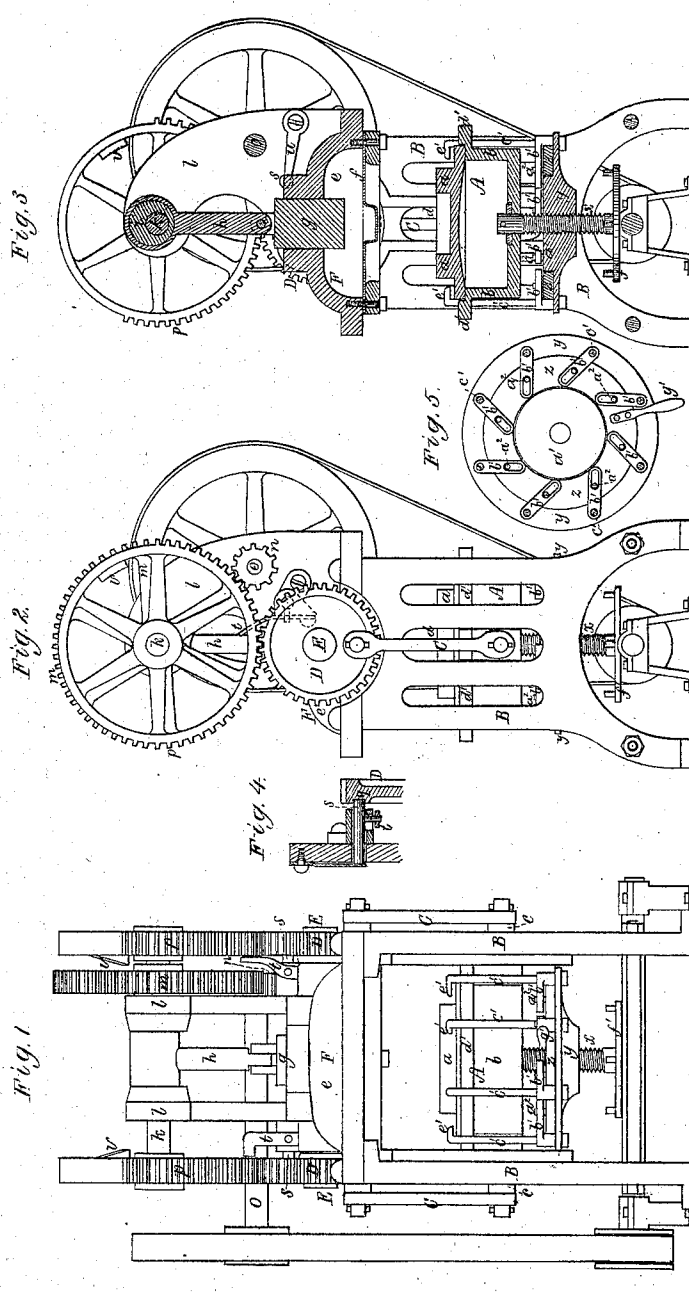


D. BROWN.
Hat-Pressing Machinery

No. 140,993.

Patented July 22, 1873.



Witnesses
L. W. Piper
L. O. Miller

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UNITED STATES PATENT OFFICE.

DANIEL BROWN, OF WRENTHAM, MASSACHUSETTS, ASSIGNOR TO HIMSELF
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IMPROVEMENT IN HAT-PRESSING MACHINERY.

Specification forming part of Letters Patent No. **140,993**, dated July 22, 1873; application filed
May 21, 1873.

To all whom it may concern:

Be it known that I, DANIEL BROWN, of Wrentham, of the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Machines for Pressing Hats; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, Fig. 2 a side view, and Fig. 3 a transverse section, of one of my improved machines.

The machine is automatic, and requires simply to have a hat applied to it, and after being pressed to be removed from it by an attendant.

In such drawings, A denotes the mold carrier and heater, the cap *a* of which is removable from the body-part *b*. The said body-portion *b* has ears *c c* extending from it in opposite directions and through vertical guide-slots *d d* of the frame B, such ears constituting journals for two connection-rods, C C, to work upon. These rods project downward from two cranked gears, D D, supported on stationary journals E E, and arranged, as shown, on opposite sides of a hydraulic press, F. The said press consists not only of a hollow dome, *e*, having an elastic diaphragm, *f*, extending across its base, but of a piston or plunger, *g*, to play through the dome at its crown. The plunger is jointed to a pitman, *h*, extending from and embracing an eccentric, *i*, fixed upon a horizontal shaft, *k*. The said shaft *k*, arranged as shown, has its bearings in two standards, *l l*, erected on the dome, and is provided with a spur-gear, *m*, which engages with a pinion, *n*, fixed upon another or driving-shaft, *o*, arranged as represented. Besides the gear *m* there are two others, *p p*, fixed upon the shaft *k*, each of which has teeth extending only over a little more than half its circumference. These gears engage with the cranked gears D D. Each of such gears D D has a recess, *q*, made in its side to receive a bolt, *s*, applied to the press or dome, and provided with a retractile lever, *t*, pivoted to the dome. Fig. 4 is a sectional view of the bolt, it being furnished with a spring, *u*,

for projecting it forward. There projects from each gear *p* a cam, *v*, which, during each revolution of the gear, is moved into contact with the lever *t*, and moves it in a manner to cause it to draw back the bolt *s* out of the cranked gear in order to admit of the latter being revolved. The bolting apparatuses are to hold the clamp-gears from revolving while disengaged from the gears directly over them—or, in other words, while the plunger of the hydraulic press is being forced downward within the dome. The said dome is to contain water, which, when the plunger descends into it, will be so pressed against the elastic diaphragm as to force it upon the hat when in the die placed on the cap of the heater A.

In the operation of the machine, the heater with the die or hat-form will first be raised up to the press and be locked in position, after which the piston will be forced downward, and after having descended the necessary extent the piston will rise, the cranked gear will be unlocked, and revolved so as to cause the die carrier or heater to descend to its lowest position, in order that the pressed hat may be removed from the press and another or unpressed hat be substituted.

The mechanism for holding the cap *a* in place upon the body *b* of the mold-carrier may now be described. Pivoted to the lower part of the said body *b* is a screw, *x*, which screws into and through a circular plate, *y*, upon which is a flat ring, *z*, the said ring encompassing a cylindrical projection, *a'*, of the plate. From the ring (a top view of which is shown in Fig. 5, which is a top view of the plate *y*, the said ring, and the arms extending over the latter) a series of studs, *a''*, extends upward into slots in a series of arms, *b' b'*, that project from a series of vertical shafts, *c' c' c'*, arranged as shown, and pivoted to the ring and in a flange, *d'*, projecting from the mold-carrier. Each of such shafts has a claw, *e'*, or is hooked or bent at a right angle near its upper part, in order that by turning the shaft in one direction the bent part or claw may be caused to project over and upon the cap *a*. When the claw is over the cap, if the screw *x* be revolved in the proper direction by an attendant by his hand

applied to the head f' of the screw, the several claws may be drawn down upon the cap so as to hold it firmly in place. A handle, g' , projects from the ring z . By taking hold of such handle, and moving the ring around, all the hooked shafts will be simultaneously revolved so as either to turn the claws off or upon the cap, as occasion may require. The mechanism for locking the cap is one by which such may be expeditiously effected.

I claim—

In the hat-press, as described, the mold-carrier A , the hollow dome e and its diaphragm f and piston g , arranged together and combined with the connecting-rods $C C$, cranked gears $D D$, partially-toothed gears $p p$, pitman h , and eccentric i , and with the locking apparatuses

or mechanisms $q s t u v$, all substantially as specified.

2. The combination of the system of clawed shafts c' , their slotted arms b' , the ring z , and studs a^2 applied to the support-plate y provided with the screw x .

3. The arrangement and combination of the system of clawed shafts c' , slitted arms b' , ring z , studs a^2 applied to the support-plate y provided with the screw x , with the mold-carrier A arranged with the hydraulic press F , as explained.

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Witnesses:

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