the barrel by a screw joint, a, m, to afford access to the valve seat, the stem, E, cast in one piece, with the external head, G, and threaded at g, to fit an internal screw thread in the barrel, A, and the valve, E', mounted removably on the end of the stem, E, all as herein specified and for the purpose explained.

**58,601.—MACHINE FOR RAKING AND LOADING HAY.**—Munson Cole, Colebrook, Conn., and David Cole, Kent, Conn.

We claim, First, The gathering rake arranged in combination with the rods, r, springs, h, and bar, b', substantially as described.

Second, In combination with the above, the endless elevator and clutch arrangement, all arranged and operating substantially as and for the purposes set forth.

**58,602.—ROTARY STEAM ENGINE.**—M. H. Collins, Chelsea, Mass.

I claim the combination and arrangement of the chambered drum, F, made substantially as described, with the two pistons and their gates and ports, d, d, arranged in the case or cylinder, as specified.

I also claim the arrangement and combination of the springs, q, r, with each of the yokes, p, the same being as and for the purpose specified.

I also claim the construction of each piston, and that part of the case against which it operates, viz: curved on their peripheries, substantially as represented, in combination with the cylindrical drum, arranged with respect to them, as specified.

**58,603.—PADDLE WHEEL.**—Michael H. Collins and William H. Holland, Chelsea, Mass.

We claim the arrangement and combination of its oblique angular plates or paddles, r, r, with the three series of end and middle connections, n, p, n, and the three wheels composed of the rings, i, k, l, and the three series of spokes applied together and to a hub, as described.

We also claim the combination and arrangement of the external rings, m, m, with the paddles, r, r, the three series of connections, n, p, n, and the three wheels composed of the three rings, i, k, l, and the three series of spokes, applied together and to a hub, as described.

**58,604.—STEAM GENERATOR.**—William Conant, Geneva, Ill.

I claim, First, The generating conductor, A, and superheating receiver, C, the latter arranged within a contracted flue, through which the products of combustion pass in close contact with its surface, substantially as and for the purposes described.

Second, In combination with the generating pipe and receiver, arranged as described, I further claim the lining, D, employed to confine the products of combustion around the receiver, and prevent the radiation of heat.

**58,605.—LATHE FOR TURNING SHAFTING.**—J. J. Conley, New York City.

I claim, First, The annular block, A', so applied in combination with the tubular spindle, B, and cutter head, C, as to support and steady the shaft during the operation of turning the same, substantially as herein set forth.

Second, The attachment of the smoothing cutter, u, to the annular block, A', substantially as herein set forth for the purposes specified.

Third, The annular block, B', fitted into the rearmost end of the tubular spindle, B, and operating in conjunction with the annular block, A', to steady and support the shaft while being turned, substantially as herein set forth.

Fourth, The combination of the hollow spindle, B, cutterhead, C, and the two sets of grooved feed rollers, D and E, one set for pushing and the other for drawing the shaft during the operation of turning the same, the whole arranged and operating substantially as herein set forth for the purpose specified.

Fifth, The swinging or self-adjusting shafts, C', furnished with tangent screws, P, and arranged in relation with the worm wheels, t, and grooved feeding rolls, substantially as herein set forth for the purpose specified.

**58,606.—GAS BURNER.**—John B. Cooledge, Boston, Mass.

I claim the split tip, c, in combination with the exterior tube, b, operating substantially as described.

**58,607.—EVAPORATOR.**—J. Cooper, Mount Vernon, Ohio.

I claim the ears, c, in combination with the guide strips, b, gage

openings, d, and partitions, D, constructed and operating substantially as and for the purpose described.

58,608.—SODA FOUNTAIN.—William Coughlan, Baltimore, Md.

I claim the valve, I, and opening, J, in the stud, C, at the side of the fountain, at or near the desired level, to act as a gate, and also as a blow-off opening for the discharge of air from the fountain, substantially as described.

I also claim the auxiliary tube, H, attachable or detachable from the faucet, to permit the fountain to be used in the upright or inverted position, substantially as described.

58,609.—LOOM.—Henry Dale, Philadelphia, Pa.

First, I claim the within-described arrangement with respect to the frame, A, and the jacks of the shaft, I, for the reception and removal of the cylinder, J, or its equivalent.

Second, The combination and arrangement on the loom of the cam shaft, c, wheels, x and m, and shaft, I, as specified.

Third, The combination and arrangement of the graduated pulleys, a, the jacks, G, and the heel cords, as set forth.

58,610.—KNITTING MACHINE.—J. Dalton, Williamsburgh, N. Y.

First, I claim the method herein described of forming a combined warp and knittitch by the action of the series of needles which rise and fall in the needle cylinder, in combination with a revolving cam and spool carrier, substantially as described for the purpose specified.

Second, The detached levers, G, with their curvatures, e, in combination with the movable ring, I, substantially as described for the purpose specified.

Third, The reciprocating needles, n, arranged in a circular series, one portion thereof placed within and concentric to that in which the others are placed, or with those with each series at an inclination from a vertical line, substantially as described for the purpose specified.

Fourth, The segmental projections, e, on the upper edges of the levers, G, in combination with the top plate or ring, a, and crum, a, constructed and operating substantially as and for the purpose set forth.

Fifth, The adjustable segments, f, in combination with the cylinder, H, levers, G, and cam, D, constructed and operating substantially as and for the purpose described.

58,611.—WARP DRESSING FRAME.—Alexander M. Damon, Lowell, Mass.

I claim the combination of the slotted bar, P, constructed as described, with the ratchet, O, and the actuating gearing, G W, when operating as and for the purpose described.

58,612.—GANG PLOW.—F. S. Davenport, Jerseyville, Ill.

First, I claim the lever, P, rod, Q, and brake, R, arranged and operating as and for the purpose described.

Second, The hinged block, G, in connection with the reversible axles, substantially as and for the purpose described.

Third, The lever, O, and quadrant, N, for regulating the depth of the furrow, substantially as and for the purpose specified.

Fourth, Lifting the hind part of the machine by means of the lever or arm, I, in connection with the chain, J, wheel, K, and lever, L, these parts operating together substantially as and for the purpose described.

Fifth, Hinging the footboard, M, to the plow frame as described.

Sixth, Securing the tongue or draft pole to the footboard, M, in the manner and for the purpose described.

Seventh, The sliding plow standard, B', guide block, O', lever, A', and notched seat standard, C, when used together, and in connection with the other parts.

Eighth, Connecting the lever, L, with the tongue or draft pole, by fastening it to the footboard, the whole operating together substantially as and for the purpose set forth.

58,613.—COMBINED ROLLER AND HARROW.—Jas. Davis, Loami, Ill.

First, I claim the revolving harrow, L, in combination with the pinion, K, gear wheel, J, and H, and traction wheel, B, for the purposes and substantially as described.

Second, I claim the levers, O, O, in combination with the harrow, L, gear wheels, K, J, and H, substantially as set forth.

Third, I claim the roller, E, in combination with the pendants, F, F, frames, A and L, all for the purposes and substantially as described.

58,614.—NEEDLE-FEED OF SEWING MACHINE.—Job A. Davis, Great Bend, Pa.

I claim, first, In sewing machines using a needle-feed the application and use, in combination with the needle-bar and needle, of the needle assistant or helper bar, G, for keeping the cloth smooth and preventing its gathering or bunching as the feed takes place, such bar being placed before the needle, and so arranged as to move up and down upon its fulcrum, and operating substantially as and for the purposes set forth.

Second, The combination of such helper bar with the pressure bar, so arranged in respect to each other that as one ascends the other rises, and vice versa, and operating substantially as and for the purpose set forth.

Third, The arrangement of the slot, m, in the helper bar, and the pin, f, upon the pressure bar, or their equivalent, so that the descent of the needle-bar or its equivalent will force down the helper bar and elevate the pressure bar, substantially as and for the purposes set forth.

Fourth, Operating the helper and pressure bars substantially as described, from or by means of the needle-bar, or its equivalent, substantially as and for the purposes set forth.

58,615.—ARTIFICIAL CAOUTCHOUC.—Austin G. Day, New York City. Antedated Sept. 29, 1866.

I claim mixing, heating, and sulphurizing vegetable and mineral oils, in combination with gum, resins, and resinous compounds, to form a composition to be used as a substitute for caoutchouc or india-rubber, substantially in the manner and for the purpose herein set forth.

58,616.—HAND WOOD SAW.—Charles M. Day, Ann Arbor, Mich.

I claim the combination of the rock shaft, K, provided with the springs, O, with the bifurcated lever, I, and pitman, J, connected to the saws, P, when arranged to operate as shown and described.

58,617.—HARVESTER.—Joseph Dick, Jr., Canton, Ohio.

First, I claim the sliding raker shaft, E, or its equivalent, and the joint ball, g, in combination with the driving pulley, B, or other suitable case, when the latter has a cylindrical axis within the hanger, A, entirely independent of the said joint ball, g, as shown and described.

Second, The arrangement, in combination with the sliding raker shaft, of the ball, g, and the pulley, B, or other suitable case within the hanger, A, the latter constituting cylindrical bearings for the axis of the said case or pulley, B, as set forth.

Third, The arrangement of the segments, C and C', upon the vertical sleeve, f, and the segmental pinions, C and C', upon the horizontal driving shaft, F, of the raker, as shown, so as to constitute collectively an entire circle of gearing, as shown and described.

Fourth, The combination of the detachable pulley, T, with the sleeve or ferrule, S, having one or more locking pins, c, substantially as and for the purpose set forth.

Fifth, The arrangement of the elevating lever, L, ratchet, O', head, Q, chain, U, and pulley, V, in combination with each other and the brace of the shoe, as and for the purpose set forth.

58,618.—SHINGLE MACHINE.—John B. Dougherty, Rochester, N. Y.

First, I claim the construction and relative arrangements of the saw guard, K and U, in the manner shown and described, to facilitate the removal or readjustment of the saw in the machine and for conducting the sawdust from the machine, substantially as set forth.

Second, The arrangement of the counterbalance, w, shaft, I, pinions, k, rocks, y, and clamping bar, g, in combination with the cams, m and n, substantially in the manner and for the purposes set forth.

Third, The arrangement of the screw gears and crank, G, with the slotted arm, H, attached to the axial shaft, C, of the bolt or clamping frame, B, substantially as and for the purposes shown and described.

Fourth, Providing the saw, S, in the within-described machine,

with a collar, J, having a conical bore to fit the mandrel, as and for the purposes set forth.

Fifth, The arrangement of the pivoted or swinging circular track, W, as and for the purposes set forth.

58,619.—BUCKLE AND RING.—Ralph C. Dunham, New Britain, Conn.

I claim a buckle or ring composed of a metal core, a, and a covering, b, of india-rubber or other vulcanizable gum, substantially as and for the purpose described.

58,620.—HORSE COLLAR.—C. R. Durfee, Rochester, N. Y.

I claim the horse collar herein described, consisting of the curved draft bow or bar, B, plates, P, pads, A, and connecting strap or pad, F, the several parts being constructed, arranged, and operated substantially in the manner herein shown and for the purpose set forth.

58,621.—RAILWAY.—Zebina Eastman, Chicago, Ill.

First, I claim the axles, e, e, each constructed in one piece, in combination with the tables or bed pieces, d, connecting rock or reach, h, and transverse reach, i, the whole being constructed, arranged, and operated substantially in the manner and for the purpose set forth.

Second, I claim the axles, e, e, in combination with the reach, b, toothed frames, r, s, and transverse reaches, i, the whole being constructed and operated substantially in the manner and for the purpose set forth.

58,622.—SEWING SWEAT LININGS INTO HATS.—Rudolph Eickemeyer, Yonkers, N. Y.

I claim the sewing in of the sweat lining of a hat by stitches passing once through the lining and through the hat body diagonally to the brim and sides, without being whipped over the edge of the lining, substantially as herein specified.

58,623.—INDIA-RUBBER AND LEATHER SOLE.—Lewis Elliott, Jr., New Haven, Conn.

I claim a waterproof sole for boots and shoes, formed of two thicknesses, one of india-rubber or its compounds, the other of leather, the two being united firmly in the manner specified.

58,624.—BEEHIVE.—Elva E. Ellis, Friendsville, Ill.

I claim the pivoted slats, C, at the bottom of the case, A, the hive in connection with the bottom, B, provided with an opening covered with wire cloth, a, and the openings, e', in the sides of the partition, D, substantially as and for the purpose set forth.

58,625.—STEAM-ENGINE GLOBE VALVE.—Theodore R. Fancher, Norwalk, Conn.

I claim the arrangement of the adjustable rubber ring, C, and screw ring, E, substantially as and for the purpose described.

58,626.—SPIKE PULLER.—R. A. Fish, Worcester, Mass.

I claim the combination of lever, A, with its bill hook end, a, with the base piece, B, having a bill hook projection, d, and flattened rear part, D, constructed and arranged for joint operation, as set forth.

58,627.—STRETCHER FOR CANVAS.—Jared B. Flagg, New Haven, Conn., and George Storer, New Britain, Conn.

We claim the perforated wedge, b, in combination with the groove, d, pins or screws, e, and frame, substantially as and for the purpose described.

We also claim, in combination with the above, the metal or wood pieces, c, substantially as and for the purposes described.

58,628.—CHURN.—John W. Forsyth, Leesburg, Va., assignor to himself, John W. Head, and Nelson Head.

I claim the combination of the platform, F, with the posts, E, E', their connecting cross piece, G, wheel, A, pinion, B, fly wheel, J, pin, N, shaft, C, and O, the vessel, M, the book, a, securing the lid, L, the slotted strips, D, D, the hooks, t, t, the staples, h, h, as is described and for the purpose set forth.

58,629.—SADIRON HEATER.—Charles H. Frost, Peekskill, N. Y.

I claim bending up or flaring the front ends of the covers of sadiron heaters, so as to allow the nose or point of a sadiron to be inserted beneath said covers to raise them, substantially as set forth.

58,630.—WINNOWING MACHINE.—Francis Frye, Time, Ill.

First, I claim the eccentric, E, lever, D, in combination with the hopper, B, and screen, C, substantially and for the purposes set forth.

Second, I claim the lever, D, eccentric, E, in combination with the fans, G, for the purposes and substantially as herein shown and described.

58,631.—DENTAL DRILL.—William H. Gates, Louisville, Ky.

I claim a drill head having two or more of the longitudinally curved external surfaces, C, extending from B to H, in combination with an equal number of cutting edges, undercut by deep grooves running backward from the ends spirally and diagonally to the stem or axis, substantially as described and for the purpose set forth.

58,632.—NUTMEG GRATER.—C. L. Gilpatric, South Deaham, Mass.

I claim the case, A, as constructed in combination with the spool, B, secured in said case, and provided with the perforated covering, D, in which is cut an opening, a, which discharges the ground nutmeg, which passes into the spool, and by means of which the spool may be cleaned internally, the several parts being arranged as and for the purpose herein specified.

58,633.—WRENCH.—Willis D. Gold, Philadelphia, Pa.

I claim the arrangement of the spring toothed lever, F, in combination with the movable jaw, E, operating with the rectangular shank, C, in the manner and for the purpose herein described.

58,634.—RAILWAY TRACK CLEARER.—M. J. Goodwin, Boston, Mass.

I claim combining with the car truck and brakes of a railway car, the clearers hung from the brakes in front of the car truck, and at a short distance above the surface of the track rails, substantially as described.

58,635.—HORSE HAY FORK.—Alexander Gordon, Rochester, N. Y.

I claim in combination with the point, P, the toothed adjusting bar, v, the hand lever, E, and the locking latch, D, they all operating conjointly in the manner and for the purposes specified.

58,636.—SHOVEL.—Samuel J. Goucher, Philadelphia, Pa.

I claim strips, E, secured to the blade and handle strap of a shovel, as and for the purpose set forth.

58,637.—NAIL MACHINE.—Simeon L. Gould, Skowhegan, Me.

I claim the arrangement of the slide plate, k, and the eccentric, h, with the vibratory cutter, carrying levers, and the cutter wheel and its shaft, or the same and the feed rollers and guide bar, as set forth.

I also claim the arrangement of the rotary cutters, their sockets, clamping and adjusting screws, and the wheel or cutter bed, as specified.

58,638.—COOKING STOVE.—Daniel Graves, Seneca, Ill.

First, I claim the combination and relative arrangement of the frustum plates, B, C, F and H, substantially as herein shown and described, in the formation of cooking stoves, for the purposes set forth.

Second, The broad annular hearth, G, when arranged to be heated

by the calorific current passing under it, substantially as and for the purposes shown and described.

Third, The double frustum, B, C, which constitutes the inner draft flue and gives a radiating direction to the calorific current, as shown.

Fourth, The segmental reflector plates or cases, R, in combination with the frustum stove, constituting an annular heating or baking oven, as shown and described.

58,639.—MINER'S FUSE LOCK.—Gebhard Hagemeyer, Big River, Cal.

I claim, as an improved fuse lock, the arrangement of the hammer, c, screw or dog, g, spring, e, pin, l, and barrel, b, relating to each other and operating in the manner as and for the purpose herein specified.

The pin, l, in combination with the spring, e, when used for the purpose herein represented and described.

58,640.—AXLE BOX COVER.—F. K. Hain, Renova, Pa.

I claim the cover, B, trunnions, a, b, spring, f, eyes, d, e, with inner inclined planes, the eye, d, being open and provided with notch, g, and the box, A, combined and arranged substantially as described for the purpose specified.

58,641.—PAPER SKIRT FOR LADIES.—J. Henry Hayward, New York City.

First, I claim, as a new and useful article of manufacture, the paper skirt as herein described, made by the combination of one or more sections of sheet paper, of any and every kind, quality and color, water-proof and fire-proof inclusive, arranged adhesively together, and strengthened by means of cords, tops, or other suitable material and devices, as fully described.

I claim the peculiar manner of arranging and connecting the said skirt at the waist by the means and for the purposes specified.

I claim the joining of two or more skirts made, as above described, on the same band, bodice or waist hoops, as set forth.

58,642.—WASHING MACHINE.—George M. Heine, Brownsville, Ind.

I claim the combination of the supporting frame, A, B, rod, C, flywheel, E, crank, H, connecting rod, I, arm, J, and barrel, D, all constructed and arranged to operate substantially as and for the purposes described.

58,643.—PROCESS FOR TANNING.—George W. Hersey, Greenlusi, Wis.

First, I claim soaking the hides or skins in salt water mixed with soft soap previous to liming, substantially as and for the purpose described.

Second, The use for tanning leather of a liquor containing glauber salt and common salt in combination with terra japonica, substantially as and for the purpose described.

Third, Also applying to the flesh the sulphuric acid, glauber salts, and alum and borax, to all furs, with swab, or brush, or paste to the same.

58,644.—MANUFACTURE OF CREAM CRACKERS.—Daniel M. Holmes, Brooklyn, N. Y.

I claim a cracker composed of the ingredients in the properties named, and treated in the manner substantially as set forth.

58,645.—PUNCH FOR HORSE SHOES.—Charles Huie, Lockport, N. Y.

I claim a punch, the point, e, of which is provided with the flange, f, serving both as a guard and gate, when constructed and operating substantially in the manner and for the purpose set forth.

58,646.—ROCKET.—E. S. Hunt, Weymouth, Mass.

I claim the arrangement of the spring, m, and its case, m', with the rocket charge tube, A, and its priming vent, h.

58,647.—HUB.—Allen Huston, Cincinnati, Ohio.

I claim casting a hub in two concentric parts, one about or within the other, so that while the parts are inseparable each may move freely in relation to the other, substantially as described.

58,648.—CONSTRUCTION OF OIL TANK.—Thaddeus C. Joy, Titusville, Pa.

I claim the method, substantially as described, of constructing metal tanks for the purpose of rendering them portable.

58,649.—FEED CUTTER AND BOX.—Abraham B. King, Camden, Ohio.

First, I claim the arrangement of box or manger A, a, shiftable cutting apparatus, E, and hinging and supporting devices, C, C', D, D', F, G, substantially as set forth.

Second, The bar, H, pivoted to the top of the trough, for the purpose set forth.

Third, The combination of knife, I, adjustable wedge, J, screw, K, and stump, L, for the purpose explained.

58,650.—DRIVING PIPE FOR OIL WELLS.—Geo. L. King, Philadelphia, Pa.

First, I claim the combination of the inner pipe, B, strengthening bands, D, and thimbles, C, the several parts being constructed and arranged in relation to each other, substantially in the manner described, and for the purpose specified.

Second, The combination of the shoe or cutter, A, with the lower end of the pipe, B, and lower strengthening band, D, substantially in the manner described and for the purpose above set forth.

58,651.—HOOP FOR SKIRT.—Judah Levy, Philadelphia, Pa.

I claim a skirt, each hoop of which consists of two light wires, rigidly clasped together at intervals, as and for the purpose set forth.

58,652.—MEDICINE.—N. C. Lincoln, Brunswick, Maine.

I claim the compound of ingredients for a catarrh medicine, mixed in the manner and proportions above described.

58,653.—CARPET STRETCHER.—Carl A. Lindner, Cincinnati, Ohio.

I claim herein, as new and of my invention, the carpet stretcher composed of the bands like, A, grapple, B, substantially as set forth.

58,654.—APPARATUS FOR MAKING BUTTON HOLES.—Ferdinand Lindner, Dayton, Ohio.

I claim a button-hole regulator, made of steel or any other suitable material, having the jaws, A, B, bow spring, H, levers, D, D, and handles, G, G, as herein described and for the purposes set forth.

58,655.—SASH SUPPORTER AND FASTENER.—J. W. and S. A. Livingston, Hartford, Conn.

We claim the friction roller, D, and spring, f, when combined and arranged substantially as and for the purpose specified.

In combination with the foregoing, the use of a pin, K, or its equivalent, as and for the purpose described.

58,656.—BLASTING CARTRIDGE.—Herman S. Lucas, Chester, Mass.

First, I claim a cartridge for blasting, made of solidly compressed gunpowder, containing either nitrate of potash or nitrate of soda, or granulated, or of any other suitable explosive material capable of being safely compressed into a suitable form for blasting purposes, and provided with any suitable device for igniting the same from the interior.

Second, The combination of a cylindrical cartridge of solidly compressed gunpowder or other explosive materials for blasting, with a central perforation extending partly or wholly through the same, constructed in the manner and for the purpose above described.

Third, The combination of a cartridge of solidly compressed gunpowder or other explosive materials for blasting with a fuse, when said fuse is inserted into its interior, in the manner and for the purpose set forth.

Fourth, The combination of a cartridge of solidly compressed gunpowder for blasting purposes with an envelope of paper or other textile material made impervious to water, or with envelopes or casings of sheet metal, earthenware or wood, the same being attached to the fuse in the manner and for the purpose set forth.



**58,657.—METALLIC FASTENING FOR BUCKLES AND STRAPS.**—H. H. Mansfield, South Canton, Mass.

First, I claim the metallic plate or bushing, A, constructed substantially as and for the purpose herein set forth and described.

Second, The manner of attaching the strap, C, to the buckle, B, substantially as herein set forth and described.

**58,658.—HOLLOW AUGERS.**—Jacob McClure, Rockland, Maine.

I claim adjusting the cutters to different sizes of tenons, by means of inclined cutter bearing pieces, sliding upon inclined supporting pieces and made adjustable thereon, and used in combination with a receding center, arranged to operate substantially as described.

**58,659.—PRUNING KNIFE.**—Cole McCrea, Leavenworth, Kansas.

First, I claim the combination with a pruning hook of a revolving wheel, A, substantially as and for the purpose described.

Second, I claim the combination with a pruning hook of an extension handle, B, substantially as specified.

**58,660.—COMPOSITION FOR REMOVING INCrustATION FROM STEAM BOILERS.**—Charles McKee, San Francisco, Cal.

I claim the combination of camphor, potash, ammonia and alum with petroleum or other oleaginous matter, substantially as described and for the uses and purposes hereinbefore set forth.

**58,661.—SUBMARINE TORPEDO BOAT.**—Scovil S. Merriam, Springfield, Mass.

First, I claim the construction of the lower portion or bottom of a submarine vessel of heavy cast iron hull, containing the water tanks, in combination with the ends of the vessel, and arranged substantially as and for the purpose herein set forth.

Second, The arrangement of the rope or cable, guide pulley and windlass with gearing, for the purpose of operating the suspended ballast in a perfectly air-tight box, operating and being operated substantially in the manner and for the purpose described.

Third, I claim, in combination with a submarine vessel, the arrangement of a torpedo bar near the bow, at the bottom of the vessel, and the manner of operating said bar from the inside of the vessel, in the manner substantially as described.

Fourth, I claim the arrangement of a chamber, X, capable of being closed perfectly air-tight, and surrounding one or more of the doors in the bottom of the vessel, for the purpose substantially as specified.

Fifth, I claim the construction of a submarine vessel, consisting of a heavy cast iron bottom plate with an iron or copper hull, in combination with the water tanks arranged in the bed plates, the air chambers around the side, top and ends of the working compartment, the suspended ballast weight, the screw propeller worked either by hand or by a compressed air engine, and the torpedo bar with exploding shell at its end, when the whole is arranged and combined in the manner and for the purpose substantially as set forth and described.

**58,662.—FIRE AND BURGLAR ALARM.**—Edward Middleton, Cleveland, Ohio.

I claim the spiral springs, Q, yoke, R, cross piece, X, arm, Y, levers, S, and cords, T, as arranged, and in combination with the spring, E, with the hammer, G, and bell, P, arranged in the manner and for the purpose set forth.

**58,663.—ATTACHING THILL OR TONGUE TO VEHICLES.**—Jonathan S. Miller, Everton, Ind.

I claim the combination of a clip formed in two parts, C and C', brace, G, and bolt, E, when said several parts are respectively constructed and arranged for use substantially as set forth.

**58,664.—SAW.**—Warren P. Miller, San Francisco, Cal.

I claim an insertable tooth for saws, when said tooth is constructed upon lines having a true circle and comprising more than one hundred and eighty degrees of the circle, and inserted into a cavity in the saw plate of a shape to fit said tooth, substantially as described.

**58,665.—MANUFACTURE OF SPOONS.**—G. I. Mix, Wallingford, Conn.

I claim the spoon blank cast and subsequently rolled, as described, as an article of manufacture.

**58,666.—ANNEALING FURNACE.**—Hiram W. Moore, Bridgeport, Conn.

I claim the openings, a, a', at the base of the annealing case, in combination with the annular flue, and perforated plate, J, for admitting atmospheric air to promote the combustion of the carbon in contact with the wheels, substantially as described.

I also claim, in combination with the case, A, the opening, b, the horizontal air flue, G, and the vertical flue space, H', for conveying air to and cooling the hubs of the wheels, substantially as described.

I also claim, in combination with the annealing furnace for containing a pile or series of wheels, the series of perforated and flanged rings to be placed between said wheels for regulating and controlling the combustion of the charcoal therein, as and for the purpose described.

**58,667.—PAPER FASTENER.**—George G. W. Morgan, Washington, D. C.

I claim a paper or other fastener formed out of a rhomboidal blank and bent into a bow or staple form, and capable of piercing and cutting its way into or through the paper or other material, and of being bent down or clinched by the thumb and finger or hand of the user, and overlap each other as shown at the line, b, figs. 2 and 5, without the use of any special instrument for inserting and clinching it, all as herein described and represented.

**58,668.—WINDOW CURTAIN.**—William Henry Morrison, Indianapolis, Ind.

I claim the combination of the roller, E, and the double curtain, F, F', having the apertures, X, X', in the opposite parts, substantially as described, when the combination is used for the purposes specified.

**58,669.—CLOTHES WRINGER.**—Hiram Nash, Cincinnati, Ohio.

I claim the combination of the inclosing case, D, made up of the plate, f, and cover, b, and provided with the concentric bearing, K, K', with the set of gears, 1, 2, 3, 4, arranged as described, the whole used in connection with the rollers, B, B', substantially in the manner and for the purpose specified.

I also claim the tightening buttons or wedges, p, p, in combination with the clamps, G, G', and standards, A, A', arranged and operating as set forth.

**58,670.—HEMMING GUIDE FOR SEWING MACHINES.**—S. D. Ogburn, Springfield, Tenn.

First, I claim the plate, B, arranged, as shown, with several curved slits as measures of quantity for different widths of hem.

Second, I claim, in combination with the above, the removable pin, E, in the plate, D, as and for the purpose described.

**58,671.—EVAPORATOR.**—Samuel Page, McAllisterville, Pa.

I claim the arrangement of the pans, A, E, G, with the connecting pipe, C, strainer, B, and the furnace flues, substantially as described and represented.

**58,672.—WELL BORER.**—John T. Parker, Farmington, Maine.

I claim the combination of the slotted part, B, part, A, stop pin, e, and bing, c, operating substantially as described for the purpose specified.

**58,673.—PAPER COLLAR AND BOSOM.**—Moritz Pinner, New York City.

First, I claim a substitute for a shirt collar and a shirt bosom, such substitute being made in whole or in part of paper cut in one or more pieces, and made to fit or adjust itself around the neck and over the collar bone and chest of the wearer, substantially by the means and in the manner herein set forth and described.

Second, Combining the collar part, A, with the bosom part, B, of

the above invention by means of one or more strips, c, for the purpose of strengthening, connecting or holding in place such parts, A and B, or either of them, all substantially as herein set forth and described.

Third, Bending, creasing or indenting on line, d, the product embraced in the above invention, for the purpose herein set forth and described.

Fourth, Making the above described article open and adjustable on any side or part of the neck of the wearer.

Fifth, Printing on and embossing the above described article, or the material of which it is made, in whole or in part, all substantially as herein set forth and for the purposes specified.

**58,674.—FRUIT JAR.**—George A. Reynolds, Rochester, N. Y.

I claim the arrangement of the clamping bar, B, having the inclined planes or hooks, c, formed upon its ends, and provided in the center with a fixed elastic packing, t, for the vent formed in the apex of the cover in this class of self-sealing cans or jars, as and for the purpose shown and described.

**58,675.—HEEL IRON.**—W. M. Rice, Boston, Mass.

I claim, as a new article of manufacture, the above described heel iron, to wit: heel irons made thickest on that part or side which usually wears out fastest and beveled on the inside, as described, so as to be held on to the heel by the leather nailed or pegged in the inside of said irons.

**58,676.—MACHINE FOR PUNCHING SHEETS OF METAL.**—J. M. Riter and L. J. Farquhar, Pittsburgh, Pa.

First, We claim the combination of the adjustable diagonal rack, E, with the rack table, D, and itsatchet, h, for the purpose of regulating and varying at pleasure the length of each separate movement of the rack table.

Second, The combination of the rack table, D, and the turning frame, K, attached thereto by a rivet for the purpose of producing a curvilinear movement.

Third, The combination of the rack table, D, and roller, K, pivoted thereto with the adjustable angle plate, L, and frame, g', g', or other similarly arranged bearing surfaces, constructed substantially as and for the purposes hereinbefore set forth.

Fourth, Also, in combination with the devices specified in the third claim, the slide, q, with screw, J, and spiral springs, u, constructed and arranged substantially as hereinbefore described for the purpose of pressing the frame, K, against the rollers.

**58,677.—CAR SPRING.**—Archibald H. Rowand, Allegheny, Pa.

I claim an elliptic spring, composed of a single strip of steel, formed in the shape substantially as shown, so that it will retain its form without the use of clamps.

**58,678.—STEAM GENERATOR.**—Esau Rowing, Parkersburg, W. Va. Antedated September 23, 1866.

I claim so arranging a series of inclined tubes, a, with reference to the drum, f, that the water line intersecting the drum at its center shall leave a gradually increasing steam space in the tubes, g, from the lower or furnace end of said tubes to the point of their junction with the drum, substantially as and for the purposes set forth.

**58,679.—BED BOTTOM.**—Rufus S. Sanborn, Ripon, Wis.

I claim a bed bottom formed by interweaving with the ordinary slats, cords or bands of India rubber or other suitable elastic material, substantially in the manner described and shown.

**58,680.—OBSERVATORY.**—L. B. Sawyer, Charlestown, Mass.

First, I claim the employment, in combination with a tower, of a car of an annular form working upon guides upon the exterior of the tower, and holding apparatus for raising and lowering the car, substantially as described.

Second, The employment, in combination with the tower, of the projecting arms of the frame, D, to which the guys are attached, by which the car is permitted to rise to the top of the tower without coming in contact with them, substantially as described.

Third, I claim the annular counterpoise working within the tower in combination with the annular car working upon the exterior of the tower, substantially as described.

**58,681.—MACHINE FOR SPLITTING AND SKIVING LEATHER.**—Samuel H. Schenck, Zionsville, Ind.

First, I claim the checks, 7, 7, the adjustable skiving block, 1, the knife, 2, and its attachment to the lever, 3.

Second, The roller, 5, in connection with the skiving fences and the set screw, 6, all arranged and operating substantially as set forth and described.

**58,682.—CHAIR.**—Charles C. Schmitt, New York City.

I claim a chair frame susceptible of being adjusted to any inclination desired, from a horizontal to a vertical plane, or nearly so, in combination with a seat and back composed of a continuous strip of cloth so hung to the chair frame that it can be lengthened or shortened, in the manner herein specified and for the purpose set forth.

**58,683.—FLY FAN.**—J. G. Schwemmer and S. Mueller, Philadelphia, Pa.

We claim the flaps, A, A, when operated by the described cam movement through a sliding rod, E, bell cranks, B, B', and links, c, c, and when arranged for the purpose of giving access to the articles thereby protected from insects, substantially as set forth.

**58,684.—ERASER AND BURNISHER.**—A. G. Shaver, New Haven, Conn.

I claim, in combination with the blade or handle of an eraser or desk knife, a burnisher tip, substantially as described.

**58,685.—STEAM GENERATOR.**—Simeon Sherman, Weston, Mo.

First, I claim the central chamber, F, and outer chamber connected by the vertical pipes, I, which operate as described, in combination with the tubes, K, and mud valves, L, for the removal of sediment.

Second, The revolving arrangement of perforated troughs for dripping the water upon the heated surface, as described.

Third, The plates, R, attached to the heated surface for the retention of the water, as and for the purpose described.

**58,686.—MANUFACTURE OF CIGARETTES.**—Samuel Shuck, Bedford, Pa.

First, I claim the method herein described of filling a wrapper with fine-cut tobacco by means of a tube and piston, the wrapper being drawn over the tube and receiving the core as the same is pushed out of the tube by the piston, substantially as shown and described.

Second, The method herein described of forming the wrapper preparatory to filling, by means of the forming plate, Fig. 2, and the hinged plate, Fig. 3, substantially as described.

Third, I also claim the within-described method of filling and packing the wrapper by inserting the fine-cut tobacco through a tube inclosed in the wrapper, and moving the said tube up and down in the wrapper during the process of filling, as described.

**58,687.—PAPER HOLDER.**—D. M. Smith, Springfield, Vt.

I claim the construction and arrangement of the coil spring provided with a point, B, that pierces the eye or hole, C, and all from one piece of wire, substantially as and for the purposes described.

**58,688.—LOCK.**—Amos W. Snow, Norwich, Conn.

I claim the arrangement of the latch bolt, C, with its arm, f, the spring tumblers, h, b, as described, and guard plate, l, constructed and operating in combination with a suitable handle and key, in the manner herein specified.

**58,689.—HORSE RAKE.**—Jacob A. Spear, Braintree, Vt.

I claim the arrangement upon the carriage, A, B, C, of the boards, E, J, and bars, H, H', as and for the purpose herein described and represented.

I further claim, in combination with the above, the hinged rock shaft, F, levers, G, G, connecting bars, G' and P, reaches, M, bars,

Q, and the sectional jointed rake, o, o' R, R, S, when constructed and arranged in the manner and for the purpose specified.

**58,690.—HAIR RESTORATIVE.**—John Sprink, Council Bluffs, Iowa.

I claim the proportionate quantities of the ingredients as compounded and made for a vegetable hair tonic, substantially in the manner and for the purpose as herein specified.

**58,691.—DOUGH MIXER.**—John M. Stanyau, Milford, N. H.

I claim the improved dough mixer, made substantially as described, viz.: of the pan and cover with the handle socket and the journal applied and arranged in manner as specified, such cover and pan being provided with suitable connections, as set forth.

**58,692.—VISE FOR HOLDING SAWS.**—G. N. Stearns, Syracuse, N. Y.

I claim the herein-described vise as a new article of manufacture, for the purposes set forth.

**58,693.—CORN CULTIVATOR.**—L. O. Stevens, Pekin, Ill.

I claim the frame, D, arms, N, N, and beams, A, A, combined and operating substantially as described for the purpose specified.

Further claim the curved or arched bars, M, M, in connection with the frames, K, K, for supporting the shaft, L, substantially as and for the purpose specified.

**58,694.—CLAMP FOR WRINGING MACHINES.**—James Stimpson, Baldwinville, Mass.

First, I claim the adjustable rods, H, attached to or cast with horizontal bars, G, which are fitted loosely on the pendular bars, a, of the end pieces, A, and provided with screws, I, to bear against the edges of sector projections, J, for the purpose described.

Second, The springs, K, in combination with the adjustable rods, H, set screws, I, and pendular bars, a, arranged as and for the purpose set forth.

**58,695.—SHEEP SHEARS.**—James A. Strong, North Wolcott, Vt. Antedated Sept. 30, 1866.

First, I claim the flanges, A' B', in combination with the blades, A, B, and spring, C, as and for the purposes herein specified.

Second, The swelled or turned-up front, A', arranged relatively to the flange, A', blades, A, B, and spring, C, substantially as and for the purpose specified.

**58,696.—BEEHIVE.**—Samuel Taylor, Burlington, Maine.

I claim a beehive constructed of a series of sections, A' A' A'', in combination with sliding frames, E, applied or fitted to the sections, and constructed substantially in the manner shown and described for the purpose set forth.

**58,697.—BEEHIVE.**—Henry A. Tozier, Littleton, Me.

I claim the removable plate or board, D', placed within the body, A, of the hive, substantially in the manner and for the purpose herein set forth.

**58,698.—COTTON TIE.**—Charles W. Wailey, New Orleans, La.

I claim the metallic tie or buckle, A, when constructed as described for the purpose set forth.

**58,699.—BALANCE SLIDE VALVE.**—John W. Wait, Portsmouth, Ohio.

I claim the valve block, A, and steam channels, C, C', of the two balance slide valves, D, D', constructed, arranged, and operated substantially as and for the object specified.

**58,700.—MACHINE FOR PRESSING BRICKS.**—William H. Walrath, Chittenango, N. Y.

First, I claim the arrangement of a stationary table, H, upon the upper surface of the revolving mold table, C, in combination with revolving blades, g, which are so arranged as to sweep the bricks from the followers, F, upon said stationary table, substantially as described.

Second, In combination with the pug mill, B, and revolving mold table, C, I claim the upward moving followers, B', and plate, G, which is sustained by means of the brackets, J, J', bolted upon the frame, A, so that the resistance to the upward pressure of the followers will be sustained by said plate brackets and frame, substantially as described.

Third, Providing for adjusting the elevated portion of the track, E, at the point where the made bricks are discharged from the mold, by means substantially as described.

Fourth, Communicating motion to the mold table directly from a horizontal driving shaft, L, in combination with the shaft, C, and spur wheels, b, b', so that the stirring shaft of the pug mill, as well as the mold table shall receive motion from said main shaft, substantially as described.

Fifth, Communicating motion to the revolving blades, from the shaft, L, which moves the mold table, C, substantially as described.

Sixth, In combination with a revolving mold table, C, I claim the device which will discharge the bricks from the follower plates upon a stationary table, H, or its equivalent, substantially as described.

**58,701.—PLASTERING MOLD FOR CORNICES.**—C. P. Walter, Aston Township, Pa.

First, I claim the combination of the former, B, with the guides A, A', in the manner and for the purpose substantially as shown and described.

Second, The slotted plate, E, and screws, c, or their equivalents, in combination with the former, B, and the guides, A, A' whereby the mold is made adjustable to angles of any degree, substantially as described.

**58,702.—REAPING MACHINE.**—Horatio Whitney New York City.

I claim the adjustable toothed chain or bolt, N, in combination with the inclined plate, M, arranged and operating substantially as described.

**58,703.—MOP HEAD.**—Ruel W. Whitney and Abner C. Stockin, South Berwick, Me.

We claim the improved mop head made as described, viz.: of the bearer, the yoke and the collar, constructed, arranged and applied together and to the handle, substantially as specified.

**58,704.—CHUCK.**—D. E. Whiton, West Stafford, Conn.

I claim the chuck consisting of the jaws, B, scroll disk, D, pinion, F, and hollow shoulder nut, M, combined and operating substantially as described for the purpose specified.

**58,705.—COOKING STOVE.**—William Wilson, Boston, Mass.

First, I claim in cooking stoves the use of the removable intermediate plates, e, e, and slab, ff, arranged as described, and for the purpose specified.

Second, In combination with the above, the arrangement of the draft chamber, k, k, as and for the purpose specified.

Third, The use of an elevator damper, r, r, arranged and operating in their box, o, o, substantially as and for the purpose herein set forth.

**58,706.—CORN HARVESTER.**—James F. Winchell, Springfield, Ohio.

First, I claim the cutting apparatus consisting of the revolving disks, P, P, or their equivalents, in combination with the stationary blade, L, when said parts are arranged to operate as set forth.

Second, The combination of the tilting rack, D, stop bar, a, and lever, b, and spring, H, when arranged to operate as herein shown and described.

**58,707.—GRAIN SEPARATOR.**—S. M. Wirts and F. Swift, Medina, Mich.

First, We claim the movable shaking spout or trough, L, operated by means of the bar, K, and the shoe, C, substantially as herein specified.

Second, The screens, a and G, as constructed and combined in

the supplemental shoe and with the carrier board, e, as and for the purpose specified.

Third, I claim the combination of the rod, o, with the main shoe and supplemental shoe for regulating the inclination of the latter, as and for the purpose set forth.

Fourth, The employment of the rod, i, in combination with the lower screen, l, for the purpose of adjusting the inclination of said screen and imparting a bounding motion to it, substantially as set forth.

Fifth, The supplemental shoe pivoted at its inner end to the main shoe so as to allow of adjustment of its outer end, as and for the purpose specified.

58,708.—TAKE-UP FOR NARROW-WARE LOOMS.—Martin Wolf, New York City.

I claim the arrangement of a movable roller, F, attached to a sliding block, C, and operated or acted upon by a weight, in combination with a stationary roll, G, which is applied to the woven material at any place between the breast beam roller, A, and the take-up roller, B, in the manner and for the purpose substantially as set forth and described.

58,709.—SPECULUM.—Thomas D. Worrall, Central City, Colorado.

First, I claim so constructing a vaginal speculum that the motion of its valves shall be confined exclusively to that portion of the vagina which is inside the pelvic bone.

Second, I claim so constructing a speculum that the whole of its valves may be worked simultaneously or one or more separately at the pleasure of the operator.

Third, I claim the use of rubber or other flexible material either securely fastened to or loosely surrounding a valved speculum and operating with it for the purpose set forth.

Fourth, I claim the screw, F, in combination with the joint, J, and the nut, C, for the purposes set forth.

Fifth, I claim the joint, K, in combination with the screw, F, and the nut, C, for the purposes set forth.

Sixth, I claim the ring, D, in combination with the tube, A, the nuts, H, the nuts, C, the screw, F, the joints, J and K, and the valves, B, for the purposes set forth.

58,710.—RAILWAY-CAR WINDOW.—J. K. Andrews, Antrim, Ohio, assignor to J. C. Tilton, Pittsburgh, Pa.

I claim the curved screens, K K, with their convex side turned inward, in combination with the curved grooves, M M, situated between the panels, H and E.

58,711.—MACHINE FOR PICKING AND OPENING FIBROUS MATERIALS.—Samuel Baxendale, Boston, Mass., assignor to himself and Thomas H. Denham, of the same place, and Samuel B. Thaxter, Abington, Mass. Antedated Sept. 23, 1866.

I claim a series of divisions or partitions so placed as to form passages or channels leading to the wire cage of a picking, blowing, or separating machine, and causing the floating fibers to be deposited upon the cage in separate slivers or fillets, substantially as herein described and for the purpose specified.

58,712.—ADJUSTABLE SHELF FOR STOVEPIPE, ETC.—S. V. Beckwith, Hamden, Conn., assignor to himself and I. B. Carpenter, New Haven, Conn.

I claim the combination of the adjusting band, B, the socket, C, and the shelf, D, provided with a shank, F, constructed and arranged so as to be adjustable, substantially in the manner set forth.

58,713.—ADJUSTABLE RAILWAY-CAR SEAT.—W. N. Bragg (assignor to himself and Wm. H. Trainham), Richmond, Va.

I claim the arrangement and combination of the slotted scroll, D, and rest, B, with the adjustable foot rest, F, and foot lever, G, when constructed and operated as herein described and for the purposes set forth.

58,714.—MACHINE FOR FITTING AXLE SPINDLES TO SKEINS OF WAGONS.—Cornelius L. Campbell (assignor to Washington W. Wheaton), Birmingham, N. Y.

I claim the manner of fitting the arms or spindles of axletrees for wagons to cast-iron skeins or timbers, by means of the revolving cutter, J, in combination with the adjustable way or guide-plate, L, the feed screen, E, and the hinged nut, K, substantially as and for the purposes described.

58,715.—ELEVATOR.—Thomas F. Christian (assignor to himself and Willie Daniel), Wilson, N. C.

I claim the arrangement and combination of the base frame, A, B, cylinder, C, guide rollers, a, a, on the bent arms, b, b, with the top winch frame, D, E, winchlass, F, G, chain pulleys, h, h, adjustable endless chain, H, H, and elevating buckets, I, I, to operate at various heights, substantially as and for the purposes herein set forth.

58,716.—PEN RACK AND BILL HOLDER.—C. P. Crossman (assignor to himself and Pembroke Churchhill), West Warren, Mass.

I claim, First, The pen rack, B, in combination with a bed piece, A, substantially as specified.

Second, I also claim the bill holder, C, in combination with the pen rack, B, and bed piece, A, substantially as specified.

58,717.—CONNECTING AND SUPPORTING STOVEPIPE.—Solomon Crowell (assignor to himself and James B. Rae), Syracuse, N. Y.

I claim the coupling, b, and the flange on the coupling, c, and the tension rod, e, when the same are constructed, combined, and used in the manner as substantially set forth and described.

58,718.—COMPOSITION FOR PAVEMENT, ETC.—Geo. W. Davis, Fitchburg, Mass., assignor to Silas Pratt and E. S. Russell.

I claim a compound for covering walks, and for other similar purposes, composed of the above named substances, substantially in the proportions specified.

58,719.—GRINDING MILL.—Chester F. Dean, St. Johnsbury, Vt., assignor to himself, Horace Paddock, Halsey R. Paddock, and Moses E. Barrett.

I claim the combination of the grinding cylinder, the stationary grinders, and the foraminous apron, arranged as specified.

58,720.—HARVESTER.—Charles Denton, Pekin, Ill., assignor to himself, Samuel E. Barber, and Samuel F. Hawley, Decatur, Ill.

I claim, First, The attaching of the spout, P, to the front part of the framing, by means of springs, G, G, substantially as and for the purpose described.

Second, The arrangement of the racks, a, a, on the guide, I, attached to frame, A, in combination with the plintons, J, J, secured to the pole or tongue, G, as shown and described, for adjusting the sickle higher or lower, as described.

58,721.—PIPE FOR OIL WELLS.—John H. Duck and Elias K. Whitcomb, Elgin, Ill. Said Whitcomb assigns his right to J. T. Whipple, Chicago, Ill.

We claim the tube or screw, S, suspended within the main tube, L, by means of flanges, V, V, in combination with the several parts of the within described device, for the purpose specified.

58,722.—WOOD-SCRAPING MACHINE.—Erasus S. French (assignor to Joshua W. Partridge), Templeton, Mass.

I claim the combination, as well as the arrangement of the guide, E, reciprocating driver, G, the two scrapers, and the mechanism for advancing and reeling the driver, and clutching and unclutching its drum, with respect to the driving shaft, the whole being so as to operate as explained.

58,723.—CAR COUPLING.—D. C. Guttridge, Canton, Ohio, assignor to himself and William Cluff, Stark county, Ohio.

I claim the rod, C, provided with the prong, F, and connected to the coupling pin, D, when used in combination with the movable coupler, B, and rod, G, as herein set forth.

58,724.—CORN PLANTER.—E. R. Holford (assignor to himself, Abiah Kingsley, and Clark Alvord), Westford, Wis.

I claim, First, The cam, D, in combination with the lever, E, and slides or valves, G, for the purposes and substantially as described.

Second, I claim the cam, D, in combination with the bar, F, levers, I and P, for the purposes and substantially as herein set forth.

Third, I also claim the arrangement of the levers, I and R, for the purpose of elevating and lowering the plows, substantially as herein described.

58,725.—BUCKLE.—O. L. Hopson, Waterbury, Conn., and H. P. Brooks, Wolcottville, Conn., assignors to the Turner & Clark Manufacturing Co., of the latter place.

We claim, First, The buckle frame, formed with double bends in the sides between the main portion and the loop, one portion of said double bend at each side of the frame, forming the axis for the tongue, substantially as specified.

Second, We claim the wire tongue formed with eyes, connected by the central portion of the wire, in combination with the aforesaid buckle frame, having double bends in its sides, substantially as set forth.

58,726.—SAWING MACHINE.—Jerome Hoyt (assignor to himself, Edwin Hoyt and Lafayette Farrington), Stamford, Conn.

In sawing machines I claim the combination of the grooved uprights, A, a sliding frame, B, saw frame, D, guides, I, J, spring pawl, H, and rack, J, when arranged and operating substantially as described, for the purpose specified.

58,727.—APPARATUS FOR GENERATING STEAM.—Elias S. Hutchinson (assignor to himself and Hugh L. McAvoy), Baltimore, Md.

I claim, First, The combination of an air-forcing apparatus and carburetor, with the engine and the boiler, for the purpose described.

Second, In combination with the engine, air-forcing apparatus, carburetor, and boiler, I claim the chamber for reserve of compressed air, as and for the purpose described.

Third, I claim the boiler tubes, constructed with a spherical or equivalent enlargement, as and for the purpose described.

58,728.—SOLDER-CASTING MACHINE.—E. M. Long, Portland, Me., assignor to himself and Isaiah Gillman.

I claim, First, The combination and arrangement of the balance wheel, A, geared wheels, B and C, and mold, D, substantially as set forth.

Second, The combination and arrangement of the receptacle, E, and cooler mold, D, or their equivalents.

Third, The combination of the receptacle, E, bar, h, joint, f, uprights, m and n, arranged in the manner and for the purposes described.

58,729.—BARREL MACHINE.—P. H. Lawler, Rochester, N. Y., assignor to himself and D. W. Roche.

I claim, First, Hanging the clamping frame, F, upon an axis arranged diagonally with relation to that of the clamping collars, and parallel with relation to that of the saw, as and for the purposes set forth.

Second, The arrangement of the adjustable tappet bar or cam, m, with the pin, n, substantially in the manner and for the purposes set forth and described.

Third, The arrangement with the sliding mandrel, I, in the swinging frame, F, of the spring, s, the pivoted lever, N, and cam, M, substantially as shown and for the purposes set forth.

58,730.—MACHINE FOR POINTING WIRE.—Eli J. Manville, Waterbury, Conn., assignor to O. L. Hopson and H. P. Brooks, Litchfield, Conn.

I claim, First, The shaft, a, formed with a cross mortise or slot, containing the dies, c, c, in combination with two or more pairs of toggle blocks around the said shaft, said pairs of toggles acting alternately upon the dies, in the manner substantially as set forth.

Second, I claim the conical or tapered pointed screws, f, i, in combination with the cap, f, dies, c, shaft, a, and toggle blocks, d, d, all arranged as and for the purposes set forth.

58,731.—GAS METER REGISTER.—William McDonald (assignor to himself, Donald McDonald, and Noel E. Sisson), Albany, N. Y.

I claim, First, One or more intermediate wheels employed to communicate motion from the measuring bellows to the registering wheels, and so connected to the latter that either a forward or backward motion of the intermediate wheel or wheels will communicate a forward motion to the registering wheels.

Second, The arrangement and combination of the wheels, F and G, when constructed and operating in conjunction with the wheels, A, B, C, D, and E, substantially as and for the purposes set forth.

58,732.—FOUNTAIN PEN.—George R. Metten, St. Louis, Mo., assignor to Horace Baldwin, Painesville, Ohio.

First, I claim in atmospheric fountain pens, causing an automatic flow of ink by reason of the act of writing, substantially as described.

Second, I claim in atmospheric fountain pens supplying the place of the ink discharge from the ink reservoir with air during and by reason of the act of writing, substantially as described.

Third, I claim so constructing a fountain pen that the act of writing will open and close a vent hole for the admission of air into the ink reservoir, substantially as described.

Fourth, I claim so constructing a fountain pen that the amount of ink discharged from the ink reservoir, and the amount of air admitted therein, shall be in proportion to the stroke of the pen, whether light or heavy, substantially as described.

Fifth, I claim attaching the pen, G, to an oscillating or hinged disk, c, substantially as and for the purposes described.

Sixth, I claim the rod, k, in combination with the disk, c, substantially as and for the purpose described.

Seventh, I claim the spring, n, and cushion, n', in combination with the rod, k, substantially as and for the purpose described.

58,733.—MANUFACTURE OF JAPANNED LEATHER.—Jeremiah L. Newton, Boston, Mass., assignor to himself and William Wickersham.

I claim, First, The treatment of raw hide with japan varnish, or other suitable varnish, as and for the purpose above set forth.

Second, The preparatory process by immersing the hide in some volatile substance, in combination with and preparatory for japan varnishing, substantially as above set forth.

Third, The subjecting of raw hides to a breaking process as a preparatory or an in combination with japanning, all substantially as described and for the purposes set forth.

58,734.—LADDER HOOK.—Joseph G. Rockwell, Cortland, N. Y., assignor to Calvin Eaton, Webster, N. Y.

I claim the extension ladder hook, constructed and operating substantially as shown and described, and for the purposes herein set forth.

58,735.—WATER METER.—Gerard Sickels, Boston, Mass., assignor to himself, James W. Preston, and Rufus S. Lewis.

I claim, First, Operating the valves by means of two sliding yokes in connection with a weight, or its equivalent, substantially in the manner herein set forth.

Second, I claim the sliding yoke, B, attached to the pistons, and provided with the wedge-shaped projection, E, or their equivalent,

for the purpose of changing the position of the valves, substantially as and for the purpose set forth.

Third, I claim the yoke, C, provided with the horns or projections, b, b, as and for the purpose set forth.

Fourth, I claim the weight, H, or its equivalent, in combination with the inclined, D, as and for the purpose specified.

Fifth, I claim the combination of the yokes, C, with the levers, F, and valves, s, as and for the purpose set forth.

Sixth, I claim the combination of the yoke, B, the yoke, C, levers, F, valves, s, and weight, H, or its equivalent, when operating substantially as and for the purpose specified.

58,736.—DUMPING CAR FOR COAL MINES.—M. G. Smith and William P. Stevens (assignors to M. G. Smith), Kingston, Pa.

We claim, First, The tilting or adjustable guides, G' G', constructed and operating substantially as shown and described.

Second, The use of the fan, J, or its equivalent, for the purpose of tilting or inclining self-dumping carriages, so as to dump or unload the car without removing it from the carriage while slack of substantially as herein shown and described.

Third, The combination of a fan or support, with the adjustable guides, substantially as herein shown and described.

Fourth, The combination of the weighted arm, L, with the fan, a, or support, substantially as herein shown and described.

Fifth, The combination of the dog, N, with the weighted lever, L, and fan, J, substantially as herein shown and described.

Sixth, The combination of the hook, n, with the arm, L, and fan, J, substantially as herein shown and described.

Seventh, The combination of the latch, S, with the arm, L, substantially in the manner herein shown and described.

Eighth, The combination of the bar, O, and arm, P, with the fan, J, and guide, G', substantially as and for the purpose herein shown and described.

58,737.—MAGAZINE FIRE-ARM.—Christopher M. Spencer (assignor to Spencer Repeating Rifle Company), Boston, Mass.

I claim the combination of the forked carriage guide, m, with the stop, s, in the face of the carrier block, for the purpose of arresting the motion of the latter at the proper point for the introduction of a cartridge, substantially as set forth.

58,738.—MAGAZINE FIRE-ARM.—Christopher M. Spencer (assignor to Spencer Repeating Rifle Company), Boston, Mass.

I claim controlling the action of the shell drawer and of the carrier block by means of the swinging stop, z, in combination with the carriage guide, m, in the manner set forth, for the purpose of converting the aim from a self-loader into a hand-loader, or vice versa, as described.

58,739.—ANTI-FRICTION DEVICE FOR THE AXLES OF MACHINERY.—N. Bailly and C. Durand, France, G. H. Mesnard and Z. Pozier, Eng.

We claim the combination and arrangement of the several parts for the production of an anti-friction bearing for rotating shafts, substantially as herein set forth.

58,740.—SHIP WINDLASS.—William Goodman, St. John, N. B.

I claim, First, The cam, F, loose on the capstan spindle, in combination with the coupling ring or collar, D, whereby the cam is connected with the spindle, substantially as described.

Second, I also claim the coupling collar, D, made with lateral teeth, E, and vertical teeth, Q, substantially as described.

Third, I also claim the combination of the revolving cam, F, with the pawl arms, I, substantially as described.

Fourth, I also claim the combination of the grooved upper collar, G, of the cam, with the teeth, E and Q, of the coupling collar, and the keys, S, substantially as described.

58,741.—CAR WHEEL.—Richard C. Mansell, Ashford, Eng.

I claim the exclusive use, as of my invention, of the improvements in the construction of wheels for engines and vehicles used on railways, by the adaptation and application thereto of retaining rings or tire fastenings, formed with outer flanges to support the part of tires which project over the sides of the bodies of wheels, and also the exclusive use of the adaptation and application to wheels of retaining rings or tire fastenings, made from flat bars of metal, the whole substantially as herein set forth, described and illustrated in and by the annexed sheet of drawings.

58,742.—CONSTRUCTION OF SHIPS.—John Weems, Johnstone, England. Patented in England November 20, 1865.

I claim obtaining and distributing buoyancy or weight in ships by regulating a pressure of air or other fluid on the water in which they float, substantially as herein described.

Also the removal of parasites from ships' bottoms after the manner hereinbefore described.

58,743.—APPLICATION OF RUDDERS TO SPINDLE-SHAPED HULLS.—William Louis and Thomas Winans, London, England. Patented in England December 8, 1863.

We claim, First, The rudders, d, placed between the brackets, c, and the midship of the spindle-shaped hull, its leaves occupying respective sides of the single propeller shaft, substantially as described, for the purpose specified.

Second, The bracket, d, placed between the brackets, c, and the midship of the spindle-shaped hull, when arranged with more than one propeller shaft, substantially as described for the purpose specified.

58,744.—PROPELLER.—William Louis and Thomas Winans, London, Eng. Patented in England June 20, 1863.

We claim, First, The adaptation to and combination with a spindle-shaped vessel, such as was invented by Ross and Thomas Winans, and for which Letters Patent were granted to them Oct. 26, 1859, No. 21,917, of one screw propeller placed at one end of the vessel, with its shaft coinciding with the center line or longitudinal axis of the vessel, or nearly so, the outside diameter of the hub of the propeller at one end corresponding with the outside diameter of the end of the vessel, and the other end of the propeller hub being continued to a point, thereby completing the spindle form of the vessel.

Second, The combination of the flanged hub, f, shaft, d, webs, f', projection, h, propelling blades, i, and feathers, i', arranged with the groove, portion, b, of the body, of the spindle-shaped hull herein described, substantially as and for the purpose specified.

REISSUES.

2,372.—COOKING STOVE.—James Spear, Philadelphia, Pa. Patented Feb. 19, 1861. (Div. A.)

I claim the combination of the sifting ash drawer, A and B, with the curved or guide plate, D, when used in connection with a stove or range, in which the oven extends under the fire-grate.

2,373.—COOKING STOVE.—James Spear, Philadelphia, Pa. Patented Feb. 19, 1861. (Div. B.)

I claim the arrangement of the ash drawer, B, having ball, G, combined therewith in an ash pit or chamber of a stove or range, and in combination with the fire grate or fire chamber thereof, so as to receive the ashes or cinders falling therefrom, and thereafter to be removed, substantially as described.

2,374.—COOKING STOVE.—James Spear, Philadelphia, Pa. Patented Feb. 19, 1861. (Div. C.)

I claim the arrangement of an ash pit under the hearth, and in front of a long oven stove, constructed and operating substantially as described.

DESIGNS.

2,487 and 2,488.—TRADE MARK.—John W. Carrol Lynchburg, Va. Two Cases.

2,489.—TRADE MARK.—William Freudenu (assignor to the Union Steam Mill Company), St. Louis, Mo.

2,490.—**DRAPERY TRIMMING.**—Catharina Lambert, New York City.

2,491 and 2,492.—**SHAWL BORDER.**—Morris M. Peyser, Boston, Mass. Two Cases.

2,493.—**CHILD'S LONG COMB.**—Leonce Picot, Hoboken, N. J., assignor to the Rubber Clothing Company, New York City.

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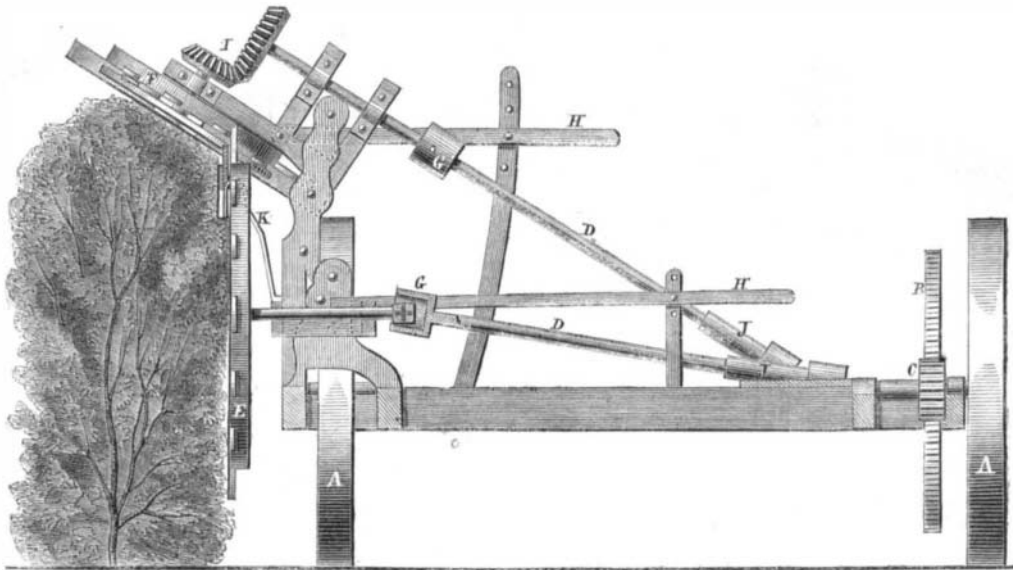
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VAN DE WATER CELEBRATED WATER Wheel for sale at the Eagle Iron Works, Buffalo, N. Y. 15 8"

TO ENGINE BUILDERS.—Ross's Celebrated Patent Oil Caps for Cylinders or Engines, Brass and Iron bolts, Globe and Check Valves, Gage Cocks, Whistles, etc., on hand and made to order. Price list sent on application. B. E. LEHMAN, Lehigh Valley Brass Works, Bethlehem, Pa. 15 4]

**Improved Hedge Trimmer.**

In England the hedge, or "live fence," has been the favorite means of inclosing farm lands for many generations. The hedge forms a beautiful feature in the landscape, and, when attended to, is impervious not only to cattle, but to most of the smaller animals. The increasing value of land in England has, however, drawn attention to the necessity of substituting a fence requiring less room and casting less shade. In our Western prairies no necessity exists for thus carefully preserving every foot of arable soil, and the Osage orange, and other closely-growing shrubs, are utilized as fences.—The principal objection to them is the care required to keep them properly trimmed, so that they shall be induced to confine their growth to the limits best calculated to insure an impenetrable barrier. This work is now done by hand, but the improvement herewith illustrated, contemplates a revolution in this department of Western farm work. The engraving represents a frame carried upon two wheels, A, the treads of which may be corrugated to insure their rotation. The apparatus



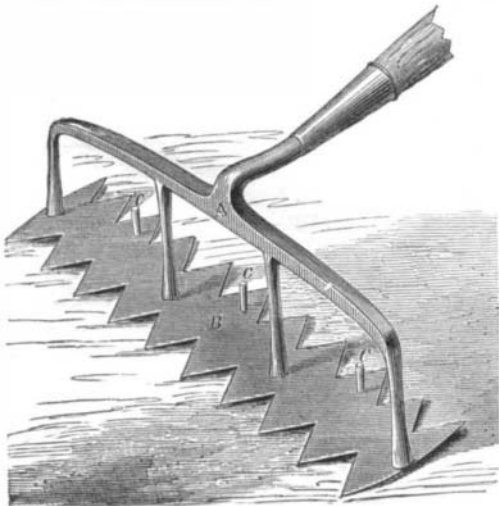
**OLIVER'S HEDGE TRIMMER.**

may be drawn by horses, attached to a tongue and axle which has two wheels, not shown. To the main shaft, which carries the two wheels on which the body of the machine rests, is secured a large gear, B, which drives two pinions, C, one on each side. These give motion to the shafts, D, one of which carries the vertical cutter head, E, and the other the oblique cutter head, F. The shafts, D, are jointed at G, by Balfour's universal joint, so that any angle desired may be given the cutter heads by means of the levers, H. The head, F, is revolved by the intervention of two bevel gears, I. Sleeves, J, which are adjustable, allow of the extension or contraction of the shafts, D. By means of a fixed disk outside the heads, E and F, which carry cutters corresponding with those on the revolving heads, the knives operate similar to the blades of scissors. A guide, K, passes out and in front of the cutting heads, which serves to bring every twig under the operation of the blades.

Where, as at the West, vast fields, on nearly level ground, are under cultivation, it seems as though this machine might be used to advantage. It was patented through the Scientific American Patent Agency, March 6, 1866, by David Oliver, whom address, Box 572, Galesburg, Ill., for additional particulars.

**ALLEN'S WEEDING OR SCUFFLE HOE.**

Few farm or garden crops require more thorough



culture than onions, carrots, beets, etc., which are usually planted in drills. While growing they must be

kept free from weeds if the farmer intends to get a decent crop. The simple implement here shown will commend itself to every practical farmer and gardener as an efficient and handy article. The frame, A, is of wrought or malleable iron, the supports being lozenge-shaped across their transverse section, to act as pulverizers and looseners of the soil. To them is attached a steel blade, B, having serrated teeth sharpened from the under side. Pins, C, project from the upper side to catch the weeds and also to loosen the

This ingenious device was patented through the Scientific American Patent Agency, Aug. 14, 1866, by Charles Gschwind and John Grether, Union Hill, North Hudson county, N. J., to whom apply for further information.

**The late Marine Disasters.**

The appalling wreck of the steamship *Evening Star* has been very generally commented upon by the local press, but no light has been thrown upon the cause of the disaster, though the owners of the vessel are very generally censured for the meager number and character of the life-boats in proportion to so large a body of passengers. The public have a right to a thorough investigation of all the facts connected with the disaster, and it is to be hoped that such investigation may lead to a searching scrutiny of the present system of inspection. It is stated by a morning contemporary that, about the month of July last, the *Evening Star* went ashore on the Florida Reef, from which she received considerable damage; that a hole was stove in her bottom, and her keel was partially

broken off, and that the keel was then cut away, and a piece was scarpd in level with the keel. In place of six life boats prescribed by law, it is said that she had only four, and that even these would scarcely have borne up the whole number of passengers and crew in ordinary weather. The public will probably insist upon rigid proof that the perils of the sea were not heightened by the defects alluded to. The *Evening Star* was a side-wheel steamer, with upright engines, and that she was considered by her owners a seaworthy vessel is inferred from the fact that, although valued at \$500,000, she was uninsured.—*Shipping and Commercial List.*

THE Russian army numbers 1,135,915 men in addition to 119,540 Cossacks liable to serve.



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FROM THE STEAM PRESS OF JOHN A. GRAY & GREEN.

soil. They can pass through, if desired, to more effectually subserve this purpose. By having the teeth formed like those of a saw they are less liable to become dull. They cut the weeds, and the end supports serve as guides in working close to the rows.

Patented through the Scientific American Patent Agency, April 24, 1866, by George P. Allen, Woodbury, Conn. Address as above for further information.

**GSCHWIND AND GREETHER'S COMBINATION HOOK AND HOLDER.**

This neat little implement may be called the traveler's convenience. It combines a cigar holder, hat hook, and toothpick, in a neat, portable and handy form. The engraving exhibits it of full size. It is made of brass gilded, or any other metal. The ornamental jaws, A, are hinged at the other extremity, and are held open by the spring of the metal passing round the pivot at B. An embracing clasp, C, can be slipped down the shank, when the two jaws are brought together, and grasping a hat, cap, or other article, it can be hung to the wall by means of the hook, D. Pivoted to the rivet, B, is an ivory toothpick, E, and a metallic one, F. When used as a cigar holder the springs inside the bow, at G, embrace the weed, while the ring, H, is worn on the finger.—The toothpick blades close into recesses in the shank. It can be made small enough to be used by ladies for holding their sewing and also for fastening up the skirts of their dresses.

