A. C. FULLER.
Hat-Pressing Machine.

No. 200,905. Patented March 5, 1878.

Fig. 1.

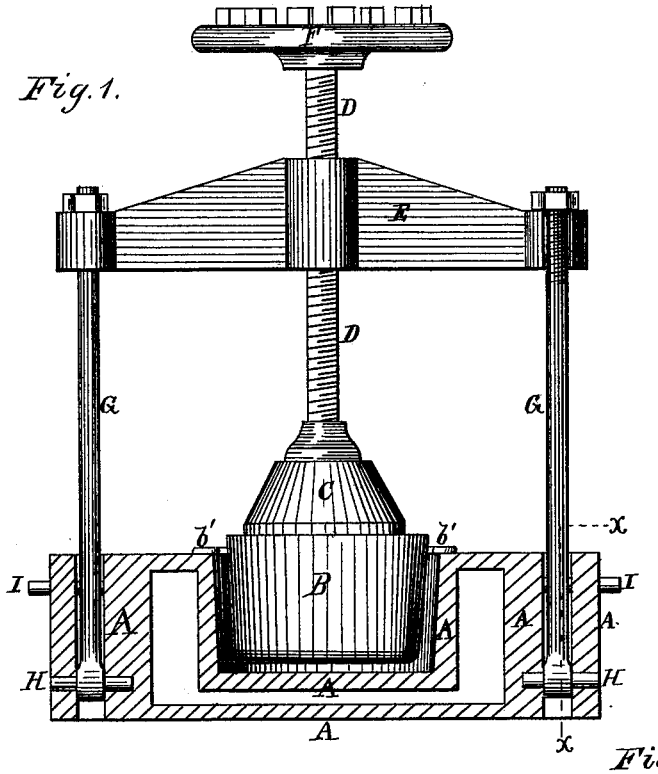


Fig. 3.

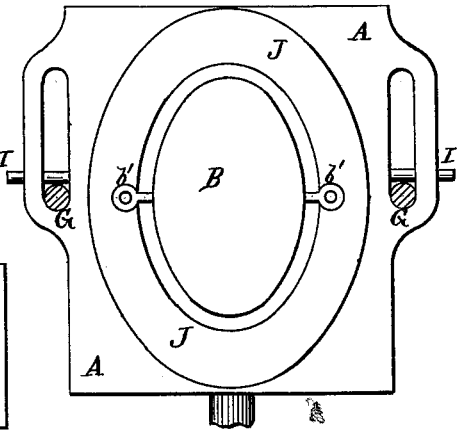
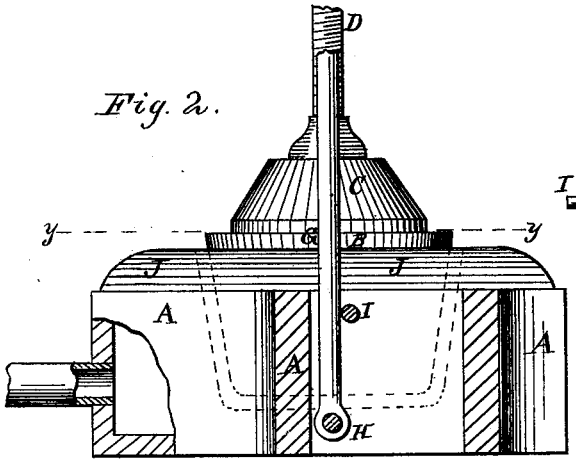


Fig. 2.



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UNITED STATES PATENT OFFICE.

AZARIEL C. FULLER, OF MIDDLETOWN, NEW YORK.

IMPROVEMENT IN HAT-PRESSING MACHINES.

Specification forming part of Letters Patent No. **200,905**, dated March 5, 1878; application filed December 29, 1877.

To all whom it may concern:

Be it known that I, AZARIEL C. FULLER, of Middletown, in the county of Orange and State of New York, have invented a new and useful Improvement in Hat-Pressing Machines, of which the following is a specification:

Figure 1 is a vertical cross-section of my improved machine. Fig. 2 is a side view of the same, partly in section through the line *x x*, Fig. 1. Fig. 3 is a horizontal section taken through the line *y y*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for pressing hats which shall be so constructed that it may be used for making the die, with a trifling and inexpensive change, for pressing hats of various styles, forms, and sizes, and which shall be simple in construction, convenient in use, and effective in operation.

The invention consists in the base of a hat-press, made hollow, and with a close inner surface or wall, to adapt it to serve as a mold for casting the female die or shell, a holder for holding the said shell, and a steam-chest for heating it when being used; in the combination of the detachable ring-flange with the base of a hat-press; and in the combination of the pivoted standards, the pivoting-pins, and the detachable locking-pins with the slotted base of a hat-press, and with the cross-beam that supports the pressure-screw, as hereinafter fully described.

A represents the base of the press, which is made hollow to receive steam for supplying the necessary heat. In the center of the base A is formed a cavity of the general form of a hat, but larger, and which is made with a close wall upon its bottom and sides, as shown in Fig. 1, so that it may serve as a holder and heater for the female die or shell, and also as a mold for casting the said die.

B is a block, which is made of the exact shape and size of the hat to be pressed, and which is suspended in the cavity of the base A by two or more pins, *b'*, attached to the upper part of its sides, and which rest upon the top of the base A. Type-metal or other suitable metal or composition of metals is then melted and poured into the space between the block B and the inner surface of base A. The block B is then withdrawn, leaving a female die or shell of the required shape and size to receive a hat, and in the proper place to be used.

When hats of a different shape or size are to be pressed, the female die or shell is lifted out, another block, B, of the required shape or size, is suspended in the cavity of the base A, and another shell is cast.

In pressing hats, the hat is placed in the female die or shell, and a rubber block of the shape and size of the interior of the hat is placed within the said hat. A follower, C, is then placed upon the rubber block, and is forced down by a screw, D. The downward pressure of the follower C forces the rubber to expand laterally, and presses the hat firmly against the female die or shell.

The screw D passes down through a screw-hole in the cross-beam E, and has a pulley or gear-wheel, F, attached to its upper end, to which the power is applied.

One end of the cross-beam E has a hole formed through it to receive the upper end of the standard G, and rests upon a shoulder of the said standard. The other end of the cross-beam E has a cross-groove formed in its side to receive the other standard G, and rests upon a shoulder of the said standard.

By this construction the beam E can be swung around upon the standard to which it is pivoted, to give free access to the base of the machine.

The lower ends of the standards G enter slots in the end parts of the base A, and have eyes formed in them to receive the pins H, by which they are pivoted to the said base in the lower rear part of said slats.

The standards G are held in an upright position by pins I, inserted detachably in holes in the upper part of the said slots. By this construction, by withdrawing the pins I the standards, cross-beam, and screw can be turned back out of the way, so that the follower and rubber block can be conveniently withdrawn from the hat. When a hat higher than the depth of the cavity of the base A is to be pressed, a ring-flange, J, is placed upon the top of the base A around its cavity, as shown in

Figs. 2 and 3, and the female die or shell is then cast and used in the manner hereinbefore described.

The block B may be made of plaster-of-paris or other substance suitable for casting purposes; or it may be made of any material and covered with felt, and the felt covered with a thin coat of plaster-of-paris, upon which could be engraved or otherwise formed any pattern or design required to be given to the hat-body.

Instead of plaster-of-paris, a coating of paper-pulp or plumbago and sugar could be used, care being taken to prepare the block with a suitable substance, so that the coating will not adhere to it and prevent it from being withdrawn, to leave the said covering in the casting. With this construction, after the shell or female die has been cast and the block has been withdrawn, one or more of the sides of the covering may be drawn inward toward the center, so as to separate it from the casting, and allow it to be withdrawn; or the block may be made in sections, when the pattern or design is such as to allow a sectional block to be withdrawn.

With this construction the brass shells now in use may be used by placing them in the cavity of the base and casting metal around them.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The base A of a hat-press, made hollow, and with a close inner surface or wall, to adapt it to serve as a mold for casting the female die or shell, a holder for holding the said shell, and a steam-chest for heating it when being used, substantially as herein shown and described.

2. The combination of the detachable ring-flange J with the base A of a hat-press, substantially as herein shown and described, and for the purpose specified.

3. The combination of the pivoted standards G, the pivoting-pins H, and the detachable locking-pins I with the slotted base A of a hat-press, and with the cross-beam E, that supports the pressure-screw D, substantially as herein shown and described.

AZARIEL CHARLES FULLER.

Witnesses:

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