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New Water Meter.

Liberal supplies of water in cities are blessings which cannot be too highly appreciated. To prevent waste, however, the necessity of some method of recording the quantity used in each household or establishment, is very much felt, and various methods have been adopted for effecting this result. None, however, measure with absolute mathematical perfection, some are quite expensive, and nearly all have stuffing boxes, packing, or the like, rendering them more or less liable to get out of order.

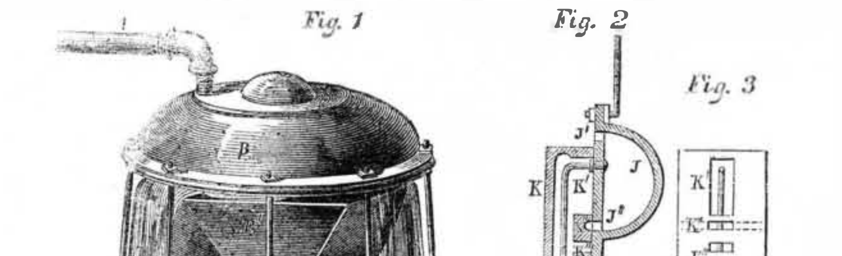
The meter represented in the accompanying engravings—an apparatus recently invented by James Cochrane, of this city—is so arranged as to require no packed parts, to work practically independent of friction, and to afford a means of measuring with great accuracy whether the flow be rapid or extremely slow. It has been constructed in various sizes, and is already in successful use in several portions of this city.

The water is received in a rocking cup, divided in two compartments. When tilted to one side, the partition induces the water to accumulate in the upper side until its gravity is sufficient to tilt the cup and discharge the quantity thus measured and weighed, and induce its accumulation on the opposite side. So far, this is an old device, but to allow the apparatus to work under a head and without diminishing the pressure of the water, the case or vessel in which the whole is enclosed, is partially filled with compressed air; and to prevent the loss of this compressed air by its escape through the pores of the metal, or its absorption by the water, provision is made for discharging, at each movement of the rocking cup, a small quantity of water from the lower part of the case, and for receiving in its place an equal volume of air from the outside, which is allowed to rise through the water, as represented.

Fig. 1 is a perspective view of the whole, the upper portion being of glass, to allow a view of the interior, while figures 2 and 3 represent sections, on a larger scale, of the device for supplying air. Fig. 4 is a vertical section of the whole, as ordinarily constructed of cast iron.

A is the pipe which supplies the water, and B a receiving and retarding vessel bolted upon the top of the main case, C. This vessel serves as a kind of air chamber, and allows the water to fall gently into the cup below. D is a cock, through which the water is discharged, and E E is the surface of the water within; it being understood that the air above E is at the density required to equal the pressure due to the head of water. This density is acquired in the first instance, simply by the rise of the surface, E E, which thus compresses it. F is the rocking cup, and F′ the partition therein.

COCHRANE'S WATER METER.



The cup being supported on suitable bearings, its pivot is free to roll horizontally, to a slight extent, and thus to make the resistance a rolling rather than a sliding friction. G is a lever, mounted in the same frame with F, and immediately below it. It is slightly bent, as described, and immediately below it is a cross bar, H, which regulates the extent to which either end of the lever, G, may be depressed. The center of gravity of the rocking cup, F, is at the point indicated by the star in Fig. 4, and its motion with the vibration of F, is a curve, as represented by the short dotted line. The center of gravity is thus lower at either extremity of its motion than at the middle of its vibration; and, in short, by well known laws, the cup inclines with a certain uniform degree of force, to remain at either extreme of its motion. The water received from B through the tube represented, accumulates on one side of F′ until its gravity is sufficient to overcome this tendency, when the cup rapidly tilts, and discharging its load on that side, commences to receive an equal amount on the other. There is no resistance to the commencement of this rocking motion, except the gravity of the cup, F, and the rolling friction of the support, but towards the close of its motion it strikes the elevated end of the lever, G, and depresses it. The devices for recording the strokes, and also for receiving the air, are worked from this lever, G, by the aid of the rod, I; and both these operations, though necessarily communicating with the exterior of the case, are performed without the aid of a stuffing-box of any kind.

The tight joint required at the point where the motion is carried out through the case, is obtained by the use of a kind of miniature

Fig. 4

slide valve, held to its seat by the pressure of the fluid within. A hollow projection, K, extends upward from the bottom into the interior of the case, A. Its interior communicates freely with the atmosphere, and its exterior is plane on one side and perforated, as represented in Fig. 2, the perforations being covered by the small slide valve, J. This slide valve is connected by the rod, I, to the lever G, and consequently moves vertically on the plane surface of K, at each movement of the latter.

The indicating mechanism is on the exterior of the case. It is similar to that ordinarily employed on gas meters and the like, and carries several indexes, which work on the face of corresponding dials, as represented by R, in Fig. 1. A ratchet wheel on the lowest and quickest shaft is operated by a pawl, which latter is connected to the work inside through the rod, L, which stands loosely enclosed in the interior of K, and is connected firmly to the slide valve, J, at the point, K′, Fig. 2. This connection avoids the necessity for a stuffing box.

When the valve, J, is in its lowest position, the water in its interior escapes through the aperture, K‴, and air from the interior of K flows in through the aperture, J, to supply its place. Now when, by the means described, the valve, J, is raised to its highest position (that represented in the figures) the air freely escapes from the interior of J through the cavity, J′, and water finds access through side openings, imperfectly represented by dots, so as to flow in through J″. At each movement of G, therefore, the indicating apparatus, R, shows that water has been discharged from the cup, F, and also allows a quantity of air to rise in bubbles through the water, as shown in Fig. 4.

The various pipes and cocks connected to the base of the case, C, serve to draw water therefrom in the usual manner. They may discharge it directly at the cock from which it is seen flowing, or may lead it in the pipe represented to any distance, and the whole apparatus serves as an air chamber to regulate the motion of the water.

The device for receiving air is made a little larger than necessary, in order to ensure a sufficient supply of that fluid within the case. Under ordinary circumstances, no harm can arise from a too great accumulation of air, as the aperture K″ which obstructs the water being higher than either of the other outlets, it simply follows that if the water surface becomes too low, small quantities of air instead of water are discharged through the cavity of the slide valve, J, and as the density of the air escaping is greater than that introduced, the effect of this device is to reduce rather than increase the quantum of air in the case, C; thus there is no possibility of too much air accumulating, except under unusual circumstances. In case the pressure in the street main should be suddenly diminished, in consequence of the bursting of a pipe, or of an extraordinary quantity being drawn out in case of a fire in the vicinity, the air enclosed in C, by expanding, might force its way backward into the main. To avoid this, the reservoir, B, is arranged, as represented, so that it will receive and contain any air which might thus be displaced, and hold it ready for discharge into the case C again, so soon as the pressure is restored. The inventor is ready to guarantee that these meters will operate perfectly without any attention for seven years, and it is presumed that they will endure for a much longer period without any derangement. This invention was patented March 24, 1857.

For further information, address the inventor and patentee, at his residence, No. 8 Tenth street, near Sixth avenue, New York.

Issued from the United States Patent Office

FOR THE WEEK ENDING SEPTEMBER 1, 1857.

[*Reported officially for the Scientific American.*]

CUTTING CORN STUBBLE—John Augspurger, of Trenton, O.: I claim the described (or substantially equivalent) combination with the teeth of a rake, of rotating knives, for the purposes set forth.

THILLS—Philipe Baillau, of New York City: I claim the flat spring, a, or its equivalent, at the back end of the thills, b, arranged and operating in the manner and for the purpose substantially as described.

SEALING CANS—Edwin Bennett, of Baltimore, Md.: I am fully aware that caps and stoppers and other sealing devices have been employed in application to jars and vessels containing fruit or other substances, and consequently I do not claim any of said devices as known or used.

I am also aware that plastic and adhesive substances have been used and combined with caps and stoppers for various purposes, but I disclaim such materials and combinations.

I claim the construction of a cap formed with a flaring lip-like rim, b b b b, and groove or gutter, C C, and combined with a stopper part, d d e e, arranged and applied to an inverted jar, or other receptacle, in the manner and for the purposes substantially as set forth.

RAKES—Andrew J. Blodgett, of Newport, N. H.: I do not claim spring teeth applied to a rake head.

But I claim making each arched brace rod and one or two teeth in one piece of wire, and extending the same through the rake head, and into or through the handle, substantially as specified.

WIRING BLIND RODS—Byron Boardman, of Norwich, Conn.: I claim the means employed for feeding the staples, p′, between the guides, d′ d′, and underneath the die or rod, K, that is to say, the plate, M, pivoted to the place, I′, on which the staples are placed, and provided with the shoulders, n n′, the plate being connected with the bar, f, by means of the rod, o′, substantially as shown and described.

I also claim feeding the rod, G, underneath the guides, d′d′, to receive the staples, p′, by means of the bar, J, attached to the bent lever, I, in connection with the lever, E, said parts being operated by their respective springs, A′ u, and also by the bar, f, as described.

I further claim the guides, d′ d′, arranged substantially as shown, to convey the staples to the rod, and at the same time also allowed to expand, so as to prevent the clogging of the same, in combination with the die or rod, K, for driving the staples into the rod.

[This machine affixes the staples to the vertical rod of rolling-slat blinds with very great accuracy and uniformity, and with great speed. The spaces between the staples may be lengthened or shortened by a simple adjustment of the parts.]

SPOOLING THREAD—Charles H. Bradford, of Lynn, Mass.: I do not claim combining with mechanism for rotating a spool or bobbin a mechanism for regulating the winding or laying of the thread on such spool or bobbin.

But I claim the improved mode of regulating the winding of the thread, that is, by causing the thread carrier to rest directly against and be moved and guided in its movements by the side of the helic coil on the bobbin, as stated.

COAL SIFTERS—William D. Brown, of Weymouth, Mass.: I claim the combination of the screen, J J, and the plates, K and L, placed in a vessel or machine, to be used as a portable coal hod and sifter, so suspended on an axis as to allow of an oscillating or swinging movement, all arranged and operating as in the specification described.

SEEDING MACHINES—Charles W. Cahoon, of Brooklyn, N. Y.: I do not claim the slide, b, nor the rock shaft, c, with the hopper.

Neither do I claim distributing or sowing seed broadcast by means of centrifugal force effected by the rotation of wheels ar cylinders, irrespective of the construction and arrangement shown.

But I claim the disk, H, and rock shaft, c, with its teeth, d, in combination with the funnel-shaped discharger, F, having spiral flanches, p, arranged substantially as and for the purposes set forth.

[This machine distributes either seed or fertilizing material in a very perfect manner, and without the employment of any reciprocating parts. The distribution may be very accurately graduated.]

STRAW CUTTERS—Aury G. Coes, of Worcester, Mass.: I claim my improved straw-cutting machine, constructed so that its bed and knife shall each operate with a compound motion produced by a lever, crank, fulcrum rod, and guides, arranged so as to operate together, substantially as specified.

ORE SEPARATOR—Thomas J. Chubb, of New York City: I do not claim the separation of substances of different specific gravities, by submitting them to the action of a blast of air through a screen.

But I claim first, The employment, in combination with an inclined perforated table or bed, and a bellows operating as specified, of a number of channels, applied and arranged substantially as described, relatively to the bed and to each other, to convey away the separated substances in different directions, as set forth.

Second, The division of a bellows, applied and operating in connection with a perforated bed, for the separation of articles of different specific gravity into numerous chambers or compartments, each having its separate valve or valves, and constituting in itself a complete bellows, for the purpose specified.

[These are other features of the device for which a patent was issued last week. See notice accompanying the claim on page 410, volume 12.]

WASHING BOTTLES—Henry N. Degraw, of Watervleit, N. Y.: I am aware that expanding brushes constituted similarly to the one described have been previously used for the same purpose, but they have been arranged in quite a complicated way, so as to preclude them from general use, on account of the cost attending their construction and keeping them in repair.

I do not claim separately, or in itself considered, the expanding brush, for that, or its equivalent, has been previously used.

But I claim the expanding brush formed of the brush bars, I J L, connected to the rod, F, and bar, G, as shown, and expanded and contracted by the lever, O, and spring, P, when said brush, thus arranged and operated, is used in connection with the sliding holder, R, for the purpose set forth.

[This is a very simple arrangement of the parts, and operates very rapidly and efficiently. We are preparing engravings to illustrate this invention.]

SWEDGING HATCHET HEADS—Levi Dodge, of Cohoes, N. Y.: I claim the apparatus described, viz., the block cheeks and former to be constructed and operated substantially as and for the purposes set forth.

LIFE-PRESERVING BERTHS—Elbridge Foster, of Hartford, Conn.: I claim the adjustable inflated keels, in the manner and for the purpose set forth.

SAWING STAVES—Peter Deal, of Amsterdam, N. Y., and James Greeman, of Northampton, N. Y.: We claim first, The combined method of supporting and driving cylindrical saws from their periphery, in the manner and for the purpose described.

Second, The arrangement on the interior of a cylindrical saw, of a supporting table, and an adjustable gage or guide, as described, by which the thickness of the stave is gaged, and it is guided during its passage through the saws, and one stave is prevented from passing each other, and jamming against and stopping the saws, or throwing the front stave off the side of the table on the bottom of the saws.

Third, The arrangement of a guard plate on the interior of a cylindrical saw, as described, for the purpose of preventing the sawdust and chips being thrown into the kerf of the stave.

Fourth, The method of diminishing the pressure of the curved surface of the stock against the periphery of a cylindrical saw, by pivoting the track on which the carriage holding the stock traverses, so that the pressure of the forward end of the stock will throw the track outward, and thus prevent the saw fron binding in the kerf.

SAW CLAMP—Leonard O. Fairbanks, of Bridgeton, Me.: Now I do not claim a saw clamp made with jaws, and with a clamp screw extending through such jaws, perpendicularly to their holding faces.

But I claim my improved saw clamp, as made with its jaws, clamping device, adjusting screws and bed plate, arranged and applied in manner and so as to operate together, substantially as described.

I also claim making the stationary jaw with a groove, e, arranged in it, in manner and so as to operate with the movable jaw, when constructed and made to act with respect to the stationary jaw and bed plate, as explained.

LOCKING FAUCETS—Henry Getty, of Brooklyn, N. Y.: I claim, in combination, the L-shaped grooves, e h, at the upper part of the spring barrel, stop bar, f, and the secret stop arm, K, placed loosely over the valve stem, and attached to the screw collar, whereby facilities are offered for fastening the faucet closed, and also when necessary of placing it beyond the control of servants and others not entrusted with its management.

[The locking is performed by means of a secret screw, and may confine the faucet either in an open or closed condition. The faucet is also of superior construction in regard to several other points, one of which is the facility with which the parts may be made accessible for the removal and exchange of a spring, or the like.]

ANIMAL TRAPS—George Hart, of Granger, O.: I claim the arms, C″ C″, springs, E E, and ring, J, when arranged substantially as set forth, for the purposes described.

OPERATING THE CUTTERS OF HARVESTERS—James Haviland, of Milton, N. Y.: I claim imparting the requisite movements to the cutter blade of a harvesting machine, by means of the spirally grooved intermediate shaft, B, and the series of hemispherical or oval headed teeth, e e, projecting from the face of the main bearing wheel, A, and operating upon the said intermediate shaft, substantially as set forth.

SPIRIT STILLS—Edward Herring, of Walton-on-Thames, England: I claim first, Giving to the diaphragms which separate the chambers an inclination or fall towards alternate sides of the still, as described, for the purpose specified.

And secondly, I claim the introduction of hot air, substantially in the manner described, for the purpose of aiding in the evaporation of the wash, and keeping it in agitation, to prevent the clogging of the still.

SURF AND LIFE BOATS—Richard C. Holmes, of Cape May Court House, N. J.: I do not claim separately the buoyant chambers, the valves, or the water tank.

But I claim constructing a boat of the peculiar form described, and giving to a boat of that form buoyant ends, ballasting tank, and freeing valves, all constructed and operating substantially as described and for the purposes specified.

RAKING DEVICE FOR HARVESTERS—Stephen R. Hunter, of Cortlandt, N. Y.: I claim the rod, K, or its equivalent, and two gates, J N, applied to the machine as shown, the gates being operated from the wheel, E, by means of the cam, D′, crank shaft, H, rod, L, and arm, M, arranged substantially as shown, for the purpose set forth.

[This is intended more especially as an improvement on the harvester formerly patented by the same inventor, but it may be applied with advantage to all which are similar in their general features. The raking is accomplished by the two gates alone, without the employment of any rake, properly so called.]

HUB FOR CARRIAGE WHEELS—James W. Jackson and Luther W. Burchinal, of Smithfield, Pa.: We do not claim a hub composed of two plates and corresponding tenons, within which the spokes are to be inserted.

But we claim making the mortises of the hub adjustable in two different directions, so that the spokes of the wheel shall be grasped on their four sides simultaneously when the two plates of the hub are forced together by the screw bolts, in the manner substantially as set forth.

FEED AND GIGGING FOR SAW MILLS—George D. Lund, of Yonkers, N. Y.: I do not claim separately the cones, F G′, for they have been previously used; nor do I claim separately any of the parts shown.

But I claim the combination of the two cones, F G′, the conical hub or boss, T, and pinion, S, on the sleeve or collar, R, placed on the sliding shaft, G, of the cone, G′, and the gearing, a K N O, arranged as shown and described, for the purpose set forth.

[This device allows the log to be fed forward at any variable rate, and to be gigged back with an increased velocity. It can be applied to mills now running, at a moderate expens .

SACK FASTENER—William P. and Jacob E. B. Maxson, of Albion, Wis.: We claim a bag or sack fastener, consisting of a spring tongue pressing the string against a side flange or projection, so as to form a self-holding nipper clutch when the said sash fastener is made of a single piece of metal, cut and bent in the manner substantially as described.

CHIMNEY CAPS—Ira Mayhew, of Albion, Mich.: I claim the constant openings, A A A, immediately beneath the drip of the roof, B B B, in combination with the larger variable openings, C C C, which are furnished with valves, D D D, hung at points, F F F, and separated by the connecting rods below, as shown, for the purpose specified.

SHOWER BATH APPARATUS—William Meyer, of Progress, N. J.: I claim the lower rose, by means of which water can be thrown upwards, and a more perfect and thorough shower bath is obtained.

GAS REGULATORS—John H. Powers, of Newark, N. J.: I do not claim the connection of the valve with the inverted pressure cup by means of a lever.

But I claim the arrangement of the inverted cup-shaped valve, D, and its seat of quicksilver, and the lever, H, which connects the said valve with the pressure cup, all within the pressure cup, substantially as described.

[The automatic regulating of the pressure of gas is a subject which has attracted much attention. This is an improvement on the form of regulators, in which the opening is controlled by the pressure of the gas on an inverted cup floating on a valve seat of mercury.]

COTTON SEED PLANTERS—Thomas J. Rogers, of Cassville, Ga.: I claim forming one side of the eduction aperture of a cotton seed planter of the extremity of a sharply vibrating plate, when the opposite side of said aperture is formed of an adjustable flaring concave, substantially as set forth.

SEWING MACHINES—Orson C. Phelps, of Rochester, N. Y.: I do not claim the use of a spring immediately connected with the needle, or with the socket for holding the needle, or any spring attachment, for a similar purpose, not directly attached to the needle bar, as seen in the patent of I. M. Singer and others.

But I claim constructing the needle bar of sewing machines with a cap or helmet, D, on its top, and a spring, b, or other elastic material which is equivalent in its effect, as india rubber, air, &c., interposed between the parts, for the purpose of giving a yielding bearing to the thread bolt, but in drawing in the stitch, and when the shuttle passes the loop, whereby a very fine thread may be used without breaking, and a better seam produced, in consequence of the even tension of the thread and gradual drawing in of the stitch, as described.

LANTERNS—Joseph A. Rohrman, of Philadelphia, Pa.: I claim first, Constructing square frame lanterns with the corner uprights of square wire or metal rods, and the door frame of a single square wire or rod bent in U form, secured at its ends by a strip, the whole arranged as and for the purposes described.

Second, I claim in combination with square wire corner uprights, the peculiar attachment of the guard wires by simple grooves and dovetailed ends, as described, the whole constructed as and for the purposes set forth.

Third, Forming tongues, g, in the bottom and top plates, or either for spring stops to secure the glasses in position, and also for the admission of air necessary to the combustion of the lamp flame, substantially in the manner set forth.

ADJUSTING CARRIAGE TOPS—C. W. Saladee, of Columbus, O.: Now I do not claim the lateral rod, D D, when placed on the outside of the seat back, for the purpose of adjusting the top, as new, Letters Patent having been granted to me for the same, dated September 9, 1856.

But I claim extending the top prop, A, back of the rest iron, B, a sufficient length to form the lever, C, in combination with the lateral rod, D D, as shown.

I also claim the scroll spring, E, in combination with the pivot iron, L, and the back bow, H, (or to either of the other three bows,) for the purpose of assisting in raising the top, and likewise to prevent its falling with the full force of its own weight, when in the act of throwing it back, substantially as set forth.

ATTACHING WHIFFLETREES TO TOW LINES—Andrew Seaman, of Amsterdam, N. Y.: I claim the shaft, C, with tongue, D, attached, in combination with the bar, E, with lever, F, attached, the above parts being fitted to the rods, B B, and the whole arranged substantially as and for the purpose specified.

[This is to facilitate the connecting and disconnecting of horses to the tow lines of canal boats, so as to avoid the liability of horses being dragged into the canal. The whiffletree is instantly detached from the tow line at any moment, by simply pulling on a loop, and thus moving a lever.]

SMOOTHING IRONS—Wm F. Shaw, of Boston, Mass.: I do not claim heating a flat iron by means of a lamp having its wick tube, or the flame of its wick, within the body of the iron.

Nor do I claim heating a flat iron by charcoal or other fuel burned in a chamber within the body of the iron.

Nor do I claim the application of a wire gauze or perforated chimney to an air and gas burner, so as to surround the flame, as such has heretofore been patented by me.

But I claim making the flat iron with ascending and descending flues, inlet and discharge openings, arranged the body of the iron, and so as to be used with a burner and stand, in manner substantially as specified.

PORTABLE GAS GENERATORS—Warren A. Simonds, of Boston, Mass.: I claim the tubular retorts, B and C, of the form described, operating in the manner substantially as set forth, for the manufacture of oil gas.

DRAWING THE CURVE OF CIRCULAR STAIR RAILWAYS—George S. Stewart, of Meadville, Pa.: I claim the construction of a machine with an adjustable table, D C, and the graduated post, B, and arm, T, adjusted with the set screws, Q i, and the semicircle, F, constructed as described, or any other substantially the same, and which will produce the same results.

SUSPENDING EAVES TROUGHS—James A. Watrous, of Green Spring, O.: I do not claim the suspending of eave troughs by bolts and nuts, as patented by Woodruff.

But I claim the employment of a metal strap, D′, in combination with the cross bar and the slotted plate, C′, for securing and readily adjusting eave troughs.

PLANING SAW TEETH—John N. Wilkins, of Waukegan, Ill.: I claim the two planers or cutters, j K, fitted within the case, A, and operated as shown, in combination with the guide or cross piece, d, within the case, the whole being arranged and applied to the saw as shown, for the purpose set forth.

[This machine shapes all the inclined edges of saw teeth with perfect uniformity and accuracy, and insures that in this respect the saw is in perfect order with very little trouble and expense.]

FORGING METALS—Elbridge Wheeler, of Feltonville, Mass.: I claim operating the roll, B, at stated intervals, by means of the described arrangement of cams and levers, or their equivalents, whereby I am enabled to roll a piece or bar of metal to a given pattern, in the manner substantially as set forth.

PIPE COUPLING—E. Wright, of Boston, Mass.: I claim the use of a compressible packing ring inserted in a groove around the pipe on each side of the joint, in combination with screw threaded or flanged and bolted couplings, and a thimble for holding the packing ring in the grooves, so as to form a water-tight joint and resist separation, by the packing ring serving as a dowel.

PERCUSSION CAP PRIMERS—George W. Baker, of Burlington, Vt.: I claim as a new article of manufacture the described percussion cap primer, whose improvement consists in the peculiar construction which enables one side of the case of said primer to serve as an elastic cap retainer at the side of the outlet of said case, substantially as set forth.

MOVING STORES, &C., IN CASE OF FIRE—Asa Blood, Sen., of Norfolk, Va., and Robert W. Brown, of Washington, D. C.: We claim the manner described for moving the adjustable stalls, by means of the lever, E, rod, F, and clinch, H, on rollers, I, and track, O, as set forth and described.

ATTACHING SCYTHES TO SNATHS—Oliver Clark, o Henrietta, O., (assignor to Aaron H. Pinney, of Columbus, O.): I do not claim the making of a scythe with a curved heel, as I claimed that in my former patent.

But I claim the metallic block, A, in combination with styrrup bolt, e, collar, f, and scythe heel, d, constructed and arranged in the manner and for the purpose set forth.

SLIDING REST FOR LATHES—E. S. Gardner (assignor to Smith, Gould & Co.) of Philadelphia, Pa.: I claim the revolving collar, C, with its square eye, G, when the same is employed in conjunction with the steady rest of a turning lathe, for which a patent was granted to Albin Warth, on the 10th day of October, 1854, in the manner and for the purpose set forth.

CROZING AND CHAMFERING STAVES—H. L. McNish, of Lowell, Mass., assignor to D. C. Butler and H. L. McNish, aforesaid: I claim the self-opening and closing clamp described, or its equivalent, so geared to other parts of the machine as to operate periodically corresponding with the motion of the feed rollers as set forth.

I also claim making the clamps adjustable to croze staves of barrels of different diameters as set forth.

CONDENSERS FOR LIST SPEEDERS—Wm. Mattison (assignor to J. C. Whitin) of Northbridge, Mass.: I claim the self-adjusting weight or condenser, F′, applied in the manner described, and retained in its position by the casing or bonnet G, or its equivalent, substantially as described for the purpose specified.

HEAD RESTS—Wm. M. McCauley, (assignor to J. N. McIntire) of Washington, D. C.: I claim pivoting the rocker or shank, A, of the head plate in the stationary holder, C, in combination with the segmental spring, e, whereby the head plate accommodates itself to any inclination of the head, and forms a springing or elastic support, the whole constructed and operating substantially as described.

I do not broadly claim pivoting the head plate to the stationary holder.

CARDING ENGINES—H. N. Gambrill and S. F. Burgee, of Woodbury, Md. Patented in England April 14, 1857. I claim delivering the cotton on to the main cylinder always at two, and sometimes at three different points or places, whilst using but one set of feeding rollers, substantially as described.

We also claim the combination of the working cylinders, B D, and the working and stripping cylinder, E, all running in the same direction, and working in connection with each other, and with the main cylinder as set forth, the two first, B D, delivering the cotton to the main cylinder regularly, whilst the latter E is doing so at intervals, substantially as described.

We also claim mixing the strippings taken from the main cylinder by the stripping cylinder E, with the cotton on the cylinder D, carding it and returning it, thus mixed and carded to the main cylinder, substantially as set forth.

We also claim, in combination with the cylinders, the stationary casing and the concave for separating the dirt from the cotton, whilst undergoing the carding process as set forth.

We also claim, in contradistinction, from giving the variable motion to the cylinder, E, by cone pulleys, and a traveling belt attached to each carding engine, the giving of said motion to a shaft or line of shafting, and imparting it from said shafting to the engine by simple belt and pulleys, by which means more certain action is had and at less expense, as set forth.

CASTING BEARINGS IN IRON WHEELS—Chas. Taylor, of Little Falls, N. Y.: I claim the employment of the bevel or oval cap piece, A, or its equivalent, when it is used in connection with the pins, B B, or their equivalent, and made to operate in the manner and for the purposes described.

SOCKET COUPLING FOR LATHES—G. N. Trowbridge, of Lowell, Mass.: I do not claim a simple conical pin for fastening the shank of a tool in a conical socket, but I claim the combination of the spring E and pin F, with the conical shank and socket, with straight screw attached, for the purpose and substantially as described.

RE-ISSUES.

LOOMS—D. W. Snell and S. S. Bartlett, of Woonsocket, R. I. Patented January 13, 1857: We do not claim priority in using "strain" as a means of regulation, for under various modifications, it is found in use. For instance, Hendrick employs strain acting upon or with the movable reed as his regulating feature; also, Stone, Potter and others, their motions acting in combination with an intermittent take-up motion; Knowles, Boyd, Bigelow, Mason, and others, use one or more stationary or reaching vibratory whip-rolls as their point of regulation, while Taylor and Wilcox and others employ the beam as a means of regulation.

But we claim, first, Employing the positive take-up mechanism or cloth roll, or any mechanism acted on or affected by the strain of the cloth, when a positive take-up is used as the point through which the variable strain and wind of warps is made to act more sensitively than from or by the variable vibratory re-acting motion of the whip rolls, or sudden jerking of the beam or movable reed.

Second, Effecting and producing a regular delivery and uniform strain of the warps by the equalizing strain lever, P, or equivalent, said lever being acted upon by the variable strain of the warps or cloth, through the positive take-up mechanism or cloth roll, as represented.

Third, The equalizing strain lever, P, or analogous device, when operating in connection with the positive take-up mechanism or cloth roll or when effected by the strain of the cloth, in combination with any mechanism for producing a rotary motion to the beam, and with any device or means for regulating the delivery and strain of the warps as the beam decreases in diameter, and as the desired strain requires.

Fourth, Employing the rod T, with the pin X, or equivalent, to act upon the strain lever, P, as a means of moving the weight, K, when the balance spring, S, or equivalent device is not sufficient to move it.

Fifth, In combination with the pulley, F, and pinion, C, we claim the movable weight, L, the fixed or yielding sectional friction piece G, and friction lever, J, as and for the purpose represented.

Sixth, In combination with the weight, K, and friction lever, J, we claim the rack N, or its equivalent, to so act upon weight K, through catches L, or analogous devices, as to gradually move this weight, K, towards the fulcrum of lever J, as the beam decreases in diameter, and as the desired strain of warp requires.

Seventh, In combination with the weight, K, and friction lever, J, or equivalent devices, we claim the jointed or stationary sectional friction piece G, and set screw, H, as and for the purpose represented.

CARDING ENGINES—Wm. H. Walton, of New York City. Patented Dec. 9, 1856. Re-issued Jan. 13, 1857: I wish it to be distinctly understood that I do not claim two sets of feed rollers combined with a carding machine, as they have before been used. Nor do I claim two independent "lickers in" working on to the main cylinder, when they are not used as "workers together," as they are on machines previously devised.

But I claim suspending the top flats or workers upon pivots in the center of their ends, by which they can be raised out of the way of the adjoining flats, and turned by a rack working into pinions or the equivalent thereof, the whole being constructed and arranged substantially as described for the purpose set forth.

I also claim stripping the flats or workers by a rotating brush, so arranged that a card may strip the brush, and return the strippings to the main cylinder, substantially in the manner and for the purposes described.

I also claim the combination and employment of two or more "lickers in," acting as "lickers in" and "workers," by running in contact with each other, or their equivalent, for the purpose of working the fibre before it enters on to the main cylinder, in the manner specified and for the purposes set forth.

DESIGNS.

STOVES—N. S. Vedder, of Troy, N. Y., assignor to North, Chase & North, of Philadelphia, Pa.

STOVES—Thomas Barry, of New York City.

Printing from Veneers.

A process of veneering by transfer is mentioned with approval in the French journals. The sheet of veneer or inlaying to be copied is to be exposed for a few minutes to the vapor of hydrochloric acid. This novel "plate" is then laid upon calico or paper, and an impression struck off with a printing-press. Heat is to be applied immediately after the sheet is printed, when a perfect impression of all the marks, figures, and convoluted lines of the veneer is instantaneously produced. This process, it is affirmed, may be repeated for an almost indefinite number of times. The designs thus produced all exhibit a general wood-like tint, most natural when oak, walnut, maple, and the light colored woods have been employed.