ISSUED FROM THE U. S. PATENT OFFICE

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58,040.—BOLT.—David E. Adams, Alleghany City, Pa.

I claim staving up or enlarging and forming into an oval or elliptic form (when viewed in cross section) that part of the rod of iron intended for the head and square of the neck of bolts, said staving or enlarging into said oval or elliptic form being done previous to the formation of the squaring of the neck and forming of the head of the bolt, which squaring and heading is performed at a subsequent operation.

58,041.—CAR COUPLING. — Homer Atkins, Plymouth, Ill.

I claim the a ustable frame, K, with cross bar, h, and cross rod, g, attached, in combination with the rack bar, I, spring, j, and link, G, all arranged and applied to the draw head, A', to operate substantially as and for the purpose set forth.

58,042.—GLOBE STEAM VALVE.—James O. Attick, Dayton, Ohio.

I claim the arrangement of the shouldered valve stem of the valve, B, with reference to the packing nut, D, nut, C, and valve seat, F, for the double purpose of packing the stem and holding the valve against its seat, in the manner substantially as described.

58,043.—ALARM LOCK.—Seth A. Andrews, Farmer's Valley, Wis.

First, I claim the combination of the sliding barrel, X, the trigger or dog, I, the lug, M, of the barrel, and the spring, P, substantially as described.

Second, I also claim the bolts, Z Z', constructed substantially as described, one being a short bolt, in combination with the claims, J, of the trigger-arm, H, substantially as described.

Third, I also claim forming a magazine, S, in the lock, at one side of the barrel chamber, substantially as described, with a priming orifice, R, in the path of the sliding barrel, substantially as described.

Fourth, I also claim covering the magazine with a cover, J, weakened by grooves or their equivalents, substantially as described.

58,044.—APPARATUS FOR THE MANUFACTURE OF VINEGAR.—Ernest Arleth, Cincinnati, Ohio.

First, I claim the tub, A, having a chamber, C, in combination with tubes, F, and conveying pipe, J, all constructed as above described and for the purpose set forth.

Second, The adjustable cold-air pipe, E, construc ed as above described.

Third, The cold-air pipe, E, in combination with tub, A, as above set forth.

58,045.—COMBINED SEED DRILL AND CULTIVATOR. Aaron Armstrong, Gillespie, Ill.

First, I claim the combination of the roller, D, with the sliding plate, K, and lever, E, as and for the purpose set forth.

Second, I claim the roller, B, in combination with the corn planter, C D K F, the stalk cutter, M, and the seed drill, G I H, when the same are all constructed upon one common frame, A, from which any of the parts except the roller, B, may be removed at pleasure.

58,046.—SPINDLE FOR SPINNING FRAMES.—John E. Atwood, Mansfield, Conn.

First, I claim the inclined tube, D, provided at its upper end with a reservoir, g, in combination with the socket, B, and spindle, a b, when said socket is surrounded by a sleeve carrying the whirr, substantially as herein set forth for the purpose specified.

Second, The bar or rod, E, suspended within the tube, D, and in relation with the annular shoulder, r, formed around the lower end of the spindle, a b, substantially as herein set forth for the purpose specified.

58,047.—CHURN.—John A. Balzart, Piqua, Ohio.

I claim the combination with the suspended dasher of the pivoted arms, F F, forming a collar in the groove of the shaft, D, and the slide, G, for retaining the said collar in position, substantially as described.

58,048.—MACHINE FOR CLEANING GRAIN.—Benjamin Barney, Time, Ill.

I claim the rotary fan, C, hopper, D, shoe, E, provided with the riddle, K, chute, L, and cockle screen, M, and having a longitudinal shake motion communicated to it by the cam or eccentric F, and spring, H, in combination with the suction blast spout, N, all arranged substantially as and for the purpose set forth.

I also claim the valve, O, applied to the spout, N, and provided with the adjustable or sliding weight, g, substantially as and for the purpose specified.

I further claim the extension support, J, formed of the two parts, d d, connected by the screw, e, for the purpose of varying the inclination of the shoe, E, as set forth.

58,049.—CANE STRIPPER.—William N. Barr, Richmond, Ind.

First, I claim the combination of several sets of strippers in one frame, when constructed, arranged, and operating in such manner, substantially as herein described, that one spring acts upon two stripping edges or cutters.

Second, The arrangement of the parallel guide pieces, f h h', in combination with strippers, B C D E, and springs, F G H, all constructed and operating substantially in the manner set forth.

58,050.—GRAIN SCREEN.—C. F. Baylor, Trenton, N. J.

I claim the combination with the sieves, A B, and chute or conducting board, C, of the conductors, E E, all arranged to operate in the manner and for the purpose herein set forth.

58,051.—PAPER-MAKING MACHINERY.—Edward B. Bingham, Newark, N. J.

I claim the arrangement of two felts and four pressure rolls, as herein described, whereby the web is pressed three times between the two felts, in combination with the arrangement of the doctors, P Q, within the felts, to remove the water from the rolls, D E', as herein set forth.

58,052.—GRAIN SEPARATOR.—John S. Bodge, La Porte, Ind.

First, I claim the construction of covers, E E' E", of suitable thickness, covering the screens or sieves, B B' B", with chutes, H, between, corresponding in number with the smooth or imperforated surfaces, C, and opening obliquely or sloping downward nearly or quite their entire length, said chutes being so located that when grains, seeds, or other substances shall pass downward through them, they will fall or be precipitated directly upon the smooth or imperforated surfaces, C.

Second, Constructing and locating the covers, E E' E", in separate sections, with barriers, F, at their upper angles, and rectangular slips, G G', attached to the ends of said covers to elevate them the requisite height above the screens or sieves, B B' B", and to keep them the proper distance apart to allow the passage of grains, seeds, or other substances, in such manner that the oblique or sloping chutes, H, through which the grain finds its way upon the smooth or imperforated surfaces, C, above each screen or sieve, will retain their proper proportions and positions relative to the surfaces, C, and above each screen or sieve.

Third, The flaps or aprons, L, composed of flexible, textile, or other fabric, such as rubber, rubber cloth, oil cloth, painted cloth, or any preparation or fabric, so attached to the covers, E E' E", or to separate pieces to occupy their places, as to adapt themselves to the inequalities of the screens or sieves, B B' B", and to grains, seeds, or other substances which may be passed between said flaps or aprons and the screens or sieves, in such a manner as to prevent the longer and broader grains, seeds, or other substances from assuming an oblique or perpendicular position while passing over the screens or sieves, thus compelling said longer or broader grains, seeds, or other substances to pass over the screens or sieves flatwise, while the shorter, narrower, and smaller grains, seeds, and other substances are permitted to pass through them when the screens or sieves are in motion.

Fourth, The building or constructing of covers, E E' E", substantially as herein shown and described, so that they will expand or contract as equally in all parts as possible, and not be liable to warp or twist, thereby preventing the irregularities in their form which would otherwise occur.

Fifth, Securing the flaps or aprons, L, to the covers, E E' E", by means of the clip plates, A', as shown and described.

58,053.—SKIRT ELEVATOR.—P. J. Boris, Boston, Mass.

I claim the combination and arrangement of the cl sp, B, the tape, C, and the sheath, D, with a lady's skirt, substantially as described.

58,054.—LIQUID FOR CARBURETING AND ENRICHING GASES USED FOR ILLUMINATING AND HEATING.—John F. Boynton, Syracuse, N. Y.

First, I claim the improved liquids for carbureting or enriching gas or air products by combining one or more hydro-carbons, derived from the petroleum, or its equivalent, with one or more hydro-carbons of the coal-tar series.

Second, I also claim carbureting or enriching coal-gas, water-gas, or air, by combining with them the vapor of a liquid, made by combining hydro-carbons of the coal-tar series with those of the petroleum series, substantially as herein described.

Third, I also claim the method or process herein described of manufacturing liquids for carbureting or enriching gas or air, by combining one or more hydro-carbons derived from petroleum, or its equivalent, with one or more hydro-carbons of the coal-tar series.

58,055.—SAFETY APPARATUS FOR GAS MACHINES AND CARBURETORS.—John F. Boynton, Syracuse, N. Y.

I claim a safety device, composed of a body of cooling material, as metal or other good conductor of heat, interposed between the burner and carburetor, and so arranged as to present an extensive surface or series of surfaces to the carbureted air on its passage to the burner, thereby keeping it at a temperature below the point of ignition.

58,056.—T SQUARE.—Austin Bronson, New York City.

First, I claim the bevel stock, D, so constructed and applied to the T square that its sides will project beyond each side of the said square, and thus enable the instrument to be employed for making right or left-hand angular lines without interfering with the head, B, of the square, substantially as herein set forth.

Second, The tangent screw, e, sliding frame, g, and adjusting screw, f, arranged with reference to each other, and with the square, A B, bevel stock, D, and sector, C, substantially as herein set forth for the purpose specified.

58,057.—HOT-AIR FURNACE.—Benjamin Brownell, Chicago, Ill.

I claim the gradually enlarged flues, E, arranged and combined with the dome-shaped casting, G, in a hot-air furnace, substantially as and for the purpose herein set forth.

58,058.—ALARM CLOCK.—J. E. Buerk, Boston, Mass.

First, I claim the arm, I, and segmental disk, I, in combination with the stop lever, e, of the alarm movement, constructed and operating substantially as and for the purpose set forth.

Second, The serrated segment, m, in combination with the tooth of the watch-key, o, and with the alarm movement, constructed and operating substantially as and for the purpose described.

58,059.—CHURN.—William Burson and D. C. Burson, Salineville, Ohio.

First, The dasher, C, when constructed as herein described, in combination with the shaft, B, gear wheels, F and G, crank, J, frame, F, cover, D, and box, A, the said parts being constructed and arranged substantially as and for the purposes set forth.

Second, The combination of the perforated gathering board, M, with the box, A, and dasher, C, substantially as described and for the purpose set forth.

58,060.—PLANTER.—William F. Caldwell, Oxford, Me.

First, The combination and arrangement of the hopper, e, spring, f, pawl, d, ratchet, c, lever and link, m, all constructed, applied, and operating as herein set forth and described.

Second, Connecting the plow and coverer to the carriage body, in the manner described.

58,061.—COOKING STOVE.—James Chambers, Booneboro, Md.

The combination of the parts, D and E, when the latter is constructed and arranged in relation to the former, as shown and described and for the purpose set forth.

58,062.—SAFETY POCKETS.—James F. Chambers, Utica, N. Y.

First, The pocket, A, provided with a spring arm, G, upon its inside, leaving a sharp pointed or needle arm, H, hung to its upper end, when combined together and arranged so as to operate substantially in the manner and for the purpose described.

Second, In combination therewith, the springs, O, upon the inside of the pocket, A, for the purpose specified.

Third, Also in combination therewith, the perforated spring or flexible band, E, secured to the pocket, A, for the purpose described.

58,063.—RECEPTACLE FOR WASTE WATER OF WELL TUBES.—Daniel P. Chesbrough, Lansingburgh, N. Y.

The receptacle, A, having float, I, and valve, G, in connection with the waste water pipe of a well tube, when arranged with regard thereto and connected with the well tube, substantially as and for the purpose described.

58,064. — MANY-BARRELED FIRE-ARMS. — W. J. Christy, Philadelphia, Pa.

First, The application to the trigger, E, of a vibrating arm, d, and lever, d', constructed in such a manner as to effect the release of the hammers in succession, substantially as described.

Second, The application of a guard, G, to the trigger, E, in combination with a contrivance which will lock this guard in front of the trigger when the breech of the barrel is exposed, substantially as described.

Third, In combination with a barrel which has an end play and which is pivoted to the frame of the piece, I claim the spring latch, b, slides k and s, and a trigger guard, G, arranged so as to operate substantially as described.

58,065.—SHEEP RACK.—M. C. Clark, Appleton, Wis.

The combination of the trough, B, feed receptacle, D, and covers, E and F, with each other and with the frame, A, of the rack, when said parts are constructed and arranged substantially as herein described and shown and for the purpose set forth.

58,066.—HANDLE FOR SAD IRON.—Henry Clarkson, Peekskill, N. Y. Antedated Sept. 5, 1866.

The lever, D, with its toe, d, and nose, e', in combination with the stirrup, e, handle, B, flange, b, socket, a, and iron, A, all combined and operating substantially as and for the purpose described.

58,067.—BOOT HEEL.—Frederick Closs, New Haven, Conn.

A revolving heel for boots and shoes, when the same is constructed with a metallic piece, B, and ring, D, said parts being respectively formed, combined with the other portions of the heel and arranged for use as and for the purpose set forth.

58,068.—SAW MILL.—Geo. W. Coddington, Middletown, Ohio.

First, The trestle, D, constructed and arranged as herein described in combination with the carriage, C, and operating substantially as and for the purpose set forth.

Second, The combination of the spring, F, catch, G, chain, H, and trestle, D, with the carriage, C, substantially as described and for the purpose set forth.

58,069.—CAPSTAN WINDLASS.—Z. E. Coffin, Newton, Mass.

First, I claim the employment of the capstan, a, and its system of gears, j k l, in combination with gears, r s, and the windlass barrels, t u, substantially in the manner and for the purpose set forth.

Second, I claim the arrangement of the barrels, t u x x, and the gear, S, to turn upon the shaft, V, this shaft being a fixed one and not allowed to rotate, substantially as described.

Third, I claim the two or more rollers, y, in combination with and to support the windlass barrels and shaft, t u and V, substantially as described.

58,070.—SAD IRON.—Elisha T. Colburn, Boston, Mass.

I claim the heat reflecting guard, C, made substantially as described so as to be applied to the sad iron in manner and for the purposes specified, such guard being composed of the plates, a a, the standards, b b, and the legs, c c, and having the notches, d d, formed in the parts, a a, as explained.

57,071.—WAGON SHACKLE.—Lucius M. B. Coleman, Danby, N. Y.

First, I claim the use of washers or metallic cylinders in the ears of a wagon shackle, and transfer as far as possible the wear in the shackle joint to the surfaces made by the periphery of the same and the said ears, when virtually made as described.

Second, I claim the described beveling of the washers and of the corresponding holes in the ears of the shackle for the purpose of tightening the shackle from time to time as described.

Third, I claim the combination of the described device or devices, for preventing motion about the iron bolt, but allowing the same about the washers or cylinders, and of the washers or cylinders in the eyes of the ears of the shackle with the wearing surfaces in the said ears, the same making a whole as described

58,072.—TOBACCO PIPE.—Malcolm M. Coppuck, Philadelphia, Pa.

I claim a tobacco pipe consisting of the open bottomed fire and tobacco chamber, A, neck piece, d, exhaust chamber, B, and stem, C, the same being arranged and combined together as and for the purposes described and set forth.

58,073.—HORSE RAKE.—Nicholas C. Decker, St. Louis, Mo.

First, I claim the construction and arrangement of the rock shaft, c, and its springs, c3 and c4, its levers, c1, and the bar c2, as described and set forth.

Second, I claim the arrangement of the segmental grooves, b, in the post, B, for the purpose of rendering easy the revolution of the rake.

58,074.—VALVE GEAR FOR STEAM ENGINE.—William Dennison, Washington, D. C.

First, I claim the cam, H, arranged to operate in such a way as to cause the valves of steam cylinders to move continuously, while the piston of the steam cylinder be in motion by a stud or pin on the piston rod or other attachment producing the same result, substantially as set forth.

Second, A steam cylinder having its openings and valves arranged on a line with the axes of the cylinder, substantially in the manner set forth.

Third, I claim the cam, H, the rock shaft, F, and the steam cylinder with its steam valves, E E', combined and operating as and for the purpose set forth.

58,075.—HORSE RAKE.—Joseph Dillier, Greensburg, Ind.

I claim a horse rake having the teeth, E, attached to a hinged beam, F, retained when down by a hook, G, and disengaged and raised by a lever, I, the said several parts being respectively constructed and combined for use by intermediate mechanism arranged substantially as set forth.

58,076.—MACHINERY FOR CUTTING KEY SEATS.—John K. Dirner, Honesdale, Pa.

I claim the spindle, X, in combination with the plate, P, pivoted to the flanges, O, and adjusted by set screws, R R, constructed and arranged substantially as described for the purpose specified.

58,077.—TWEER.—Levi A. Dole, Salem, Ohio.

I claim a tweer which is composed of blast pipe, A, and a chambered portion, B, cast in one piece, substantially as described.

58,078. — ICE BREAKER. — Charles. W. Dunlap, Brooklyn, N. Y. Antedated Sept. 5, 1866.

I claim the ice breaker formed with a metal band around the larger portion of the wooden handle of the ice pick, as and for the purposes specified.

58,079.—RIFLE BOX.—Rhesa H. Dunning, North San Juan, Cal.

I claim the rifle box, C, damwall, D, or their equivalents, to be employed for saving gold at any point where there is a divide of waters, substantially as described.

58,080.—STRAW CUTTER.—J. Eiberweiser and R. Weber, Cincinnati, Ohio.

We claim the arrangement of a knife, H, suspended by two arms, F F', pressure board, I, bent lever, T T', feeding mechanism, C D E V W X, and cam, S and U, for the purposes explained.

58,081.—PROTECTING ANIMALS FROM THE HEAT OF THE SUN.—Charles Elveena, New York City.

I claim the method herein specified of protecting animals from the heat of the sun by a shield, constructed substantially in the manner specified.

58,082.—CULTIVATOR.—Samuel P. Etter, Scotland, Pa.

First, I claim the compound levers, R and Q, connected to the plow beams by the braces or rods, V V, when constructed and operated for the purposes and substantially as described.

Second, I claim the compound levers, R and Q, rods, V V, and plow beams, H H, in combination with the pendants, G G, and pendent guides, J J, substantially as and for the purposes shown and described.

58,083.—HAND PROPELLER FOR SMALL BOATS.—John Fehrenbatch, Ind.

I claim the combination of the bevel wheels, 3 and 8, the ratchets, 2 and 11, the dogs, 4 and 10, and springs, 5 and 9, with the upright shaft, 1, and lever, 17, and with the pinion, 7, on the shaft, 13, which propels the screw, all applied for the purpose of propelling small boats.

58,084.—SKATE.—M. Fleisher, Philadelphia, Pa.

First, I claim the notched foot rest, C, for holding the end of the lever, K, combined with the clamps, J G, of the heel rest, B, substantially in the manner, and for the purpose represented and described.

Second, The combination and arrangement of the clamps, O, bar, Q, straps, R, notched rest, C, lever, K, clamp, G, heel rest, D, constructed and operating in the manner and for the purpose herein represented and described.

58,085.—PUMP.—A. F. Fletcher, Athol, Mass.

First, I claim a pump box constructed in two or more parts so arranged and combined as to secure the parts to each other and the packing of leather or other suitable material to the pump box, in the manner substantially as and for the purposes described.

58,086. — ROTARY STEAM ENGINE. — Matthew Fletcher, Louisville, Ky.

First, I claim the method of reducing the side strain on the rotative sh ft through the connection of cylinder with eccentric ring flyers, flyers ends and half rounds, c c c c c c, in drum, m, substantially as described.

Second, I also claim the arrangement and combination of the brushes, P P, and small metal packer rings, f f, by which means soft or elastic packing is avoided from pressing on the revolving shaft.

58,087.—APPARATUS FOR GENERATING AND BURNING VAPOR OF HYDROCARBON OILS.—Henry R. Foote, Oil City, Pa.

I claim, First, The combined retort and gas holder, constructed substantially as described.

Second, I claim the coil of metallic tubing charged with iron filings, or their equivalents, and the heaters connected with the gas holder for the purpose of generating hydrogen gas by the decomposition of steam, substantially as and for the purpose set forth.

Third, I claim the tubes at the bottom of the retort with supply pipes elongated so as to extend into the gas holder, as described.

Fourth, I claim the arrangement of burners connected with the gas holder, substantially as described.

Fifth, I claim the hood attached to the bottom of the retort, for the purpose of protecting the lower burners, as described.

58,088.—AMALGAMATING GOLD WITH MERCURY.—M. Foreman and J. R. Mathewson, Philadelphia, Pa.

First, We claim the amalgamation of gold with mercury by circulating pulverized ore, combined with water, upward through a body of mercury, substantially in the manner described.

Second, We also claim heating the mass of auriferous ore and water by a jet of steam, which induces the above-mentioned circulation, substantially as specified.

58,089.—ORE QUARTZ CRUSHER.—Joseph Fowler, Rahway, N. J.

First, I claim the yielding eccentric bearing shaft, f or f', and weighted lever, g or g', applied in substantially the manner specified, to keep the jaws at their lower ends toward each other, but allow them to open or yield, as and for the purposes set forth.

Second, I claim the combination of the jaws, d and k, connecting rods, l l, and cranks, 1 and 2 2, when the j w, d, is connected directly to the crank, 1, and receives the movement specified, for the purposes set forth,

Third, I claim the links, e, in combination with the eccentric yielding bearing, f, and moving j w, d, as and for the purposes set forth.

58,090.—CAR COUPLING.—Robert G. Fowler, Olney, Ill.

I claim the jointed coupling bars, G G, having springs, I, and wedge-shaped heads, g g, which slip upon and catch behind each other, permitting the automatic uncoupling by lateral or vertical deflection of one car relatively to the other, under the circumstances described.

58,091.—CLASP FOR MAIL BAGS.—Leander Fox, New York City.

I claim the adjustable metal clasp, B, with permanent raised letters, operating on a joint, C, and swivel, D, as herein described and for the purposes set forth.

58,092. — APPARATUS FOR INSERTING FUSIBLE PLUGS IN STEAM GENERATORS.—Joseph French, Pittsburgh, Pa.

I claim the combination of the ring, c, for holding the fusible plug in the flue, the tubular rod, c, and screw, f, for closing the bore of the rod, e, constructed and arranged substantially as and for the purposes hereinbefore described.

58,093.—WATER ELEVATOR.—James Freret, New Orleans, La.

I claim the combination of the double or compound valves, C' D', and C'' D'', with the cisterns, G and F, and simple valve, C, when these several parts are constructed and conjointly operate, substantially as described for the purpose set forth.

58,094.—BRIDGE.—John H. Gilbert, Roxbury, Mass.

I claim the combination of the angle plates, D, pierced side plates, C, floor beams, E, flanged arched plates, B, constructed and operating substantially as described for the purpose specified.

58,095.—APPARATUS FOR SEPARATING GUM FROM CANE JUICE.—Henry Gortner, Deavertown, Ohio.

I claim an improved apparatus for separating the gummy substance from cane juice, formed by the combination of the disks, B, and pipes, b', with the partitions, a', of the apparatus, the various parts being constructed and arranged substantially as herein described and for the purposes set forth.

58,096.—BOLT-HEADING MACHINE.—Chas. Hall and Emil Hubner, New York City.

First, We claim the combination in a bolt-blank machine of the following instrumentalities, viz.; the tubular die, carriage, preparing dies and set of finishing dies, consisting of an upsetting die and side dies, substantially as set forth.

Second, The combination in a bolt-blank machine of the following instrumentalities, viz.; the upsetting die, side heading dies, turning tubular die, and cam tappets which operate the side heading dies twice for each operation of the upsetting die, substantially as set forth.

Third, The combination in a bolt-blank machine of the following instrumentalities, viz.; the heading die or dies, turning tubular die, and carriage, substantially as set forth.

Fourth, The combination in a bolt-blank machine of the following instrumentalities, viz.; the tubular die, upsetting die, gage and cam, substantially as set forth.

Fifth, The combination in a bolt-blank machine of the following instrumentalities, viz.; the tubular die, side dies, gage and cam, substantially as set forth.

Sixth, The combination in a bolt-blank machine of the following instrumentalities, viz.; the tubular die, upsetting die, side dies, gage and cam, substantially as set forth.

Seventh, The combination in a bolt-blank machine of the following instrumentalities, viz.; the heading die or dies, tubular die, gage and cam, and carriage, substantially as set forth.

Eighth, The combination in a bolt-blank machine of the following instrumentalities, viz.; the heading die or dies, turning tubular die, gage and cam, substantially as set forth.

58,097.—LAMP BURNER. — Thomas Hall, Bergen, N. J.

I claim the connections, A and B, and stop, C, substantially as described for the purposes set forth.

58,098. — GRANULATING AND DRYING SUGAR. — Jesse Hanford, Lexington, Mass.

I claim the combination of the rotary hollow drum or cylinder, I, and the tubular heater, arranged and connected substantially as described.

I also claim the combination of the rotary or hollow cylinder, I, the crushing roller, K, and the tubular heater, arranged and applied together substantially in manner and so as to operate as and for the purpose described.

I also claim the combination of the journals, c c, and their supporting standards, B B, of the tubular heater with such heater and the rotary cylinder, or the same and the crushing roller, applied and arranged together, substantially as specified.

I also claim the combination and arrangement of the series of helical wings, l l, with the cylinder and the heater, applied in manner and so as to operate as specified.

58,099.—FEED-WATER HEATER.—Geo. Hasecoster and J. Stephens, Richmond, Ind.

We claim the combination of the rod, B, flanged shelf, C, flanged perforated plates, D E F, constructed and arranged as described; the receiving cup, f, and washers, I, with the cylinder A, substantially in the manner and for the purpose herein specified.

58,100.—DESULPHURIZING ORE. — John A. Hitchings, Denver City, Colorado.

First, I claim the arrangement of the crucible with its dome-covering sectional lid and discharge openings, M P, substantially as and for the purpose described.

Second, I claim the combination with the crucible of the water supply tank, K, as and for the purpose described.

58,101.—SPINNING MACHINE.—Charles B. Hoard, Watertown, N. Y.

First, A removable tube or spindle for twisting roving while being drawn, when the twist is imparted from one side of the tube or spindle and the roving is conveyed to the bite of the draw rollers from the center of the tube or spindle, substantially in the manner described.

Second, The combination of a removable twisting tube or spindle, constructed substantially as described, with a revolving tube driven by a whirl, substantially in the manner set forth.

Third, The combination of a removable tube or spindle with the whirl tube and drawing rollers, when constructed, arranged, and operating substantially in the manner and for the purpose set forth.

58,102.—PENCIL HOLDER.—Henry W. Holly, Norwich, Ct.

The holding stem or tube, A, provided with a single slit, c, formed longitudinally in one side thereof, in combination with the sliding ring or collar, C, substantially as herein set forth for the purpose specified.

58,103.—HOISTING APPARATUS.—George L. Howland, Topsham, Me.

I claim an improved hoisting apparatus formed by combining with each other the bars, A B, the levers, D H, the pawls, C I, the spring, K, and the stop, L, the parts being constructed and arranged substantially as described and for the purpose set forth.

58,104.—MACHINE FOR MAKING NUTS.—W. W. Hubbard, Philadelphia, Pa.

First, I claim the revolving disk, J, with its recesses, Z, in combination with a series of punches and dies arranged in a circle, the whole being constructed and operating substantially as and for the purpose described.

Second, The cross head, E, and its arm, L, in combination with the shaft, H, and its rib, w, the whole being constructed and operating substantially as and for the purpose specified.

Third, The combination of the boxes or casings, c, punches, d, and gibs and keys, the whole being arranged substantially as and for the purpose set forth,

Fourth, The carriers, M and M', with their adjustable hammers, the whole being arranged in conjunction with the rotating disk, J, to operate on the blank, substantially as and for the purpose described.

Fifth, The combination of the carriers, M M', lever, T, and arms and levers, p q, the whole being arranged and operating substantially as and for the purpose set forth.

Sixth, The slide, 7, and spring, 5, or its equivalent, in combination with the cutters, d k.

Seventh, The slide, m, operating in combination with the punch, d3, hammers, S S, and disk, J, substantially as and for the purpose described.

58,105.—MAGNETO-ELECTRIC APPARATUS.—Jerome Kidder, New York City.

First, I claim the construction and arrangement of an electro-magnetic apparatus, whereby the primary current through two helices or systems of helices is thrown successively in opposite directions, or so as to develop induced currents successively in opposite directions, substantially as herein described.

Second, The arrangement of the parts of an electro-magnetic apparatus, whereby the currents from two helices or systems of helices are made to flow in succession, one immediately after the other, in a uniform direction, substantially as herein set forth, such currents being either of the same character, made thus more rapid in succession, or of different degrees of tension or concentrative or diffusive influence.

Third, I claim for adjusting the screw opposed to the vibrating spring of an electro-magnetic apparatus the use of the arrangement as represented by v y, operating substantially in the manner described.

58,106.—MEDICINE.—N. Kieffer, New Orleans, La.

I claim the medical compound composed of the ingredients herein named and mixed together, in or about the proportions named.

58,107.—OILER.—Parley Lafiin, Warren, Mass.

I claim the bifurcated guide, F, in combination with the tube of an oiler, substantially as and for the purpose set forth.

58,108.—RACK FOR HAULING WOOD.—Abraham Landis, Colesburg, Iowa.

I claim the woodrack herein described, the same consisting of the sills, A, sleepers, B, and stakes, C, all secured together by the loops or stirrups, D, in the manner and for the purpose explained.

58,109.—ANTI-FRICTION JOURNAL BOX.—Henry M. Le Duc, Washington, D. C.

I claim the rims or projections, G F, within the hub or box, and around the axle respectively, extending into annular grooves in the concentric series of larger rollers to maintain them in position longitudinally, substantially as described.

58,110.—HORSE HAY FORK.—Thomas Lloyd, Muncy, Pa.

I claim the employment, in combination with the main bar, A, of pivoted fingers, D D', and arms, E E', operated by means of a vertical rod, C, and lever, B, the whole arranged substantially as set forth.

58,111.—APPARATUS FOR UPSETTING TIRES.—Levi W. Loomis, Homer, N. Y.

I claim the movable plate, B, provided with the notched strip, C, and operated by a shoulder of the lever, D, and arms, Z Z, to force said plate against the body, A, to upset the tire when held between cams and ratchets, substantially as herein set forth.

58,112.—SHOVEL PLOWS.—William H. Luce, Hampton, Ill.

I claim the general construction and form of the beams, A, and handles, C C, in combination with a double concave mold board, B, substantially as described.

58,113.—APPARATUS FOR DISTILLING PETROLEUM, ETC.—Orazio Lugo, New York City.

First, I claim the admission of air or gas into the goose-neck or exit pipe of the still, substantially as and for the purpose herein specified.

Second, Varying the point of admission of the air or gas, B, into the still and goose-neck or exit pipe as the process of distillation progresses, substantially as and for the purpose herein set forth.

58,114.—SPIRIT METER.—Wm. Magrowitz, New York City.

First, I claim the arrangement and construction of the wheel, A, provided with chambers or cavities, in combination with the roller, E, and float, G, operating in the manner substantially as described.

Second, I claim the arrangement of the levers, D, with the roller, E, in combination with the lever, F, and float, G, and operated by set screws, C and D, in the manner and for the purpose set forth.

Third, I claim the arrangement of the paper rollers, P P', and the manner of operating the roller, P, by means of the friction roller, O, for the purpose substantially as set forth.

Fourth, I claim the manner of operating the friction roller, O, from the shaft of the wheel, A, by means of the gearing, 2 and 3, flanch wheel, 4, pin, 8, and pawl lever, R, when arranged and combined in the manner and for the purpose specified.

Fifth, I claim the box, K, in combination with the pipe, g, and cylinder, I, the hydrometer, M, with the needle, N, at its upper end, for the purpose substantially as set forth,

Sixth, I claim the frame, S, in combination with the needle, N and the manner of operating said frame, S, and needle N, substantially as and for the purpose described.

Seventh, I claim, in combination with the hydrometer, M, and its needle, N, the endless paper wound on roller, P' and P, and lined in the manner described, and operating together substantially for the purpose specified.

Eighth, I claim the friction pulley, k, with its lever, K, in combination with the measuring wheel, A, for the purpose set forth.

Ninth, I claim the combination of the measuring wheel, A, with its registering device, the hydrometer, M, provided with a marking needle, N, the paper rollers, P and P', with paper lined in the manner described, the friction rollers, O and O', and the frame, S, when arranged and operating together so as to mark the quantity and the weight or specific gravity of alcohol or other liquid which is made to pass through the box, V, or through the machine, substantially in the manner as set forth and specified.

58,115.—CAR BRAKE.—Samuel McCambridge and Edward G. Martin, Philadelphia, Pa.

We claim the combination of a series of coil springs with a train of cars and the continuous chain, which operates the brake levers, by means of the cylinders, B, shafts, C, and chains, F, the several parts being arranged and operating substantially in the manner described and for the purpose specified.

58,116.—ORE OR QUARTZ CRUSHER.—E. P. McCarthy, San Francisco, Cal.

I claim the use of a rubber tappet, A, steel shod, the steel shoe, B, plate, E, and bolts, F F, combined in the manner and for the purposes set forth.

58,117.—DEVICE FOR HOLDING ROLLED WORK WHILE BEING STITCHED.—Wm. M. McCoy, Bloomingdale, Ind.

I claim a device for holding rolled work while being stitched, constructed and operating substantially as specified, that is to say: I claim the bed piece, A, having a groove, a, along its upper face, and provided with a tightening band, B, operated by a set screw, C, substantially as shown and described.

58,118.—BLOW PIPE.—Josiah McFarland, Clinton, Ill.

I claim in blow pipes, a detachable air chamber, A, in combination with the flexible tube having a suitable mouthpiece for directing the current of air or gas, and a force pump, all constructed and operated substantially as described.

58,119. — PLOW. — F. W. McMeekin, Morrison's Mills, Florida.

I claim the standard, C, constructed of a single metal bar, doubled and bent so as to have two diverging arms, a a', and an inclined loop, b, in combination with the land side and mold board, all arranged to form a new and improved plow, as set forth.

58,120. — SAFETY ATTACHMENT FOR POCKETS.—John Metzendorf, New York City.

I claim a watch pocket protector, composed of two jaws, A and B, flexibly connected together at one end, and furnished with a catch at the other end, and provided with eyelets or other means of attaching it to the pocket, all substantially as herein described.

58,121.—SADDLE.—Jacques Meyer, Williamsburgh, N. Y.

I claim the device formed of the case or thimble, c, inclosing the spiral spring around the pin, d, for the purpose of attaching and detaching stirrup straps to a saddle, constructed and applied in the manner herein described.

58,122.—LANTERN.—F. Meyrose, St. Louis, Mo.

First, I claim inclosing the wick elevating rod or shaft, a3, with a tubing or casing, a2, for the purpose of conducting any moisture or fluid that may escape on the said rod outside of the guard of the lamp or lantern.

Second, I claim the cap, F, either with or without the ventilators, substantially as described.

58,123.—EDGE PLANE.—S. Miller, Urbana, Ohio.

I claim the exposing of the cutting edge of bit, B, always evenly and securely at one operation, as described, or any otherway substantially the same.

58,124.—SNOW PLOW.—Robert B. Nevens, Lowell, Mass.

I claim, First, The combination and arrangement of the fence, A, and facing, d, sides, B B, leveling beam, C, and mold boards, E E, substantially as and for the purpose set forth.

Second, And in combination with a snow plow constructed and arranged as above stated, I claim the employment of the auxiliary brace chains, F and H, connected with the entire draught chain, G, substantially in the manner and for the purpose specified.

58,125.—CORN CULTIVATOR.—D. I. Noble, New Boston, Ill.

I claim the adjustable foot-pieces, L L, connected to the plow standards, I I, and arranged with brace, K, in combination with the mode of attaching said standards to the frames, C and F, substantially as and for the purpose herein specified.

58,126.—MACHINE FOR POUNCING HATS.—Emile Nougaret, Newark, N. J.

First, I claim the swivel disk, B, carrying the block, D, in combination with the adjustable disk, F, carrying the pouncing rollers k k, constructed and operating substantially as and for the purpose described.

Second, The gears, l m, and revolving shaft, F, in combination with the pouncing rollers, k k, and block, D, constructed and operating substantially as and for the purpose set forth.

Third, The brake, p, in combination with the disk, F, spring, n, pouncing rollers, k k, and block, D, all constructed and operating substantially as and for the purpose described.

Fourth, The rollers, G G, and supporting brackets, t, constructed and operating substantially as and for the purpose set forth.

58,127.—LOCOMOTIVE.—John C. Parker, Chicago, Illinois.

First, I claim providing the nozzles of the exhaust pipes of a locomotive engine with valves which shall be allowed to close by a movement of the reversing lever, substantially as described.

Second, The combination of the draw rod, D, and valves, d d, with the spring, f, and a contrivance which will effect the tripping of said rod when the engine is reversed, substantially as described.

58,128.—ANCHOR.—G. C. Pattison, Baltimore, Md.

I claim providing the flukes of an anchor having pivoted arms with stationary guards, substantially as and for the purpose herein described.

58,129.—STRAW CUTTER.—S. Pettibone, Corunna, Mich.

First, I claim the application of the fly-wheel, B, in combination with crank wheel, C, pitman, D, and lever, E, substantially as and for the purposes described.

Second, The adjustable box, or bearing, F, in combination with the lever, E, gage, G, and throat, I, for the purposes and substantially as herein shown and described.

Third, The mode of securing the gage plate, G, to the lever, E, as and for the purposes and substantially as herein set forth.

Fourth, The mode of securing the lever, E, to the pivot, by means of mortise and key, substantially as herein shown and described.

58,130.—FASTENING FOR GATE.—Pompeius Philippi, Beardstown, Ill.

I claim the arrangement of the hooked rod, J, and lever, K, in combination with the bar, B, posts, E F, and pin, D, constructed and operating in the manner and for the purpose herein specified.

58,131.—SHIRT BOSOM.—C. F. Pidgin, Boston, Mass.

I claim a shirt bosom, cut or hollowed out at its sides, R, and end, C D, in combination with the straps, F, substantially as and for the purpose described.

58,132.—ASH SIFTER.—Charles L. Pierce, Buffalo, N. Y.

I claim the inclosing case, A, and removable charger, D, the said case being fitted to receive and support the charger, and the

charger having a hinged bottom so that its contents may be discharged into the sieve, the inclined open-end sieve, B, the operating gearing, and the ashes box E, combined as herein described.

58,133.—Dental Mallets.—Chandler Poor, Dubuque, Iowa.

I claim the sliding mallet, i, piston, a, spring, f, and socket, b, by means of which to apply force to a common plugger or point in filling teeth. My claim has no reference to said plugger or point except in the manner of applying force to the same.

58,134.—Machine for Making Screws.—Treat T. Prosser (assignor to himself, G. W. Gillet, J. A. Eastman, D. Rimbark, J. R. and D. H. Wells), Chicago, Ill.

I claim the method of forming the threads on screws by means of revolving swages or dies, constructed and operated substantially as and for the purpose set forth.

Second, I claim the grooved rollers, a, when arranged and operating as described, for the purpose of forming threads on screws.

Third, The combination of the revolving swages or dies, a a, with the anvil or rest, n, substantially as set forth.

Fourth, The chuck, E, constructed and operating as herein described.

Fifth, The combination of the hollow shaft, F, chuck, E, and rack shaft, d, provided with the arms, f and c, when arranged to operate as and for the purposes set forth.

Sixth, In combination with the shaft, F, and hopper, H, I claim the follower, I, arranged to operate as described, for the purpose of feeding the blanks into the shaft, F, as set forth.

58,135.—Corn Planter.—A. Putnam, Owego, N. Y.

First, I claim the drill tooth, G, wheel, F, and adjustable slide bar, E, arranged and operating as described.

Second, In combination with the above I claim the arrangement of the cams, D, bar, A, spring, K, and valve, g, as and for the purpose specified.

58,136.—Car Brake.—J. Wyatt Reid, New York City.

First, I claim the combination of chains, rods and pulleys, for operating the brakes, the whole substantially as described.

Second, The combination with the car brakes of the guards, r r, constructed and applied in the manner and for the purpose set forth.

58,137.—Machinery for Making Nails.—Samuel G. Reynolds, Bristol, R. I.

First, I claim giving lateral support to that portion of the nail blank which is to be upset to form the head, during the operation of heading the nail, by means of the radial supporting bar, A, arranged to co-operate with the header, H, substantially as herein described, for the purposes specified.

Second, Combining and arranging the gripping die in a nail-making machine with the movable cutting shear, as described, so that the former shall change its position relatively to the latter, for the purpose of lowering the blank during the swaging and heading operation below the cutting edge of the shear, in the manner and by the means substantially as herein set forth.

58,138.—Flat Iron.—E. B. Robinson, Portland, Maine.

I claim the combination and described arrangement on a flat iron of the glass or porcelain handle, H, and the hinged guard and reflector, D, as and for the purposes herein set forth

58,139.—Surcingle.—D. P. Rood, Warsaw, N. Y.

I claim an elastic, B, made of rubber or other suitable material, in combination with the webbing, A, so as to cause the surcingle to adjust itself to the varying size of the horse, for the purposes and substantially as herein described.

58,140.—Machine for Harvesting Beans.—D. C. Rosier, Clarkson, N. Y.

I claim the arrangement of the L-shaped cutters, C, in combination with the elevating or adjusting devices, in the manner and for the purposes set forth.

58,141.—Trunk.—Alfred V. Ryder, New York City.

I claim a trunk provided with a hinged portion, A, formed by the vertical and horizontal cuts, a b, in the main portion and hinged to the part, B, so that it may when turned up or opened, rest upon B, the parts A B being provided with drawers, and the other parts, D, provided with a lid or cover, substantially as shown and described.

I further claim, in combination with the hinged portion, A, the metal stays or plate, E, applied to the ends of the trunk and having the handles, F, attached substantially as set forth.

58,142.—Hook for Davit-fall Block.—William R. Satterly, Port Jefferson, N. Y.

I claim the combination, with the davit-fall block, of the hook, D, link, H, and cord, I, operating substantially as described.

58,143.—Corn Harvester.—Samuel Secrist, West Liberty, Ohio.

I claim, First, The reels, j j, with their arms engaging with each other, in combination with the box, G, substantially as described for the purpose specified.

Second, I claim the reels, k k, in front of the sides, G G, for gathering up the leaning and broken stalks, and passing them on to the cutters, constructed substantially as herein described.

Third, The arrangement of the revolving platform, H, hoop, o, discharging gate, half-hoop, r, spiral spring, t, constructed and operating substantially as and for the purpose specified.

Fourth, The lever, b, and the clamp, g, suspended by the standard, J, over the platform, H, to gather the shock together at the top and set it on standing upright on the ground, constructed substantially as herein described.

58,144.—Washing Machine.—Henry Sidle, Minneapolis, Minn.

I claim the box, A, with its vertical rollers, B B, arranged with the top, C, and shaft, D, with its oblique arms, F F, substantially in the manner and for the purpose herein specified.

58,145.—Tweer.—Thomas Sinnott, Brooklyn, N. Y., and James McIntyre, New York City.

We claim, First, A series of wings, or divisions, around the blast pipe, with openings at alternate opposite ends to cause the air or blast to travel back and forth within the tweer, for the purposes and as set forth.

Second, We claim the valve, l, attached to the block, m, in combination with the blast pipe, a, for the purposes set forth.

Third, We claim the movable nozzle, n, in combination with the tweer, as and for the purpose specified.

58,146.—Brick Kiln.—Francis H. Smith, Baltimore, Md.

I claim the middle flue, A, beneath the floor, extending outside the walls to connect with furnace, F, and having lateral communications with ash pits.

I claim the furnace placed at the mouths of said flue, heating all the air that passes into the kiln, creating the hot blast.

I claim the middle door, e, in combination with the flues, A and C, and the furnace, F.

58,147.—Cultivator.—Andrew Stark, Topeka, Kansas.

I claim the pivoted bars, L L, having the driver's seat, N, attached to them, in combination with the plow beams, H H, connected at their front ends to the front part of the frame of the machine, and the plow beams and bars connected by chains, h, or their equivalents, substantially as and for the purpose specified.

58,148.—Roofing Cement.—Jesse Stow, Geneva, Ohio, and James White, Cleveland, Ohio.

We claim a plastic roofing cement composed of the ingredients herein named and compounded, as specified.

58,149.—Amalgamator.—Stephen G. Sturges, Newark, N. J.

I claim the flute or pocket, t, when attached to a reciprocating or revolving cylinder, in the manner and for the purpose substantially as shown,

Also, the bolts, w, extending across as supports to the cylinder, when used in combination with the pocket attached to the cylinder.

58,150.—Deep Well Pump.—J. W. Summers, Tarr Farm, Pa.

First, I claim suspending the piston of a pump from the pump rod by means of a ball and socket joint, substantially as described.

Second, I also claim the cylindrical stop, G, having its upper edge leveled as shown, for the purpose of catching rivets and other objects, and directing them into the piston, substantially as described.

58,151.—Saw-filing Machine.—Alvah Sweetland, Syracuse, N. Y.

I claim the swing bar, the adjustable table, the rag, the dog, the lever, the rag wheel, the straight file, the cylinder, the clasps, and the connecting rod, the whole being arranged and combined substantially as and for the purpose set forth.

58,152.—Chuck.—Royal H. Thorn, Syracuse, N. Y.

I claim clamping the jaws, C C', by the screw, D, and allowing the same to play freely through the body of the chuck, for the purposes set forth.

58,153.—Bottle Stopper.—Samuel H. Timmons, Lafayette, Ind.

I claim, First, A cup, graduated or otherwise, fitting a base piece to be attached to the cork or neck of a bottle of any size.

Second, The base piece, provided with an entering shank, for insertion into a cork, and with a flange for the reception of the cup, substantially as described.

Third, I claim a graduated cup attached to the stopper or neck of a bottle, for the purpose described.

58,154.—Artists' Stretcher.—Joel E. Todd, Middletown, Conn.

Making the angle of artists' stretchers self-adjusting by means of springs, F, or equivalents therefor, substantially as herein described.

58,155.—Machinery for Making Railroad Chains.—William Van Anden, Poughkeepsie, N. Y.

I claim, First, The dies, G G, arranged to take hold of the metal plate at its edges, and constructed and operating so as to form the lip flanges and a projecting base on said plate, all substantially in the manner and on the principle herein set forth.

Second, The devices, c' c', in combination with a plunger, for curving or slightly bending the plate of metal, the same being arranged and operating substantially as described.

Third, Forming on a metal plate, which has been previously curved or bent, and from which a rail chair is to be made, a projecting base, and flanges standing at right angles, or nearly so, with the base of the plates, ready for the action of the finishing dies, by means of swaging dies, G G, in combination with an anvil, a, and a former, e, substantially as described.

Fourth, The combination with the anvil, a, and dies, G G, of the elevated pieces, a3 a3, so as to form a box die conforming to the shape of the base of a chair blank, substantially as and for the purpose described.

Fifth, The combination of the plunger or former, e, swaging dies, G G, and finishing dies, J J, working in a manner and for the purpose of forming a metal chair having a continuous lip, substantially as described.

Sixth, Making from a plate of metal, by one machine, and by a succession of operations in the said machine, a chair, substantially as represented in fig. 8, the means for doing this being constructed and operating substantially in the manner and on the principle herein set forth.

Seventh, Discharging a chair by means of the discharger, D, passing from the rear to the front of the chair, and then drawing the chair from the former on its backward motion, the said discharger being arranged and operated substantially as described.

Eighth, As a new product, I claim a swaged rail-chair, such as represented in fig. 8, the fibers of said chair being transverse to the length of the rail, which is to be supported by it, substantially as described and for the purpose set forth.

58,156.—Machinery for Coiling Springs.—Richard Vose and Wm. Toshoch, New York City.

We claim the inclined edged stationary guide plate, S, or its equivalent, in combination with the cylindrical mandrel, D', and one or more swaging and forming wheels and rollers, revolving in orison, all substantially in the manner and for the purpose herein set forth.

58,157.—Oil Can and Oiler.—James E. Weaver, Temperanceville, Pa.

I claim the arrangement of the division, d, and tube, c, when used in connection with the body, a, and conductor, b b', as herein described and set forth.

58,158.—Hay Rack.—D. N. Webster, Geneva, Ohio.

First, I claim the sliding bar, H, spring, P, cross sills, G G', the levers, f and i, in combination with the sections, F F', as arranged in the manner and for the purposes set forth.

Second, I claim the sides, A, as hinged and arranged in combination with the sections, F F', and ends, D, for the purpose and in the manner herein described.

Third, I claim the ends of the rack, D D, the catch, b, spring, e, and the loops, a, as arranged and in combination with the sides, A, and sections, F F', in the manner and for the purpose as described.

58,159.—Ventilating Pipe for Stoves and Heaters.—A. A. Wilder, Detroit, Mich.

I claim the arrangement of the supplementary pipe, B, with its portion, a a, as described, with the elbow joint of a stove pipe, combined and operating in the manner and for the purpose specified.

58,160.—Toys.—Job T. Williams, Philadelphia, Pa.

I claim constructing rocking toys out of single pieces of tin or other metallic plates, substantially in the manner above described.

58,161.—Gate.—James F. Winchell, Springfield, Ohio.

First, I claim the combination with the pivoted bars, a, the slotted brace, C secured by the bolt, n, and nuts, l, when arranged to operate as and for the purpose set forth.

Second, I claim the rubber washer, l, when used in combination with the brace, C, and gate, as and for the purpose set forth.

58,162.—Improved Machine for Wiring Sheet-metal Pans.—F. M. Woods, York, Ill.—Antedated Sept. 2, 1866.

I claim the sliding section, C, in combination with the adjustable grooved wheel, D, arranged in a suitable framing, to operate in the manner substantially as and for the purpose herein set forth.

58,163.—Disinfectant.—Lucy Broad (assignor to Charles A. Broad), St. Louis, Mo.

I claim the combination of the materials herein described in the proportions specified, or their chemical equivalent, for the purpose of producing a fumigating disinfectant.

58,164.—Steam Generator.—E. P. Chase (assignor to himself and John Eaton), Rockland, Maine.

First, I claim the arrangement of an annular steam generator, C, substantially as and for the purpose set forth.

Second, The combination of the annular generator, C, with the heater, B, substantially as and for the purpose described.

Third, The superheating pipe or pipes, P, in combination with the annular generator, C, and situated in the flue formed by the inner shell of said generator, substantially as and for the purpose set forth.

Fourth, The cap, g, weighted lever, F, and diaphragm, l, in combination with the generator, C, and pump, E, constructed and operating substantially as and for the purpose described.

Fifth, The slide, M, channels, t, chamber, u, and additional smoke pipe, L', in combination with the grate, D, and generator, C, constructed and operating substantially as and for the purpose set forth.

58,165.—Egg Beater.—Charles McDrennan, Boston, Mass., assignor to Wm. P. and Isaac Gannett, Roxbury, Mass.

I claim the gauze diaphram, c, when supported and inserted by the wires, d d, attached to the cover, as and for the purpose specified.

58,166.—Combined Corn Planter and Broadcast Seeder.—Andrew J. Edgett (assignor to himself, John W. Ferry and A. Graves), Hornellsville, N. Y.

First, I claim the construction and combination of a corn planter with a broadcast seed sower, so that either machine can be used, substantially as described.

Second, I also claim the distributing wires, I, in combination and arrangement with the grain box and slide of a broadcast seed sower, for the purpose and substantially as set forth.

58,167.—Clamp for Planking Floors.—H. B. Gregg (assignor to himself and James Gable), Camden, Ohio.

I claim the clamp, A, the bar, B, the guide, b, the press block, c, the lever, M, the bar, N, the pawl, f, and the plate, P, the whole constructed, arranged, and operating as and for the purpose herein described.

58,168.—Necktie.—Ira W. Hamlet (assignor to himself and Henry J. Chapman), Nashua, N. H.

I claim the new manufacture or necktie as made with hooks, B B, applied to and arranged with the part or cravat, A, substantially as set forth.

I also claim the combination of the hook, B, the cravat, A, and the stiffener or plate, C.

I also claim the combination of the cravat hook and stiffener, the same being for the purpose set forth.

58,169.—Composition Roofing.—James G. Holliday (assignor to himself, Wm. Hastings, J. Harlan and R. A. McCabe), Wheeling, West Virginia.

I claim an improved composition roofing, formed by combining coal tar, acid tar, still bottom of petroleum, finely ground brick clay and refuse lime from gas house, in the proportions and in the manner substantially as herein described and for the purposes set forth.

58,170.—Attachment for Pumps.—Thomas J. Jones, Summit, N. J., assignor to Charles J. Eames and Wesley Welty, New York City.

I claim a suction attachment by which a pump may be constantly supplied with water, and the introduction of solid substances to choke its action may be prevented, all substantially in the manner above described.

58,171.—Covering for Floors.—Clement Keen (assignor to Keen & Co.), Philadelphia, Pa.—Ante-dated Sept. 2 1866.

I claim a floor covering consisting of burlap or other equivalent textile fabric and paper or paper pulp combined, substantially as set forth.

58,172.—Weight.—Daniel B. Lacy, Mott Haven, N. Y., assignor to himself, Isaac A. and Thomas T. Lacy, Jersey City, N. J.

The construction of weights with an outer case of sheet metal and a filling of "slag," and a malleable or wrought metal ring or shank, around which the slag is cast, all substantially as herein set forth, for the purpose specified.

58,173.—Molder's Flask.—E. C. Little (assignor to Eveline Little), St. Louis, Mo.

The combination of the hinges, B B, and the pins, C C, with the protecting frames, D D, when cast together in one piece, and so arranged and applied in connection with the cope and drage of molder's flasks as to permit a match plate pattern, a, to be placed between them without derangement by side movement, substantially as herein described.

58,174.—Bottle Stopper.—John Mulchahey (assignor to himself and Charles Mulchahey), Springfield, Mass.

First, The arrangement of a safety valve in the stopper of a bottle, substantially in the manner and for the purpose set forth.

Second, The use of a rubber or similarly elastic stopper, when the same is fitted in a case, A, which is hinged at one side, and fastened by a catch or latch at the other, substantially as set forth.

Third, I claim holding the latch or catch, b, by means of the pivoted bar, H, which is also held in place by means of the spring, K, or other suitable means, substantially as described.

58,175.—Drilling Machine.—Robert Nutty (assignor to himself and John Scott), New York City.

First, I claim the piston cylinder of a steam, atmospheric, or other suitable engine, with the piston of which a drill rod is suitably connected, so hung that it can be adjusted to enable the drill to be brought to bear against the surface of the rock or other surface to be drilled, in any desired situation, whether in a vertical or horizontal plane or in any intermediate plane, substantially as described.

Second, A piston cylinder through which a drill rod is operated, hung upon the boom or supporting beam therefor, in such a manner that it can be moved thereon and set at any desired position according to the point of the rock or other surface against which the drill is to act, substantially as and for the purpose described.

Third, The tongued lever, E5, hung to the outer end of the drill boom, and having an extension arm, P5, swiveled or pivoted to it, substantially as described and for the purpose specified.

Fourth, The piston cylinder hung by trunnion pins, to and in a frame, W, that by trunnion pins is suspended in the eyes of screw rods, S, having screw nuts, T2, said screw rods passing loosely through the boom, K, or its equivalent, substantially as and for the purposes set forth.

Fifth, The extension frame, C2, secured to the bottom of the piston cylinder, in which frame slides a cross head, E2, carrying the drill rod, N, and connected with the piston head of the cylinder, in connection with which it moves, substantially as and for the purpose described.

Sixth, The arrangement of the bevel pinion, H2, on the drill rod ratchet pinion, F2, hung in stationary bearings of the frame, C2, and spring pawl, L2, secured to sliding cross head, E2, when arranged and connected together so as to operate upon the drill rod as the cross head moves forward and backward, substantially as described and for the purpose specified.

Seventh, The tappet wheel, G4, walking beam, J4, having drill rod, B4, suspended in its outer end, connecting link or piece, M, double crank shaft, O4, rod, Q4, connected with crank arm, S4, carrying a pawl which engages with the ratchet wheel, V4, of the said drill rod, B4, when the several parts are combined and arranged together so as to operate upon the drill rod, substantially in the manner and for the purpose described.

Eighth, The arrangement and construction of the framework of the machine, the same consisting of the parallel horizontal slotted platforms, D and H, connected to a common center post, G, and supported at suitable points by uprights, J, for holding the drill booms, the whole being supported upon suitable wheels or friction rollers, and arranged and connected together, substantially in the manner described and for the purpose specified.

58,176.—Piston Packing.—William A. and Thomas F. Powers (assignors to William A. Powers), Brooklyn, N. Y.

First, We claim the packing rings, e g, constructed with annular grooves or rebates, c, in their outer sides, and combined with the bull ring, A, and perforated flanges, B, substantially as herein set forth for the purpose specified.

Second, The annular groove, c', formed at the innermost edge of the rebate, c, and arranged in combination with the rebated packing ring, e g, and the perforated flange, B, substantially as herein set forth, and for the purpose specified.

Third, The packing pieces, m, constructed as described in combination with the tongues, t, on the rings, e, substantially as and for the purposes herein specified.

58,177.—Plow.—John A. Quick (assignor to himself and Charles R. Holliday), South Danville, N. Y.

I claim the combination with the plow having mold board and land side, of the conical rotating point, H, shaft, F, gearing, I, M, and supporting wheel, J, operating substantially as described.

58,178. — Shoe Shanking. — Timothy K. Reed, East Bridgewater, assignor to Samuel J. Shaw, and Thomas Corey, Marlboro, Mass.

I claim so combining and arranging a knife or knives and bed and guide pieces that in scarfing one edge of each piece of the shanking, the opposite scarf of the next piece is formed thereby, substantially as described.

Also, combining with a bed which holds the stock in position to be cut square or at one angle to its supported edge, a bed which supports the stock in position to be cut at an angle to the opposite side, substantially as described.

Also, conjointly and specifically the provision for cutting stock of various thicknesses and into various widths for scarfing the material to a greater or less degree, and for inclining one of the scarfed edges more or less, all substantially as specified.

58,179.—Low-water Detector for Steam Generators.—Thomas Savill (assignor to C. Jones and Cadbury), Philadelphia, Pa.

I claim the hollow spindle, C, with its valves and openings in combination with the valve chest, A, its valve seats and openings, b, the whole being constructed and operating substantially as and for the purpose specified.

58,180.—Burning Fluid.—John B. Scott, Hyattsville, Md., assignor to himself, Geo. Hall, Prince George Co. and S. Mop, Baltimore, Md.

I claim the use of the above described ingredients, composed as and for the purpose herein specified.

58,181. —Sewing Machine. — Sidney M. Tyler, Brooklyn, N. Y., assignor to The Empire Sewing Machine Company, New York City.

I claim the rocking shatt, g, crank, k, link, l, and shuttle driver, m, arranged and acting on the shuttle in the manner specified, in combination with the needle bar, m, and cam, q, for giving the specified motions to the needle, as and for the purposes set forth.

58,182. —Sewing-machine Shuttle.—Sidney M. Tyler, Brooklyn, N. Y., assignor to The Empire Sewing Machine Company, New York City.

I claim the tapering rearward projecting point, 3, of the shuttle, in combination with the spring thread detainer, c, extending to the rear of the heel of the shuttle, as and for the purposes set forth.

58,183.—Machine for Cutting the Corners of Paper in the Manufacture of Boxes.—Daniel Whitlock (assignor to himself and J. M. Seymour), Newark, N. J.

First, I claim the providing of the knife or cutter, I, with pendent bars, g g, to serve as guides for the same, substantially in the manner as and for the purpose set forth.

Second, The adjustable bed piece, F, in combination with the knife or cutter, I, substantially as and for the purpose set forth.

Third, The graduating of the edges of the opening, d, in the bed piece, F, in combination with the adjustable gages, G G, substantially as and for the purpose set forth.

58,184.—Railway Chair.— Thomas Whittemore (assignor to Edmund G. Lucas), Cambridgeport, Mass.

I claim the combination and arrangement of the two wedged jaws, C C, and the wedge socketed base plate, F, constructed, arranged and applied together, substantially as and so as to operate as specified.

58,185.—Fruit Jar.—J. F. Winchell (assignor to himself and Joseph Leffler), Springfied, Ohio.

First, I claim the circular bead, b, on the underside of the cap, B, for the purpose herein described.

Second, The pressure lever, D, having projections, c, cam-lever, E, in combination with the bridge, C, and cap, B, when arranged to operate substantially as described.

58,186.—Instrument for Cutting Teeth.—Eugene Bourguard (assignor to himself and Pierre Boisset), Paris, France.

I claim a perforated tube in connection with a handle or any other contrivance for closing the open end of the tube, together with a sponge or other porous substance to be used as above described. The sponge may be dispensed with and the perforated tube filled with sugar or any other sweet substance of such consistency as will not require a sponge to hold it.

58,187.—Cotton Gin.—Frederick T. Ackland and Henry G. Mitchell and Mustapha Mustapha, Zagazig, Egypt.

We claim the application and use to and in the Macarthy cotton gin, or other cotton gins of a like character, of a feeding bar or surface having a rectilinear reciprocating motion along the grid or grating, for the purpose of pushing the cotton up to the gunning roll and "doctor," substantially as hereinbefore described and illustrated by the annexed sheet of drawings.

58,188.—Cultivator.—Alexander Anderson, London, C. W.

First, I claim the mode of suspending the cultivator frame beneath the axle by means of the chains, G G, rods, R R, and levers, J K K, so arranged, as described, to give it the necessary lateral and vertical play.

Second, The slotted extension axles, F' F', counterpart central portion, F, and bolts, S S, constructed and operating as described and represented.

58,189.—Apparatus for Indicating the Speed of Vessels.—Thomas Walker, Birmingham, Eng.

I claim the adaptation or combination of means forming apparatus for indicating the speed of vessels whereby the wheelwork and index are placed in front of the vanes of the rotator and they are definitely acted upon to have motion given to them in the rotation of such vanes and in which the rotating vanes and the chamber containing the wheelwork are immediately connected, substantially as explained.

58,190.—Machine for Slicing and Drying Peat—A. H. Emery, New York City.

First, I claim the combination for cutting peat to facilitate its drying of a knife or slicer attached to or carried by a wheeled vehicle and breaker, set in motion by the draught, for operation together, substantially as specified.

Second, The combination with the knife or slicer, 9, and its pronged stock or cover, of a revolving toothed breaker, arranged and operating together essentially as and for the purpose or purposes herein set forth.

Third, Connecting the knife stock with the frame of the vehicle by means of slotted side uprights made capable of vertical adjustment through the frame, as specified.

Fourth, The combination with the sliding uprights of the knife stock, of the levers, 2 2, screw nut or box, 2 3, and its adjusting screw, for action together, as shown and described.

Fifth, In combination with a revolving toothed breaker, the hangers, 5, supported by or on the axle of the running wheels also carrying the revolving shaft of the breaker with its gear and made adjustable relatively to the frame of the machine, substantially as specified.

58,191.—Rotating Harrow.—Silas Grenell, Mokena, Ill.

I claim a revolving harrow, when constructed with a frame, A, and circular plate or ring, C, upon which the draught is applied by the wheel, I, attached to the tongue, the harrow turning upon a wrist pin, E, and having an arm, G, carrying a weight box, K, resting upon the track, L, on the friction wheel, K, said several parts being respectively constructed and arranged for use, substantially as set forth.

58,192.—Churn.—John R. Mickey, Chicago, Ill.

I claim the combination of the cog dashers, B and B', when constructed substantially as and for the purpose set forth.

58,193.—Fence.—Benning Rowell, Elmira, N. Y.

I claim a portable fence so constructed that the boards or rails, A1 and A2, supporting the panels shall be interlocked and sustained upon posts, B, and be held in place by intermediately placed hooks, C, fastened to short posts, D, and arranged to operate substantially as set forth.

REISSUES.

2,357.—Process and Apparatus for Carbureting Gases for Illumination.—John A. Bassett, Salem, Mass, assignor to Thomas D. Worrall, New York City. Patented March 4, 1862.

First, I claim the combination, substantially as herein described, of the vessel, A, in which the gas passes circuitously over the surface of the hydro-carbon liquids to be partly carbureted and cooled by the evaporation of the liquids, and the vessel, B, containing a porous substance, and saturated with such liquid, through which the gas subsequently passes, as herein set forth and described.

Second, The gas regulating valve, j, and float, k, combined with a gas naphthalizing or carbureting apparatus, substantially as herein specified, that is to say, with the float floating in the naphtha or other hydro-carbon liquid used for the carbureting processes.

Third, I claim, in combination with a carbureting apparatus, a regulator to govern the flow of gas to the burner, substantially as described.

Fourth, The use of carbon-spirit or light products of petroleum for the purpose of carbureting air or of enriching and carbonizing any kind of gas.

2,358—Preventing Rattling in a Carriage.—William S. Chapman, Baltimore, Md. Patented Aug. 8, 1854.

First, I claim the employment of blocks of india-rubber, or other equivalent elastic material, so shaped as to be self-sustaining in position when interposed between the ends of the carriage shafts or poles and the "clip" to prevent rattling, substantially as above described.

Second, I also claim the use of india-rubber blocks, or other equivalent elastic material, interposed between the ends of carriage shafts and the "clips," in such a way and under such strong compression as to hold the bolts in place independently of the nuts, and also to prevent the rattling of the parts, substantially as above described.

Third, Finally, I claim as a new manufacture a block of india-rubber, or other equivalent elastic material, intended to be used as herein contemplated, when made substantially in the form described, that is to say, when so shaped that it will remain permanently in place, and perform its functions without the aid of any other special contrivance for that purpose, in the manner above set forth.

2,359.—Operating Slide Valves in Direct-action Engines.—G. W. Hubbard, Brooklyn, N. Y., and William E. Conant, Little Falls, N. J. Patented Jan. 9, 1855.

We claim, First, So combining a main engine or motor, a supplementary valve-working engine and their induction and eduction valve or valves, that the movement of the valve or valves of the main engine or motor is commenced and partly effected by the piston of said engine, and completed by the piston of the supplementary or valve-working engine, substantially as herein described.

Second, When two direct-action engines are so combined that the movement of the induction and eduction valve or valves of one is produced by the movement of the piston of the other, we claim the arrangement of the cylinder and piston of one engine within the valve chest of the other, substantially as herein described.

Third, In operating the slide valve in one direct-action engine by the piston of another, we claim so connecting the said slide valve with a tappet-rod operated by an arm on the piston-rod of its own engine, that the said rod and valve may have each a certain amount of motion independently of the other, substantially as and for the purpose herein specified.

Fourth, The arrangement of the valves, E and k, the tappet-rod, F, and its connections with the said valves, and the cut-off plate, j, and stops, l l, substantially as described for the purpose set forth.

2,360.—Hay-hoisting Machine.—John S. Lloyd, Salem, N. J. Patented April 24, 1860.

First, I claim an elevated way or railroad, A, in combination with a hoisting or horse hay fork, F, arranged to operate in the manner substantially as herein shown and described.

Second, The construction, combination, and arrangement of the fork, cords, levers, pulleys, springs, and railway, the arms, E E, to the block, D, and the mode of attaching and supporting the railway to the barn or frame, so as to allow the wheels, B B, with the attached blocks and fork, to pass freely along the length of the rail.

Third, The post, P, as constructed in combination with the pulley, lever, slide, spring, and cord.

2,361.—Knob Latch.—Wallace T. Munger and J. A. Leggat (assignees of Wallace T. Munger), Branford, Conn. Patented April 3, 1866.

First, I claim the follower, E, recessed in its rear side, in combination with the bar, a, of the yoke, H, attached to the latch bolt, substantially as and for the purpose specified.

Second, The horse shoe, F, link, I, and spring, M, in combination with the lock bolt, D, substantially as and for the purpose set forth.

2,362.—Wagon-shaft Shackle.—H. D. Smith, G. F. Smith, and Edward W. Twichell (assignees of James P. Thorp), Plantsville, Conn. Patented May 1, 1860.

We claim the improved manufacture of carriage-shaft shackle blank, constructed with the projections, dd, arranged at or about at the junctions of the arms and body of the blank, substantially as and for the purpose specified.

Also for making the said blank, the die as constructed with the projection forming recesses, arranged with respect to the portion for swaging the body and arms of the blank, substantially in manner as specified.

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MOST VALUABLE MACHINE for all kinds of irregular and straight work in wood, called the Variety Molding and Planing Machine, indispensable to competition in all branches of woodworking. Our improved guards make it safe to operate. Combination collars for cutters, saving 100 per cent, and feed table and connection, for waved moldings and planing, place it above all others. Evidence of the superiority of these machines is the large numbers we sell, in the different states, and parties laying aside others and purchasing ours, for cutting and shaping irregular forms, sash work, etc.
We hear there are manufacturers infringing on some one or more of our nine patents in this machine. We caution the public from purchasing such.
All communications must be addressed "Combination Molding and Planing Machine Company, cor. 1st ave. and 24th-st., New York, where all our machines are manufactured, tested before delivery, and warranted.
Send for descriptive pamphlet. Agents solicited. 14 5*

MANUFACTURERS AND INVENTORS.—PACIFIC PATENT AGENCY, for opening facilities to Manufacturers and Inventors to introduce their products to the public in the departments of Mining, Mechanics, Agriculture, Domestic, Musical and scientific, on this coast. Address
J. H. ATKINSON,
Northeast Corner California and Kearney streets,
10-6*] San Francisco, Cal.

PATENT POWER AND FOOT-PUNCHING PRESSES, the best in market, manufactured by N. C. STILES & CO., West Meriden, Conn. Cutting and Stamping Dies made to order. Send for Circular. [10 tf

THE 19th ANNUAL EXHIBITION
Of American Manufactures and the Mechanic Arts, will be opened in the spacious Hall of the Maryland Institute, Baltimore, on Tuesday evening, October 2d, 1866, and close Oct. 20th.
Articles for Competition and Premium must be deposited before Thursday night, Sept 27th.
For particulars, address the undersigned, or Joseph Gibson, Actuary.
JNO. F. MEREDITH,
7 9] Chairman Exhibition Committee.

IMPROVED STATIONARY AND PORTABLE Steam Engines and Boilers, also Saw Mills, Cotton and Hay Presses, Corn and Flour Mills, on hand and in process of construction. Marine Engines, Iron Steamers. Light-draft River Boats, Barges, Iron Bridges, Tanks, and general iron work constructed to order. Address T. F. ROWLAND,
9 26* Continental Works, Greenpoint, Brooklyn, N. Y.

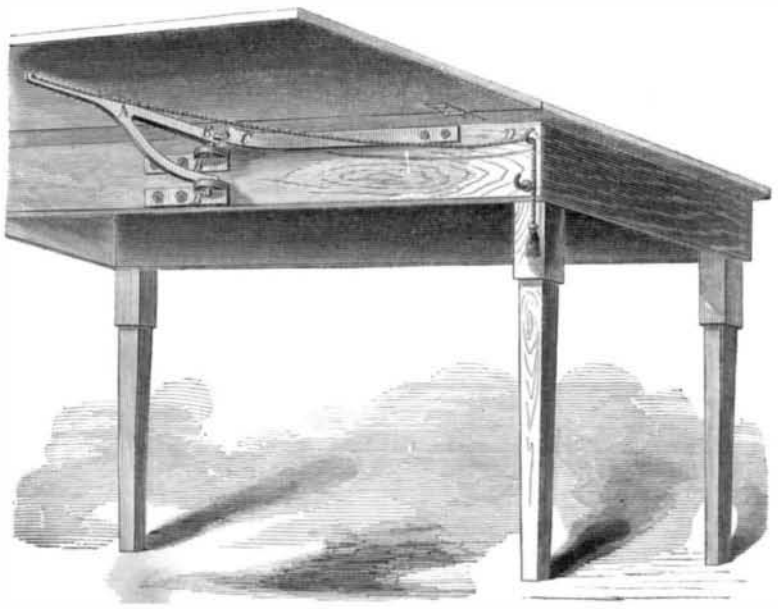
IRON CASTINGS AND STEAM BOILERS.—THE HINKLEY AND WILLIAMS WORKS, No 416 Harrison avenue, Boston, are prepared to manufacture common and gun-metal castings, of from ten pounds to thirty tuns weight, made in green sand, dry sand or loam, as desired; Also Flue and Tubular Boilers, and "Hinkley's Patent Boiler," for locomotive or stationary engines, warranted to save a large percentage of fuel over any boiler now in use. 1 13*

A CARD.—TO MECHANICS AND MANUfacturers.—The Chelsea Machine Works of Norwich, Conn., have on hand and are manufacturing Engine Lathes of very superior quality, with Smith's Patent Feed, and Cross-feed, and many other valuable improvements, making them the most desirable tool of its kind in market. The attention of Watchmakers and others is called to our small class of Engine Lathes as being extremely accurate and reliable; also, hand, drill, wood turning, and foot lathes; dial plates for gear cutters, and first-class machinery made to order, gear cutting, pattern making, iron forging, and general machine jobbing. Lathes fitted with scroll chucks when ordered. H. K. SMITH,
11 4*] General Agent and Superintendent.

PLANER WANTED.—WANTED IMMEDIately a Planer or Shaper, suitable for shaping steel dies, to take in a piece 12 to 20 inches long and 10 to 18 inches in depth and width. Must be stiff and strong, and capable of taking a smooth heavy cut. Send description and price.
LEWIS, OLIVER & PHILLIPS,
141*] Pittsburgh, Pa.

Improved Table-leaf Supporter.

The engraving of this improved table-leaf supporter represents the device so plainly that but little explanation is necessary. It is designed to obviate the necessity for the stooping and lifting required in spreading heavy table leaves. The support, A, is of metal, swiveled to the table by the pivot pieces, B, and held in position by the spring, C. When the leaf is to be lowered, the cord, D, is pulled, and the spring is depressed by the lug, E, allowing the support to shut against the table frame. The simple raising of the leaf to a horizontal position allows the support to springout without the intervention of the hand.

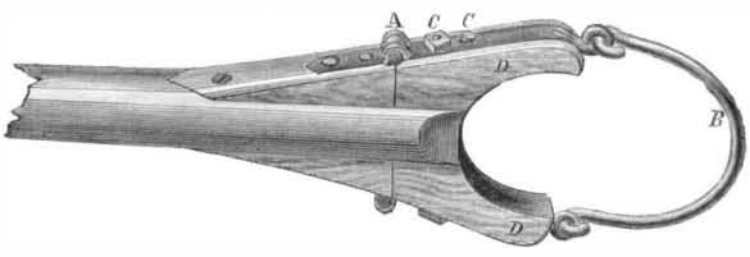


CAVENDER'S TABLE-LEAF SUPPORTER.

Patented through the Scientific American Patent Agency July 3, 1866, by L. R. Cavender, Eureka, Woodford county, Ill., to whom apply for rights to vend and manufacture.

Improved Boom and Gaff.

The object of the improvement here illustrated is to allow a worn jaw of a boom or gaff, to be conveniently removed and replaced by another, without injuring or removing any other portion. The jaws are bolted to the boom in the usual way, but at A, the straps terminate in hinges to allow of the removal of either jaw. The hoop, B, hooks into eyes at the ends of the straps. By driving out the bolts, C, the jaws, D, may be taken off and new pieces fitted. The advantages of this device will be seen by practical navigators and seamen.



MANNING'S BOOM AND GAFF.

It was patented May 1, 1866, by Alfred Manning, Fair Haven, Conn., to whom all letters on the subject should be addressed.

Gas Odors.

A director of a gas company recently wrote to the London *Times* that the excessive impurity of London gas has a beneficial effect in keeping away the cholera, and that none of the workmen in the metropolitan gas works have ever died of that disease, although their duties expose them to great alternations of heat and cold, and they are notably intemperate. The director, however, is directly contradicted by two different writers. Mr. Simcox Lea, incumbent of one of the churches at Bow, declares that no class of men in his neighborhood have suffered so heavily from the cholera as the class employed in the gas works, and the engineer of the Commercial Gas Company says that his company lost five workmen in the first seven days of the present attack.

If the director of the gas company is correct, it might be said "that the remedy is worse than the disease." It may be, however, that the gases which the workmen at a gas-making establishment are compelled to inhale will have some effect in keeping away the causes of cholera; but it is a statement that requires corroboration. As yet there have been no circumstances of position or employment that have proved specifics against the cholera.

Pressed and Cast Bullets.

Machines have been made, and, we believe, are still in use, to press leaden bullets; but we have been told by those who have had much experience with fire-arms that the pressed balls are unreliable. The complaint is that the lead being closely compressed is heavier than a bullet which is run in a mold, and also that in time the pressed bullet expands until the metal regains its natural porosity, and thus becomes too large for the bore of the rifle. Whether these objections have any better foundation than whim or prejudice, or not, it is certain that some large establishments make only cast bullets. This is the case at Colt's pistol factory and Sharps's rifle works. The bullets are cast in metallic molds with lead at a high heat. Each bullet, when cold, is tested by an expert and all the light ones rejected. This is not determined by weighing, but simply by handling the balls, long experience enabling the workman to detect at once those which contain blow holes.

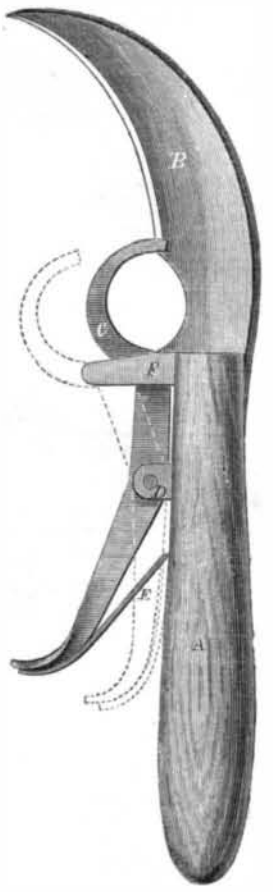
Test for Acids.

AN exceedingly sensitive test for ascertaining the presence of acids has been suggested by Schönbein; this is simple cyanine blue, easily produced by the action of iodide of amyl on lepidine subsequently treated with soda. One part of the cyanine dissolved in one hundred parts of alcohol is further diluted with twice its volume of water. The merest trace of an acid is promptly shown. Distilled water simply blown upon shows by this test the presence of carbonic acid from the lungs. The solubility of oxide of lead, which is so slight as to be unrecognized by sulphureted hydrogen, is clearly discovered by this test. By carefully adding acid to the solution till the blue color is destroyed, a very delicate test for the presence of bases may be procured.

CONARROE'S CANE KNIFE AND STRIPPER.

In crushing sorghum and other canes for the extraction of the saccharine matter, if the cane is not properly stripped, the leaves absorb the juices, and thus a portion of them is wasted. The improvement illustrated in this engraving is a device for combining a cutter and stripper for the cane.

A, is the handle and B the blade of the knife, which latter is hollowed, so that in connection with the jaw, C, the cane can be closely grasped. This jaw is pivoted at D, and held in place by the spring, E, the end of the jaw being notched to receive the edge of the blade, B. Two guides, F, assist to retain the jaw in position.



The operation, after topping the cane, is to open the jaw by the thumb, then, as the thumb is removed, the jaw and blade grasp the cane and a downward motion of the hand strips it of its leaves, and the stalk is cut by drawing the knife toward the operator. The value of the device is seen at a glance.

Patented through the Scientific American Patent Agency July 3, 1866, by Robert Conarroe. For State and county rights address R. Conarroe & Co., Camden, Preble county, Ohio.

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