

GATES FOR CANAL LOCKS.—C. W. Williams, of Port Jervis, N. Y.: I do not claim, broadly, the employment or use of the balls, *g*, for they have been used for similar or analogous purposes.

But I claim, first, The rods, C C, and rack, D, applied to the gates, B B, for the purpose set forth.

Second, Having the journals, *c*, of the gates fitted in oblong slots, *d*, of the pulleys, *e*, which are placed in suitable bearings or boxes, *f*, and arranged substantially as shown, to admit of the sagging of the gates, and the close fitting of the same when closed for the purpose specified.

Third, Securing the bearings or boxes, *f*, to the lock, A, by means of the rods, *h*, the boxes being attached to slides, *i*, and arranged substantially as shown, so that the boxes may be adjusted as occasion may require.

Fourth, Operating the wickets, H H, by means of the gearing, arranged as described, whereby either wicket may be operated from one and the same crank-shaft, *q*.

[A novel means of opening and closing the gates, and a peculiar manner of hanging them, constitute this invention, whereby the small balance-sweeps are dispensed with and the gates are allowed to be operated with comparatively little friction, and are rendered capable of being closed much tighter or with less leakage than formerly. There is also a device for operating the wickets, whereby both wickets may be operated singly from one and the same crank-shaft.]

PLOWS.—Wm. H. Wilson, of Summerfield, Ohio: I claim the arrangement of the sub-soil shovel, W, the common shovel, M, coulter, C, and brace, A, the whole being constructed as described for the purpose set forth.

ADDING-MACHINE.—C. Winter, of Piqua, Ohio: I claim, first, The arrangement of the lever, *c*, spring, *d*, shaft, *h*, wheels, *m*, *n*, and stops, *e* and *f*, in the manner set forth and for the purpose specified.

Second, The arrangement of the ratchet-wheel, *k*, bevel wheels, *j* and *i*, pawls, *s* and *z*, cord, *o*, and pulley, *p*, in the manner and for the purpose substantially as described.

MODE OF APPLYING AND CONSTRUCTING HORSE-POWER MACHINES.—Wm. Zeller, of Lebanon County, Pa.: I do not claim the cog-wheels or gearing used.

But I claim the construction of the horse-power machine described, by which it is made to drive a reaping-machine or stationary power, when the whole is constructed, arranged and operated substantially as and for the purposes described.

HANGING-BELLS.—Henry Delfield, (assignor to himself and Justice Cox), of Philadelphia, Pa.: I claim the lever, *G*, its spring dog, *h*, and spring, *f*, in combination with the bell-crank lever, *F*, its hammer, *H*, and spring, *d*, the whole of the parts being arranged in respect to each other and to the bell, *C*, substantially as and for the purpose set forth.

Second, The bracket, *B*, with its four legs and projection, *b*, for holding the bell, *C*, the said bracket being arranged in respect to, and in combination with the levers, *G* and *F*, and their respective springs, substantially in the manner specified.

REVOLVING PLUGS FOR MANUFACTURING BOTTLES AND JARS.—John F. Bodine, (assignor to himself, Wm. H. Bodine, and Joel A. Bodine), of Williamstown, N. J.: I claim the large rim-bearing, *a*, formed on and near the circumference of the turning plate, *D*, and fitting in ring grooves, *b*, *b*, formed in the plug, *C*, and capping plate, *E*, substantially as and for the purposes set forth.

MACHINES FOR CLEANING GRAIN.—Harrison Fitts, of Somerset, Mich., assignor to himself and Nelson Turel, of Addison, Mich.: I claim the combination of the adjustable piece, *K*, with the concave and rubber, substantially as and for the purposes set forth.

OBTAINING FIBERS FROM WASTE FELTED FABRICS.—J. F. Greene, of Brooklyn, N. Y., assignor to S. B. Tobey, of Providence, R. I.: I claim subjecting the felts to be disintegrated, to the successive and combined action of steam and picking, substantially as described, the steam having the effect either to so unfelt or loosen the hold which the fibers have on each other, in felted fabrics, that they can be drawn apart of sufficient length, to be advantageously employed in the manufacture of other felts or other fabrics.

MACHINERY FOR DISINTEGRATING WASTE FELT FABRICS.—J. F. Greene, of Brooklyn, N. Y., assignor to S. B. Tobey, of Providence, R. I.: I claim the combination of the steaming apparatus and the picker, substantially as described, for steaming the felt, as it is passed to the picker to be disintegrated, as set forth.

MACHINES FOR CUTTING CORN STALKS, &c., ON GRASS PRAIRIES TO PLOWING.—Hezekiah Johnston, (assignor to himself and Richd. Withers), of Collinsville, Ill.: I claim arranging and combining the curved frame, *A*, with the knives, *E*, *E*, and the guides *J*, *J* in the manner described for the purpose specified.

MACHINE FOR CUTTING FILES.—C. Miller and T. W. Decker, (assignor to T. W. Decker), of New York City: We claim, first, Arranging the gate rest, *M*, to oscillate on a fulcrum, *L*, located in relation to the cutting chisel, substantially as shown, that by moving the arm of said rest, laterally, by means of the screw, *N*, the bed, *C*, and block, *a*, may be adjusted to correspond with the cutting edge of the chisel, as set forth.

Second, Hinging the frame, *E*, which carries the chisel and its appendages to the frame, *A*, by a joint at *f*, so that the rest, *M*, may readily follow the curve of the file blank, and, with the chisel, be thrown back, when desired, all as shown and described.

[This invention consists in certain means of providing for the adjustment of the face of the file blanks to the edge of the chisel during the cutting operation so as to secure a uniform depth of cut all across the file. It further consists in a method of providing for the resting of the chisel-stock on the file-blank during the whole of the cutting operation, for the purpose of regulating the depth of cut, the same means also providing for the raising of the chisel-stock to afford convenience for taking out and putting in the files or file-blanks, and for the removal and replacement of the chisel. There is also a provision for changing the angle of the chisel relatively to the face of the blank.]

MACHINES FOR WRINGING CLOTHES.—T. H. Peavey, of Montville, Me., assignor to himself and C. G. Collins, of Portland, Me.: I claim the arrangement of the rollers, *C* and *D*, with the rollers, *A* and *B*, when the same are constructed and operated in the manner and for the purpose described.

THRASHING-MACHINES.—John J. Sigler, (assignor to himself and W. M. Griffith & Co.), of Marlin's Ferry, Ohio: I claim, first, The series of rollers, *E*, *E*, *E*, *E*, etc., provided with fingers or projections, *a*, *a*, etc., in combination with the slab device, *b*, *b*, etc., the fingers working in the spaces between the slats, and being used for the purpose of carrying the straw from the threshing cylinder to the place of discharge, *H*, and at the same time so moving it as to secure an effectual separation of the grain therefrom; the slab device, *b*, *b*, etc., being employed for the purpose of supporting the body of the straw between the impulses of the fingers, *a*, *a*, etc., and also for the purpose of preventing the straw from winding on the rollers, *E*, *E*, etc.

Second, I claim the application of the oscillatory motion to the fingered-shaft, *R*, by means of which I secure an agitation inwardly towards the fan, *G*, in addition to the throw towards the place of discharge, *M*, for the purpose of more effectually freeing the apertures near the tail of the riddle, *K*, from obstruction, the required motion being obtained by means of the pinion, *h*, rack-segment, *Q*, and arm, *X*, or their equivalents.

METHOD OF ARRANGING GALVANO-ELECTRO HELICES FOR MAGNETIZING THE DRIVING-WHEELS OF LOCOMOTIVES.—Orin D. Vosmus, of Boston, Mass., assignor to himself and Edward W. Gerritt, of Greenfield, Mass.: I do not claim, broadly, the application of electricity or magnetism, to cause adhesion of wheels of locomotives; neither do I claim a helix, applied to a locomotive wheel, as this has before been done, but, it is believed, proved nearly or entirely valueless; whereas, in my invention, I have succeeded, by the use of a curved helix, as set forth, in obtaining the point of the greatest magnetic effect at the point of contact between the wheel and the track, therefore, I claim a curved helix applied to the wheels of a locomotive engine, in substantially the manner specified, whereby the point of greatest magnetic effect is the point of contact between the wheels and track.

And, in combination with the helix aforesaid, I claim adjusting the helix in the manner and for the purposes specified.

PUMPS.—Benjamin Douglass, of Middletown, Conn., for himself, and as administrator of the estate of William Douglass, deceased, late of said Middletown: What is claimed is the combination of the lugs, *B* and *C*, within the flange, *x*, and the conical set nut, *A*, substantially as described, for fastening the lower end of the pump cylinder.

MACHINERY FOR MAKING WOOD SCREWS, &c.—Cullen Whipple, of Providence, R. I., assignor to the New England Screw Company. Patented Dec. 7, 1853—Ante-dated June 7, 1852: I claim, in combination with a mandrel, which carries chuck or gripping jaws, an automatic mechanism, for closing said jaws upon the blank, keeping them closed to hold the blank while being dressed, and then opening them to release the dressed blank, arranged and operating in such manner as to leave the mandrel (during the time that the blank is being acted on by the cutter) free from endwise pressure by the chucking mechanism.

Also, in combination of toggle-levers, carried by the mandrel, to lock and hold the toggle-levers when pushed beyond a straight line, and gripping jaws with shanks having sufficient elasticity to maintain a firm hold of the jaws upon the blank, when the toggle-levers have passed a straight line, substantially as set forth.

MACHINERY FOR MAKING WOOD SCREWS, &c.—Cullen Whipple, of Providence, R. I., assignor to the New England Screw Company. Patented Dec. 7, 1853—Ante-dated June 7, 1852: What is claimed is a feeding punch and mechanism for causing it to approach within different distances of the gripping jaws adapted to receiving and holding screw blanks in variable positions and of different lengths, in combination with a suitable tool-holder and a cutting tool, substantially as set forth.

MACHINERY FOR MAKING WOOD SCREWS, &c.—Cullen Whipple, of Providence, R. I., assignor to the New England Screw Company. Patented Dec. 7, 1853—Ante-dated June 7, 1852: What is claimed is the spring discharging punch, in combination with the mandrel and gripping jaws, when the punch and spring are both carried by the mandrel, substantially as set forth.

MACHINERY FOR MAKING WOOD SCREWS.—Cullen Whipple, of Providence, R. I., (assignor to the New England Screw Company). Patented December 7, 1853—Ante-dated June 7, 1852: What is claimed is, first, the feeder, composed of a sectional trough with a close bottom and open top, into which the blank drops and arranges itself before a traversing rod, which pushes it into the gripping jaws, as described.

Second, The combination of an adjustable automatic feeding-punch and a spring-discharging punch, with an intermediate trough or equivalent means for bringing the blank into line with two punches, substantially as set forth.

Third, The arrangement of a spring-discharging punch, with its end far enough within the end of the grooves in the gripping jaws to leave a space for admitting the end of a blank and guiding it against the end of the discharging-punch, thereby rendering the checking more certain, substantially as set forth.

PRINTING-PRESSES.—George P. Gordon, of New York, N. Y. Patented July 13, 1858: I claim, first, the combination and arrangement of the feed-table, the fly or pile-board, the platen and bed, with the set or sets of independent revolving nippers or grippers, for the purposes described.

Second, I claim the fly-board with its adjustable gage or guide, in combination with the grippers or nippers, to ensure the even piling of the sheets of paper, or their equivalents, whatever the size of the sheet may be.

Third, I claim the vibrating double cam for throwing off on the impression.

Fourth, I claim two or more distributing rollers, having a lateral motion upon a main distributor, which shall move independent of and in opposite direction to each other, and thus alternately cross and re-cross each other's distribution for the purpose of giving a uniform linking to the form.

Also, I claim the combination of the independent rollers upon one cylinder, for each impression (heretofore patented by me) in combination with the rotating red-procating bed with the spring extensions attached, all of which is described and set forth.

AUTOMATIC GRIPPER FOR CARRYING SHEETS OF PAPER IN PRINTING-PRESSES.—George P. Gordon, of New York City. Patented July 13, 1858: I claim, first, One or more sets of grippers, nippers or fingers to revolve independent in themselves upon an axis, for the purpose of carrying the sheets of paper to the place of impression, or for carrying the sheet, after it has received the impression, to its place of deposit upon the pile-board or fly-board, or for either or both of these purposes, thus receiving and piling the sheets of paper in an even and regular heap by the acts of my automatic grippers or independent revolving-nippers, or their equivalents.

Second, I claim the combination of the independent revolving-grippers with the vibrating feed-board, or its equivalent.

Third, I claim the combination of the independent revolving-grippers with a pile or fly-board, to be used as described, or in some equivalent way.

Fourth, I claim the combination of the independent revolving-grippers with a feed-board and a pile or fly-board, or their equivalents, substantially as described and set forth.

HARVESTERS.—Thomas D. Burrall, of Geneva, N. Y. Patented March 18, 1856: I claim, first, The shoe-piece, *v*, and rack, *14*, to adjust the height of the outer end of the finger-board, substantially as and for the purposes specified.

I also claim the shaft, *f*, passing across the end of, and nearly at right angles to the shaft, *1*, of the main-wheel, *a*, when fitted in such a manner that its pinion, *i*, can be thrown into and out of gear with the face-wheel, *k*, for the purposes and substantially as specified.

COFFEE-ROASTERS.—Theodore Heermans, of Mitchellville, Tenn. Patented Jan. 13, 1859: I claim, first, The within-specified arrangement of the plates or shelves, *D*, *D*, for the purposes set forth.

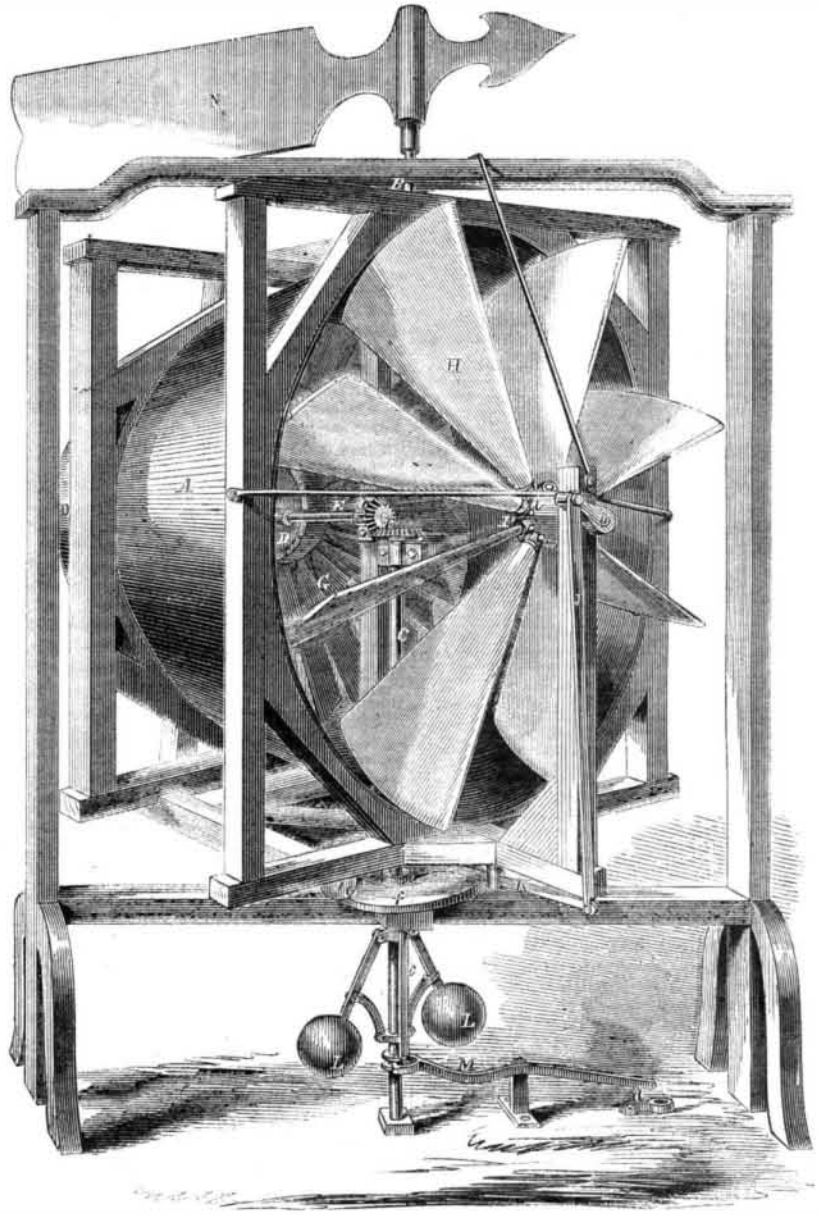
Second, The combination of a window or plates in a coffee-roaster, with agitator or elevating plates or shelves, substantially as and for the purpose set forth.

DESIGN.

STOVES.—Garretson Smith and Henry Brown, of Philadelphia, Pa., assignors to Hayward, Bartlett & Co., of Baltimore, Md.

QUICK SHIP-LOADING.—At the New Tyne Docks in England, a steamer was recently loaded with 400 tons of coal and trimmed for sea in 55 minutes. These docks have been erected for the especial purpose of shipping coal, and are capable of loading 1,600,000 tons per annum.

WHITMAN'S TURBINE WINDMILL.



Some authors assert that windmills were first used in France, in the sixth century, while others are as positive that they were brought to Europe by the Crusaders, and that they had long been known in the East, where a scarcity of water precluded the use of that agent as a motive power. Be the fact on the one side or the other, one thing is certain, which is, that the subject of our illustration was invented by Ephraim Whitman of South Abington, Mass., and to prove that such is the fact, Letters Patent were granted him for the invention dated Sept. 9, 1856, so we may leave antiquarians to settle the difficulty as to the first idea, and proceed to our own legitimate business—the description of the perspective view before us.

A flume, *A*, slightly tapering, is mounted in a suitable frame, in which it can rotate on a center, *B*, horizontally, to accommodate the direction of the wind, and always present the broad end to receive the current of air. At the back of *A* is placed a disk, *G*, divided radially by plates inclined and curved in order to give the proper direction to the wind as it passes to the turbine, *D*, which is rotated as the wind leaves its buckets. The motion of *D* is communicated by a shaft, *E*, and bevel gear, *F*, to a central vertical shaft, *C*, from which the power can be conveyed to any desired location either by belts or gears as may be most convenient.

A series of shutters, *H*, are placed in front of the flume to regulate the quantity of air admitted so that the motion of *D* shall always be regular and even; they are placed upon pivots, *a*, which are partly cogged, and these cogs gear into a bevel wheel, *I*, upon the shaft, *b*. A crank is placed on *b* and a link, *J*, and lever, *K*, are attached to it; the inner end of the lever, *K*, being connected with two bars, *c*, which are attached to the side of the governor, *L*, that is placed upon the shaft, *C*. It will be easily

seen how when *D* is revolving too fast, the governor balls, *L*, spread out, elevating the lever, *K*, depressing the crank and so turning the bevel wheel, *I*, and closing the shutters; on the other hand as the speed decreases the vanes are opened more and more and a larger quantity of air is admitted to the flume. Thus whatever be the force and velocity of the wind, a definite and even power can always be obtained with this wheel. When it is desired to keep the shutters closed, the lever, *M*, is used, which lever operates the governor slide so as to close the vanes, and a catch, *d*, retains them in that position. The flume, *A*, rests by friction rollers, *e*, upon a plate, *f*, on which it can turn, as on *B*; and the vane, *N*, keeps it constantly face to the wind.

This is an excellent windmill, and it certainly uses up the force of the wind in a most economical manner having little friction to overcome and being simple in construction. Any further particulars can be obtained from the inventor by addressing him as above.

American Machines in Australia.

We learn by our exchange, *The Colonial Mining Journal*, (Melbourne, Australia,) that the American quartz-crushing machine of Minor King, who lately arrived there from California, is very favorably regarded as being superior to other machines which have been used in that colony. Our cotemporary states that the stampers hitherto employed in crushing quartz have been made of very inferior metal, and that improved machinery is loudly called for.

SOMETHING LIKE WORK.—A wrapper-writer in this office wrote seventeen thousand one hundred (17,100) wrappers in six days, from Monday, April 11, to Saturday, April 16. There are not many, if there is one wrapper-writer in the United States, who can beat this.