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LOCK—Christian Ackerman, of Newark, N. J. : I am aware of various claims on rotating bolts to locks, and therefore do not claim the mere rotation.

I claim the use of the fall, b, and lever, C, in their combination with the eccentric moving bolt, a, when constructed and operated as set forth.

GAS REGULATORS—Salmon Bidwell, of Chicago, Ill., assignor to the New York Car and Steamboat Gas Company, of New York ity : I do not claim such an apparatus as the patent of H. F. Beacon, described in Newton's Journal (conjoined series), Vol. 14, page 89, plate 5, as this invention is not suitable for my purpose, it being entirely inoperative from its construction in regulating the flow of gas under varying pressure.

But I claim the cock, F, operated by the diaphragm, C, rod, b, and spring, a, as described and set forth.

BRICK MACHINES—John Booth, of Mobile, Ala. : I claim the chambers, B and C, separated by the perforated floor, a, in combination with the spring blade, F, scraper, K, and reciprocating mold carriage, H, also constructed, arranged and operating substantially as and for the purpose set forth.

SHEARS—Joseph A. Braden, of La Grange, Ga. : I claim making the blades of triangular form in their transverse sections and fitting them to the handles, so as to be capable of being turned therein to present three different pairs of edges in an operative position, substantially as described.

[This invention consists in making the blades of scissors or shears with their transverse section of the form of an equilateral triangle, so that each presents three cutting edges; and fitting them to their handles in such a manner that they are capable of being turned therein, when it is desired to bring a new pair of cutting edges into an operative position when one pair has been worn or blunted.]

PLOW PRESS AND DRILL—T. E. C. Brimby, of Simpsonville, Ky. : I am aware that presses and also drills have been employed in making moldboards of plows, and I do not claim any of the separate devices employed by me.

But I claim the above described press in combination with the drill for pressing and drilling the moldboards of plows, the whole being constructod, arranged and operated substantially as set forth.

TRUSS PADS—C. Campbell, of St. Louis, Mo. ; I do not claim the mode or art of casting or molding gutta percha into any desired shape.

But I claim the application of pads made of gutta percha in the manner described in the specification for the prevention of the escape of viscera through hernial openings in the human body.

PORTABLE FIELD FENCE—P. S. Carhart, of Collamer, N. Y. : I claim, first, Constructing the panels of a portable fence, having their bearings on sills or their equivalents below, shorter at their tops than their bottoms, substantially in the manner and for the purposes specified.

Second, In combination with panels constructed as described, I claim the sills provided with one or more cross blocks, arranged to project between or on either side of the end battens of the panels, to support and guide them, as set forth.

Third, I claim the employment for tightening up the panels and uniting them firmly and expeditiously with the sill of the key or wedge, f, in combination with the brace or strap, e, substantially as specified.

ROTARY PUMP—M. R. Clapp, of Seneca Falls, N. Y. : I am aware that corrugated or cogged pistons have been used, and such alone I do not claim.

But I claim the combination and arrangement of the revolving toothed pinion, E, and cylinder, C, with the abutment, K, or its equivalent, cylindrical case, A, and internal gearing, b, substantially as and for the purposes set forth.

NUT MACHINE—R. H. Cole, of St Louis, Mo,: I claim first, The arrangement of two knives, G G, whereby they are made to act simultaneously on each side of the bar, so as to cut the nut blank entirely off and deposit it between the vibrating jaws or formers, K K, substantially as described.

Second, And I also claim the arrangement of the vibrating dies or formers, K K, whereby they are made to press the sides of the nut to the required form while carrying it from where it is cut off to where it it is to be punched on the die, O, substantially in the manner set forth.

Third, And I also claim the spring, N, as arranged with the aforesaid jaws or formers, whereby they are opened by a yielding force, as described.

Fourth, I do not claim facing the dies or punches with steel, as they are both made entirely of that metal; but I claim making them in three separate pieces or parts substantially as described, so that I can renew one part and retain the other so as to economize material.

RAKING ATTACHMENT FOR HARVESTERS—P. S. Crawford, of Marengo, Ill. : I do not claim, broadly or irrespective of the arrangement shown, a rake or system of rakes arranged or operated, so that one will sweep over the platform and rake a gavel into the other rake, the latter assisting in discharging the gavel from the platform, for such device has been used, and the plan carried out in various ways.

But I claim the combination of the rakes, O P, the former being attached to the box, I, and the latter operated through the medium of the gearing, H J K, placed within the box, I, and the bars, L M, and arm, N, the whole being arranged as and for the purpose set forth.

I further claim the supplemental or discharging rake Q, placed over the rake, P, and used in connection with the springs, i, of rake, P, substantially as described.

[This is a novel means employed for operating the rakes, whereby the grain as it it is cut is taken from the platform of the reaper and discharged in gavels on the ground at suitable points, by a very economical mechanism, that may be readily applied and will work efficiently in all cases.]

EXPANSIBLE FLOATS FOR LIFEBOATS—Charles Legros, of New York City : I claim constructing the outer sides or side surfaces of the floats of some non-corrosive metal, while the top and unexplored surfaces are formed of rubber or other air-proof flexible material, substantially as and for the purposes set forth.

ROOFING CEMENTS—G. W. Cushing, of Chicago, Ill. : I claim the roofing cement composed of asphaltum, coal tar, and the residuary gum specified, combined in about the proportions stated.

[The component parts of this cement are asphaltum, coal tar and the pitchy residue known as "residuary gum," which is separated from the fatty substances in the manufacture of stearic acid for what are known as "star candles" or for other purposes.]

INKSTANDS—Samuel Darling, of Bangor, Me. : I claim an inkstand, with a dipping cup and reservoir, arranged and constructed substantially as described.

BURGLARS' ALARM—A. W. Decrow, of Bangor, Me. : I do not claim, broadly, an alarm bell attached to or connected by mechanism with a till or drawer, so that an alarm will be sounded when the drawer is opened, for such devices have been previously used.

But I claim the slides, D E F, tumblers, G H I, bar or bolt, J, and an alarm formed of the clock movement, C, and bell, D, combined and arranged to operate substantially as and for the purpose set forth.

I further claim the particular manner, as shown, of operating the tumblers, G H I, from the slides, D E F, to wit, by means of the oblique ledges, n, formed on the slides and the adjustable pins, p, which pass through the tumblers, whereby the tumblers are not only actuated, but changes also allowed to be made, so as to require a varying movement of the slides in order to throw back the bolt, J.

I also claim connecting the tumbler, G, and bolt, J, with a bar, L, substantially as shown, to serve as a check or supplemental device to give an alarm, in case an attempt is made to open the drawer by force, or otherwise without tampering with the slides, D E F.

[This invention consists in arranging a series of slides and tumblers with a bolt and an alarm movement, whereby an alarm will be sounded, when an attempt is made to open the till, without having recourse to the bolt that locks it, or by actuating it in an improper way. The invention is designed to effectually prevent the tills of store counters being suddenly opened and rifled by adroit thieves, when the back of the proprietor or clerk is turned, a species of sharp practice of daily occurrence in large cities.]

MACHINES FOR SORTING SILK OR OTHER THREAD ACCORDING TO ITS SIZE—Ira Dimock, of Mansfield Center, Conn. : I claim, first, A device by which the varying thickness of the thread is made to shift a traversing guide or its equivalent, to distribute the thread upon a winding apparatus according to its thickness, consisting of two surfaces, one of which is caused to receive a reciprocating motion through the agency of variations in the thickness of the thread passing between them; whether the said surfaces consist of the peripheries of an eccentric wheel and roller, as represented in the drawing and described, or have any other form which permits of their operation in an equivalent manner.

Second, The movable carriage, T, with its opening, 7 and notches, 7' 7', applied in combination with the series of spools, S1 S2 S3, and the bobbin, D, or winder on which the thread has been distributed and arranged according to its size or thickness, and operating substantially as described to stop the winding operation as the unwinding of the thread from said bobbin or winder varies beyond certain parts thereof.

[A notice of this improvement is given in another column.]

CIGAR WRAPPERS—Henry Durell, of Morrisania, N. Y. : I do not claim converting the fibrous or ligneous parts of the tobacco plant into sheets or leaves.

But I claim the removal of the coloring and flavor of the plant by means described, then reducing to pulp and thence to paper the fibrous or woody parts of the plant in any known way, and then re-charging said paper with the solution or volatile matters previously removed therefrom in order to prepare said paper to be used as wrappers for segars.

MACHINES FOR WASHING COAL—J. P. Evans, of Borough of Hazelton, Pa. : I claim, first, Forming a series of slits, D', at the lower end of the corrugations, C 2, next the triangular openings, C 3, so as to enable the thin pieces of slate to discharge themselves automatically through them, substantially as described.

Second, I claim the combination and arrangement of a tappet or tappets, E', with and in the relation to the corrugated bottom, C 2, of the chutes, C, and the slits, D', and triangular openings, C 3, at the lower ends of the same over which they are suspended, as set forth, the said tappet or tappets being provided with adjustable weights, G, to regulate their resistance to the coal, substantially in the manner and for the purpose before described.

Third, I claim the arrangement of the upright pipe, N, and right angled perforated pipe, P, at its lower end in the relation to the corrugated bottoms of the chutes described, said perforations being formed on the lower portion of its periphery as stated for subjecting the coal to a thorough washing in its descent, as set forth.

[This is a very simple and efficient machine for washing coal.]

PUMPS—S. H. Gray, of Bridgeport, Conn. : I claim having the upright or stand B, of the pump handle provided with a claw or hook, a', at one side of its lower end, and having a bolt, c, pass through the lower part of the upright or stand, the bolt being provided with a curved or hook-formed head, d, the above parts being used in connection with fianch, a, on the upper end of the pump cylinder, as and for the purpose set forth.

I further claim, in connection with the upright or stand, B, the cover, C, arranged as shown, so that it may be secured to the cylinder, A, by the upright or stand, as shown and described.

[The handle of this pump is adjusted in such a way relatively with the spout as to lessen the cost of construction, and ensure better working. It will be found a great improvement in hand reciprocating pumps.]

PUMPS—Foster Henshaw, of Washington, D. C. : Having fully described the construction and operation of my improved pump, and disclaiming any such device as represented in the patent granted to John Tapley, what I claim is, first, Operating the piston by a curved slot, possessing the characteristic features described and arranged or formed in a vibrating handle, substantially as set forth.

Second, In the construction of lifting pumps, the combination of three or more valves, arranged and operating as before described.

Third, The arrangement of washes. I I, formed as specified, with the series of valves, substantially as and for the purpose set forth.

Fourth, Casting in the well pipe a series of steps, essentially as described.

APPARATUS FOR APPLYING SOLES TO BOOTS AND SHOES—Jacob Jenkins, of Charlestown, Mass. : I do not claim an elastic bed and a sole adjusting cavity or space, nor do I claim constructing such sole adjusting cavity with adjusting sides or jaws, as such have been the subjects of claim in another application for a patent which I have made.

But I claim the application of the rocker jaws or jawholders to the elastic bed, whereby the latter when forced downward is made to draw the jaws towards one another in manner as explained.

I also claim the combination of the elastic cushion or sole pressure with the elastic bed, A, and a mechanism for forcing the shoe down upon the said bed.

I also claim the combination of the rocker-bearer, H, and its screws I I, with the holding lever F, or its equivalent, and to operate therewith, substantially as specified.

I also claim the contrivance shown in Figs. 7 8 and 9, and as above described, to be used in manner and for the purpose specified.

DENTISTS' CHAIRS—Alex. M. Holmes, of Morrisville, N. Y. : I claim, first, The foot-rest, O, arranged with the slides, j j, racks, n, pinions m, and palls, o, substantially as described.

Second, The supplemental back, P, attached to links q, which are fitted in the slot, p, of the back, c, and actuated by the set screw, s, substantially as set forth.

Third, The adjustable head rest formed of the slide, u, pinion, w, plates, Q R, and a' b', arranged relatively to each other and applied to the back, c, substantially as set forth.

[The standard of this chair is formed of two parts connected by a universal joint, and arranged with a clamp of novel construction: the standard is also connected to a revolving base. The chair is also provided with an adjustable foot rest, an adjustable head rest, and supplemental back, the whole being arranged so that the body of the chair may be rotated and also inclined in any direction, and secured in varying positions, that the operator may place the patient in the position most comfortable and conducive to the success of the operation with great facility.]

SMUT MACHINES—Hiram Hopkins, of Evansville, Ind. : I am aware that scourers have been constructed in various ways and used in connection with blast spouts, and I therefore do not claim separately any of the parts irrespective of the construction and arrangement of parts shown and described.

But I claim the scourer constructed of the vertical bars, F, provided with radial projections, h, at their inner sides, and the arms, H, provided with ledges, K, and attached to the shaft, B, when said scourer thus constructed is enclosed by a box, M, and arranged relatively with the blast spouts, J K L, and fan, D, to operate as and for the purpose set forth.

[In this machine a peculiar scourer is employed in connection with blast spouts and a fan, so that the effectual cleaning of the grain from smut and other impurities and foreign substances will be easily and perfectly performed.]

WASHING MACHINE—H. R. June, of Millport, N. Y. : I claim the combination of the revolving rubber, C, having alternate slats, d d d, and receding boards, f f, as described with the rubber, E, constructed and operating in the manner specified.

I also claim the elastic pivot rod, m, operating in the manner and for the purpose set forth.

NEEDLES FOR KNITTING MACHINES—J. K. Kilbourn, of Pittsfield, Mass., and E. E. Kilbourn, of Norfolk, Conn. : We claim the improved knitting needle having a secondary groove in its stem, substantially as set forth.

MACHINE FOR CUTTING METAL BARS—D. R. Knowles, of Center Groton, Conn.: I claim the bed piece, A, provided with the clamp, B, block or rest, C, slide, D, having the cutting tool, E, attached and connected with the lever, G, in combination with the automatic feed movement formed of the adjustable lever, H, palls, I, ratchet, J, and screw shaft, K, connected with the block or rest, C, the whole being arranged to operate conjointly as and for the purpose set forth.

[The object of this invention is to obtain a portable machine, and one that may be operated by a small expenditure of power, for cutting metal bars transversely with a clean, smooth cut. The invention is designed for the use of blacksmiths, repairers of railroads, and others, who cannot employ large machinery for such purposes. It consists in attaching a proper cutting tool to a reciprocating slide, which is connected with a lever, and fitted in a rest, which has an automatic feed movement given it by the motion of the lever.]

BRUSH CYLINDERS FOR SPREADERS, COTTON GINS, &c.—A. M. Lampher, of Gloucester, N, J. : I am aware that metallic fans have been used on the ends of a cylindrical brush in the cotton gin, as described in E. Carver's patent, and I am also aware that brushes have been arranged around the periphery of the end of the cylinder, and that such an arrangement was patented by B. D. Gullet, in 1858, but while I believe I can prove priority of invention over Gullet, I deem my arrangement essentially different from an improvement upon his, as it combines the advantages of the fans of Carver, with the protection against fire attained by Gullet. I therefore claim the brushes on the ends of the cylinder when arranged substantially as above described, for the purpose of preventing the filaments of cotton or other fibrous substance from becoming entangled in the journals and for preventing accidents by fire.

SELF-ACTING WAGON BRAKE—A. Larrowe, of Cohocton, N. Y. : I am aware that self-acting brakes having a wedge-shaped rubber for self-tightening on the forward motion of the wagon, and self-releasing on the backward motion are not new, such therefore I do not claim.

But I claim constructing the rubbers with the flanges on each side operating loosely in grooves in bar, B, and resting on springs, h, for allowing the rubber to rise upon an inclined plane, and relieve the friction of the wheels when backing the wagon and for replacing the rubbers, the whole operating as described and for the purposes set forth.

HORSE SHOE—John Maddock, of Bloomington, Ill. : I claim a nailess horseshoe, provided with lugs, a, or their equivalents formed on the upper side of the sole, A, when used in connection with corresponding projections, b, formed on the inner side of the upper flange B the former being made to fit cavities formed in the horse's hoof, and the latter into grooves, c, formed for their reception in the sole, A, the whole being constructed and secured together in the manner and for the purposes substantially as set forth.

CANAL BOAT—John McCausland, of Kingston, N. Y., and Jefferson McCausland and James McCausland, of Esopus, N. Y. : What we claim in the construction of canal boats and other flat-bottomed and vertical-sided vessels is, first, Interposing the bilge timbers between the floor timbers and the side timbers, substantially as and for the purposes set forth.

Second, Beveling the edge of the bilge timbers and forming a face on either side of the beveled face for the fitting on of the bilge plank in a gradually rounding line, as described.

Third, The second dovetail in the side timbers, with the chock between the dovetailed faces and the bilge timber, as an arrangement of means for adding strength to the vessel, as set forth.

MACHINES FOR CUTTING GRASS, &c.—C H. McCormick, of Chicago, Ill. : Disclaiming such combination of guard fingers and sickle as is shown in Jonathan Read's machine, patented March 12, 1842, what I claim is the combination of the sickle, having the scolloped or indented edge and serrated teeth, with a continuous series of fingers having the back reversed angles for supporting the grain or grass to be cut to the edge of the sickle both above and below the edge or above the edge only, substantially as described.

I also claim cutting out the middle of the upper part of the fingers that project over the sickle, as described in combination with the vibrating sickle, as described for the purpose specified.

HARVESTERS—McClintock Young, Jr., of Frederick, Md. : I claim the combination of the handle, J, shaft, D, arm, L, pitman, M, and guide, R, or their equivalents, when arranged and operated substantially in the manner and for the purpose specified.

I also claim making the gatherers, F, adjustable on the arms, E, of the reel, as and for the purpose specified.

MODE OF PREVENTING NUTS FROM UNSCREWING—S. Noblet, of Halifax, Pa. : I claim preventing bolt heads or nuts from turning by inserting below them a flexible metallic washer, one end of which is turned against the head or nut, and the other held immovable in place, substantially as described and represented.

CHURN—Andrew Ralston, of West Middleton, Pa. : I claim the arrangement of the openings, o and v, in the circular part of the fan or beater case, the valve, x, the gathering valve, h, the conductor, u, the whole being arranged and combined as described and represented for the purpose specified.

LAMPS—C. Reichmann, of Philadelphia, Pa. : I claim in combination with the lamp, the slotted open bell shaped cap m, when so constructed, arranged and operating as to allow light to be deflected downward, substantially in the manner and for the purpose set forth and explained.

ROTARY HARROWS—Jabez Robins, of Boston, Mass. : I am aware that loaded frames or weights have been previously used and applied to rotating harrows, and I therefore do not claim broadly such device.

But I claim the two harrows, A C, placed one within the other, and connected by the concave rollers, d, and bead, l, in connection with the draft beam, D, and frames, E F, provided with the rollers or weights, G H, the whole being arranged substantially as and for the purpose set forth.

[This invention consists in the employment of two annular rotating harrows, placed one within the other, connected in a peculiar way, and provided with weights and a draft beam, the whole being arranged so as to obtain a very simple and efficient implement.]

WATER WHEEL—Alpha Smith, of Sanquort, N. Y. : I am aware that curved buckets have been used and applied to horizontal water wheels in various ways; and I am aware also that buckets have been placed between conical shells. I therefore do not claim broadly the parts above named.

But I claim constructing the buckets, C, with ledges or prominences, d, the buckets being curved, and fitted between the shells, a d, which form the body of the wheel, A, and arranged relatively therewith, substantially as and for the purpose set forth.

[In this wheel the buckets are of curved form, and are provided with ledges or projections, arranged so that each individual bucket will virtually consist of a series of buckets, against which the water will act successively in its passage through the wheel, and a corresponding relative speed be observed between the water and the wheel at all points.]

ROTARY VALVE FOR STEAM ENGINES—Thomas Stewart, of Philadelphia, Pa. : I do not claim generally a rotary valve for the induction and eduction of steam.

Neither do I claim generally mounting an independent cut-off upon the upper side of a valve.

But first, I claim making a rotary valve with an independent cut-off applied thereto, constructed, arranged and operating substantially in the manner set forth.

Second, I claim constructing the said rotary valve with two or more sets of ports or ways therein, as described, for the induction and eduction of the steam, so as to enable me to cut off the said steam at any required part of the stroke, without producing any connection with the opposite side of the piston when the steam is cut off short, as set forth and described.

ROTARY HARROWS—Salathiel S. Thompson, of Heller's Corners, Ind. : I am aware that rotary harrows have been previously invented, and I therefore do not claim broadly rotary toothed wheels for such purpose.

But I claim attaching the toothed wheels, D D, to the frame, A', formed of the bars, d d, hinged together or connected at their front ends by a swivel joint, a, and having their back parts attached to bars, e' e', connected by a pivot, f, and secured in proper position by the segments, g, and pins, g', substantially as and for the purpose set forth.

[Two harrow wheels are attached to a frame constructed and arranged in a novel way, whereby the wheels may be adjusted in a perfectly horizontal plane, so that they will, as the implement is drawn along, remain stationary, or have no rotary motion, and also rendered capable of being adjusted more or less in an inclined position, so as to obtain, by the draft movement, a greater or less rapid rotation of the wheels, as may be desired.]

EYELET FASTENINGS FOR LADIES' SKIRTS—W. S. Thomson, of New York City : I claim the use of the H-shaped washer or fastener, or equivalent, in combination with an eyelet, as a means of fastening together the straps and hoops of elastic skirts, substantially as set forth.

COTTON GINS—John L. Tuttle, of Bridesburgh, Pa. : I claim so combining a toothed cylinder with an open breast, that allows the fiber to pass through it, but holds back the seeds, as that the cylinder shall work against the edge of said open breast, and carry the fiber past it, whilst the seeds shall roll up against the surface of said breast, and draw the lint that has not been taken from them up through the openings, whence they are turned over, and returned again and again by the action of the cylinder to the breast until divested of all their fiber, substantially as described

CORN PLANTERS—Charles Van Houten, of Sunbury, Ohio : I claim first, The employment of the hinged, adjustable and laterally sliding hopper, and share frames, E, furnished with a spring stop or catch, M, in combination with a long transverse pinion, S, and the propeling axle, C, substantially as and for the purposes set forth.

Second, The combination of the hinged grated apron, J, with the sub-soiling covering shares, I, and furrow opener, H, substantially as and for the purposes set forth.

[In this machine the grain can be planted regularly in hills or drills, each grain being conducted into the soil by a channel in the bottom of the hopper and a narrow tube leading from the same to the ground. After the corn is planted it is covered with light pulverized soil by shares which subsoil, and have a pulverizing grated apron attached to them. The corn tubes and hoppers can be adjusted very readily out of operation. We regard the whole arrangement as a good one for planting corn.]

MACHINE FOR CUTTING VENEERS—Gilbert Bishop, of Fairfield, Conn., assignor to Edward White, of New York City : I claim first, The cutting of veneers from opposite sides of the log, by knives, arranged and operating in opposite directions, so as to cut with the grain of the wood.

Second, The construction and arrangement of the diagonally-faced side pieces, D' D'' D''', and the sliding frames, g g, in connection with the knives, so as to give the thrust of the knives into the center of the log, and thus cut the veneer clear from the log.

Third, The arrangement of the wheels, H H, in combination and connection with the sliding frames and knives, so as to produce the drawing cut at the same time that the knives are being thrust in upon the log.

Fourth, The combination and arrangement of cam, 19, the pair of bars, 13, 14, the connecting rod, 12, and vibrating arm, 11, and pawl and ratchet, so as to operate in the manner described, to raise or lower the feed screws.

APPARATUS FOR COLORING PAPER, &c.—Charles Williams, of Philadelphia, Pa. : I claim distributing or laying the color in the process of marbling or coloring paper, by means of an apparatus constructed so as to operate substantially in the manner and for the purpose described.

SKATE IRONS—C. A. Williams, Robert Williams and G. A. Morse, of Bloomfield, Me. : We do not claim that portion of the studs included between the runner and the wood.

We do not claim the collar, C, nor the nut, N.

Nor do we claim any heel spur which is not a continuation of a stud that is solid to the runner.

But we claim that portion of skate studs (solid to their runners) above the collars, C, upon which is cut the screw thread, T, in the manner and for the purposes substantially as set forth in the description.

GAS BURNERS—A. H. Wood, of Boston, Mass. : I am aware that metallic plates or spreaders have been attached to oil lamps, for the purpose of facilitating the capillary attraction, and thereby aiding combustion, but metallic plates or spreaders which conduct the heat to a hight above and beyond the orifice of the burner have never heretofore been attached to gas burners, and consequently I shall claim the combination with a gas burner, of the metallic spreaders or flanges, constructed as described. This arrangement of the spreaders has the effect of conducting the particles of coal tar, &c., that obstruct the orifices of gas burners as usually constructed, to the points of extreme heat, which in this case are in the flanges or spreaders, instead of in the orifice itself, as in other gas burners, thereby drawing, as it were, all the impurities from the orifice of the burner, and consuming them on the spreaders or flanges, leaving a kind of ashes upon the same, which can readily be removed.

I claim the combination with a gas burner of metallic flanges or spreaders, arranged near and above the orifice of the burner, as described, for the purpose of spreading the flame and consuming the impurities of the gas, whereby the orifice is kept clear, as set forth, and this I claim whether the conducting rods be used or not.

SAW MILL.—John Pemberton, deceased, late of Jonesborough, Ind., assignor to Lemuel Pemberton, of said Jonesborough : I do not claim as new the devices below enumerated, but simply their relative arrangement, as specified, for the purposes set forth, to wit: first, The roller, T, ropes, t and u, to raise the bars, M and M', in combination with the pin, b, slide, X, lever, w', bar, N, and rock shaft, P, with its arms, rod, q, and lever, q', the whole being so constructed and arranged as to throw the feeding out, and the backing devices into gear, by operating the lever, e', and move the gate or valve to reduce the speed of the mill at the proper time, or after the saw cuts through the log.

Second, The arms, J, rock shaft, S', and bar, S, in combination with the projection or stop, e, connected to the lever, E, or its equivalent, to turn the ratchet wheel shaft and traverse the rack to set the log, as described.

Third, The ratchet wheel, F', bent lever and pawl, G, in combination with the pin, f, or its equivalent, in the lever, F, to stop the ratchet wheels when they have moved far enough, so as to prevent the log from being moved too far when it is set for a new cut.

Fourth, The pin, n, in the head block, and slide, X, in combination with the lever, W, which releases the hook, V', to let M' M descend to increase the speed of the mill, as described.

Fifth, The rod, a, and stop, L, in combination with the slide, Y, and lever, U, so constructed and operated as to hold up the bar, M, after the log is sawed, and prevent it from descending and increasing the speed of the mill, and at the same time stop the apparatus which sets the log.

TEA POTS—William Austin, (assignor to himself and William Obdyke), of Philadelphia, Pa. : I do not desire to claim the use of an interior casing for confining the tea in the inside of the same.

But I claim the plunger or presser, D, in combination with the interior casing, B, the whole being arranged in the manner set forth, or any equivalent to the same, and for the purpose specified.

AUTOMATIC PAPER FEEDER FOR PRINTING PRESSES—William Bullock, (assignor to George W. Taylor), of Newark, N. J. : I claim operating the hands, or their equivalents, which effect the feeding of the sheet of paper in manner substantially as set forth, so that they have a greater capacity for moving the sheet than is necessary for the purpose.

I also claim controlling the operation of the hands, or their equivalents, upon the sheets of paper, by mechanism whose operation is dependent upon the position of the sheet being fed, so that the length of time during which the hands, or their equivalents, are permitted to act upon each sheet of paper does not bear any fixed relation to the movements of the other parts of the printing press.

I also claim intermitting the operation of the hands, or their equivalents, upon the paper, while the latter is being drawn into the press by mechanism acting substantially as set forth.

I also claim effecting the progressive movement of the pile of paper by mechanism whose operation is dependent upon the position of the pile, substantially as set forth.

I also claim the combination of the flap guides and nozzles, or their equivalents, for stopping the movement of the forward edge of the sheet, and for releasing the same, in the manner described.

I also claim moving sheets of paper by automatic rubbing hands, or their equivalents, constructed substantially as set forth.

I also claim operating the stop cocks of the air cylinder and the flap guides by a cam, or its equivalent, whose movement is coincident with or bears a fixed relation to the movement of the fingers which draw the paper into the press.

SEWING MACHINES—Jonas Hinkley, of Huron, Ohio, assignor to himself and F. A. Wildman, of Norwalk, Ohio : I claim, first, The method of operating the feeding arm or cloth mover, by the combined action of the pivoted bow, K, pressing lever, N, fiexing strap, O, and vibrating plate, D, or its equivalent, as set forth.

Second, Mounting the vibrating plate, D, which imparts motion to the loop-forming hook and feeding mechanism, upon spring arms, n, arranged at right angles to a longitudinal spring, H, for balancing said plate in its vibration.

Third, Mounting the spool, T, upon a spindle having elliptical-shaped springs, which extend into and through the eye of the spool, as and for the purposes specified.

MACHINES FOR PEGGING BOOTS AND SHOES—B. F. Sturtevant (assignor to himself and Elmer Townsend), of Boston, Mass : I claim, first, Causing the hammer to descend each time a peg is driven a short distance below the stationary rest, for the purpose of compressing the soles, as set forth, and of relieving the shoe from contact with the rest, that it may be fed forward, as described.

Second, The arrangement of the hammer, X2, and stationary rest, H, constructed and operating as described, in connection with the weighted lever, as set forth.

Third, I claim the peculiar holder, p, for the blank, the same having several knife edges lying in the direction of the feed, operating in the manner set forth, to hold the last peg of the blank whilst it is being separated from the one preceeding it.

Fourth, And in combination with the holder, p, I claim the pawl, A2, operating upon several points of the blanks, in the manner set forth, for the purpose specified.

Fifth, I claim sawing off the pegs in the machine by a saw operating into and through the trough through which the pegs are fed.

Sixth. I claim the spring, p2, in the end of the trough operating as described, for the purpose specified.

RE-ISSUES.

TACKLE—Joel Bryant, of Brooklyn, N. Y. Dated April 7, 1857: I claim the construction and use of winches, whose bosses or drums, turned by cog wheels, operate in connection with certain sheaves, wheels or pulleys, for carrying, operating and sustaining the fall or tackle used in hoisting or lowering the sails or cargo of vessels on shipboard, substantially as described, and for the purposes set forth.

RAILROAD CAR SEAT—J. B. Creighton, of Tiffin, Ohio. Dated May 18, 1858 : I claim the employment of the movable backs of car seats, when used for the purpose of filling up the spaces between the seats, so that a bed may be formed, and this I claim whether accomplished in the manner shown or in any other manner substantially the same, whereby the same result is accomplished..

Second, The described method of forming and concealing, when not in use, in the spaces between the windows, an upper tier of beds, the same in arrangement with the device constituting the subject of the first claim.

TREATING SULPHURETS—Alfred Monnier, of Camden, N. J. Dated August 11th, 1857; re-issued October 6th, 1857 : I claim the process of treating native metallic sulphurets or arsenical sulphurets, in connection with the substances above described, in order to expel all or part of the sulphur and arsenic, for the purpose of obtaining therefrom sulphuric acid, and the metals as sulphates or oxyds.

DESIGN.

STOVES—G. Smith and H. Brown (assignor to North, Chase & North), of Philadelphia, Pa.

Destroying Grain Insects.

Agricultural science is perhaps the most important of all others, because we are dependent upon its results for the very stamina of life, and no subject in relation to it is of more general interest than the one which forms the topic of these remarks. The labors of the husbandman are frequently rendered abortive by the ravages of tiny insects, which devour his grain in the fields, destroy the fruit of his toil, and blast his hopes of an abundant harvest. The two most destructive of these insects are the Hessian fly, and the wheat-midge or red weevil. The ravages of the latter have been very destructive in some sections of our country during the present year. The attacks of both are confined to grain in the fields. The means which should be employed by farmers to prevent or mitigate their depredations are described by the distinguished State entomologist of New York, Dr. A. Fitch, also by Professor Hind, of Toronto, C. W., in his prize essay of 1857.

There is another wheat insect which is oftentimes very destructive to grain in heaps, namely, the true weevil (*calandra granaria*), and as the crops are now being "gathered into the garner," our remarks will be chiefly confined to it.

This weevil is a sort of small beetle, brown in color, having a slender body, and is about one-eighth of an inch long. The female lays her eggs in the wheat in the granary, and a single pair will produce six thousand descendants in one year. The young burrow in the kernels of the grain, consume the contents, and leave only the shells. So secretly are their operations conducted, that it is impossible to detect them by the simple inspection of the wheat. On throwing a handful of the grain into a bucket of water, those attacked with the insect will float, while the sound grains will sink, and in this manner their presence will be discovered. After a female weevil has deposited an egg in a grain, she closes the puncture with a glutinous substance of the same color as the husk, hence the difficulty of detecting the presence of this depredator when in its *larvæ* state. As one of these insects can be the means of destroying six thousand grains in a storehouse in a season, some conception will be formed of its means of destruction.

On the approach of very cold weather, developed weevils retire from the wheat, and seek shelter in crevices where they remain in a torpid state. They are not so destructive in the cold as in the warmer sections of our country, where certain methods for their destruction are more urgent and necessary. They avoid light, hence. if the wheat is kept in well-lighted granaries and frequently turned over, much will be done towards checking their operations. Authors, however, who have devoted much attention to their habits, have asserted that kiln-drying the wheat is the only effectual means of destroying them. It has also been recently recommended that wheat for storing up should be submitted to the action of a smut machine, to receive a thorough scouring, in order to rub off the glue with which the female conceals the punctures made for her eggs. The admission of air into these small holes, it is stated, destroys the germinating powers of the eggs. It seems reasonable to us that by submitting wheat to a scouring process, then heating it in a kiln up to a temperature of about 120° or 130° Fah., it would be completely protected from the destructive effects of this insect in granaries.

A correspondent of the *American Farmers' Magazine* asserts that the weevil, midge, Hessian fly and rust may be exterminated from wheat by preparing it for sowing, as follows : Wash the wheat thoroughly in several waters in a tub, stirring it well until the water runs off clear. After this take two quarts of caustic lime to every bushel of grain, and mix it well with the wet wheat in the tub. The amount of water in the tub should just cover the grain, which must be left to soak for twelve hours. This lime lye kills all the seeds of the insects, and the wheat is then rendered fit for sowing by turning it over among dry wood ashes on the barn floor, and using a pound of the flour of sulphur to each bushel. It is stated that the sulphur protects the grain from the attacks of vermin, while the alkali dissolves the insect ova in the seed. Wheat thus prepared has yielded large crops in New England. We have seen this grain prepared for sowing by various modes, such as salt brine, lime and ashes, but we like the above method better than any hitherto known to us. Farmers residing in sections subject to the attacks of the Hessian fly, who do not sow fall wheat until October, should give this method of preparing it a trial. It cannot injure the grain, and we believe it will be the means of greatly benefiting it.

Preservation of Fruits.

As at this season of the year we have frequent inquiries respecting the best manner of preserving vegetables and fruit, we will present something which, we think, will be of benefit to many of our readers. A common way of preserving green corn to make succotash during winter is to boil it slightly in the ear, then remove the kernels from the cobs with a knife, dry them by a slow heat, and pack in tight cans. The same practice has been pursued with Lima beans, &c. A friend informs us that green corn, peas, Lima beans, tomatoes and various other vegetables, can be preserved without the use of tight cans and in a superior manner by drying them slowly at a low heat in the shade, until all their moisture has been evaporated, after which they are placed in stone ware or glass jars, and put away in a dry pantry. The best method of carrying out the operation is to place such vegetables in shallow earthenware plates, and arrange them around a stove until they (the vegetables) are thoroughly dried. They should be steeped for an hour in warm water before they are cooked. Most of the vegetables employed in cookery may be thus preserved, and retain all their original flavor.

Peaches, plums and such like fruit may be preserved in good condition as follows :—The fruit (which must be perfectly sound) is placed in air tight "self-regulating cans," then boiling hot sirup made in the proportions of one pound of white sugar to one pint of water is poured in up to the top covering all the fruit. For a few seconds air globules will rise to the surface ; when these cease ascending, the covers are put on the cans, which are then put away in a cool, airy place. Fruit or vegetables, preserved by sirups, and put up in tin vessels, do not have such a good flavor as those which are put up in stoneware vessels ; at least this is our experience.

At a late meeting of the Cincinnati Horticultural Society, this subject formed an interesting feature in the proceedings. One member stated that he had found it beneficial to gather his fruit in the morning while it was cool, and to keep it in an airy place. Pears should be gathered before they were fully ripe, and allowed to mature after picking, in a cool, clean cellar, in such a position as not to press upon one another. Another member stated that he had tried two methods of preserving pears; one was by packing them with oats in barrels ; the other by wrapping each in a piece of dry paper, and placing them in boxes in the same manner that oranges are packed for shipping. This was found to be far the best system. Another member—Mr. Buchanan—stated that he had the Virginia greening apple perfectly sound at that time (August). It was of last year's growth, and was put away in a tin-box in a cool, dark cellar. It was generally conceded that fruit kept best in a cool, dark situation. Moisture, light, and heat are active agents to cause and promote vegetable decomposition; fruits for preservation should therefore be secluded from such influences.

A correspondent (C. Campbell) of the *American Agriculturist* describes the following method, which has been successfully pursued by him for preserving grapes. The clusters —all sound and fully ripe—are carefully placed in open shallow boxes, about six inches deep, with a sheet of dry paper between each layer. They are then set in a dry, airy place, and thus kept for ten days, during which period they sweat, and the moisture passes off. The lids are now put on tight, and the boxes set in a dry, cool place, where the grapes will not freeze. Grapes thus treated and packed will keep fresh all winter. It is asserted to be a superior mode of preserving to that of packing them in dry bran or between layers of cotton wadding.

Currant Wine.

In answer to the request of a correspondent, we give the following recipe. Bruise eight gallons of red currants with one quart of raspberries. Press out the juice, and to the residuum after pressure, add eleven gallons of cold water. Add two pounds of beet root sliced as thin as possible, to give color, and let them infuse, with frequent stirring, for twelve hours; then press out the liquor as before, and add it to the juice. Next dissolve twenty pounds of raw sugar in the mixed liquor, and three ounces of red tartar in powder. In some hours the fermentation will commence ; when this is complete, add one gallon of brandy, let it stand for one week and then rack off and let stand two months. It may now finally be racked off, and placed in a cool cellar where it will keep for years. The cider white wine is a pleasant beverage; here is the recipe. Mix sixteen gallons of apple juice, sixteen pounds of honey, four ounces of white tartar, enclose in a bag one ounce each of cinnamon, cloves and mace, and suspend them in the wine while fermenting. When this fermentation is complete, add one gallon of rum.

Poison of the Common Toad.

It is an ancient and common opinion that toads and salamanders possess a subtle venom ; this, however, has been generally deemed fabulous by those engaged in scientific pursuits. MM. Gratiolet and Cloes, in a report to the French Academy, show that there is in reality some foundation for the common belief, and that toads and salamanders do secrete a deadly poison. These gentlemen innoculated small animals with the milky fluid contained in the dorsal and parotid pustules of these animals, and found it productive of fatal effects in a short space of time. A turtle-dove slightly wounded in the wing and inoculated with the liquid secreted by the salamander, died in terrible convulsions in eight minutes. Five small birds inoculated with the lactescent humor of the common toad, died in five or six seconds, but without convulsions. The liquid of the pustule of the toad, even after being dried, kills birds, though not with the same rapidity as when fresh.

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