

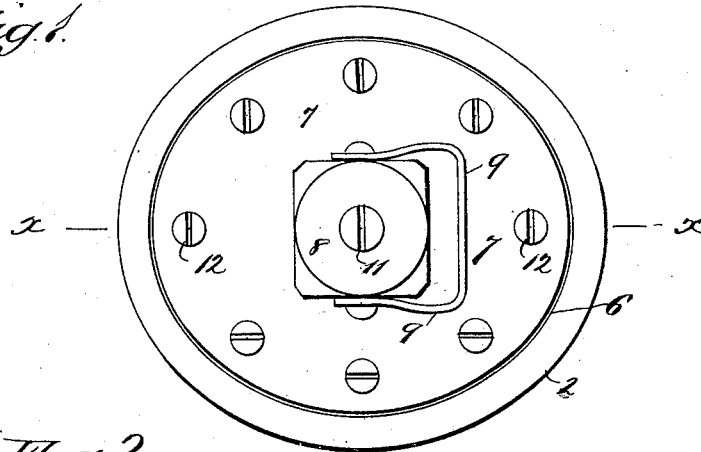
(No Model.)

W. J. WALKER.  
HAT CROWN PRESS.

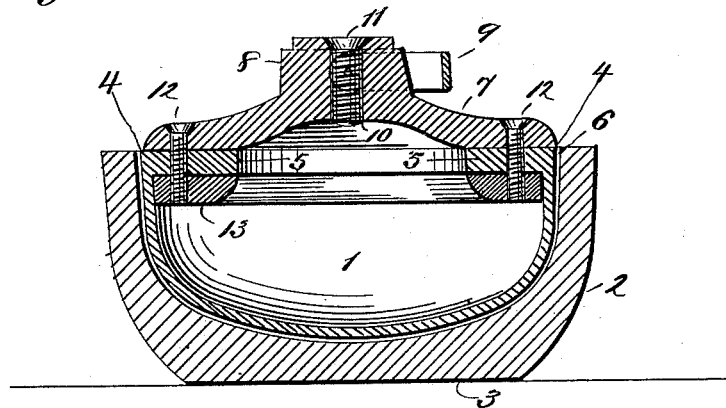
No. 418,392.

Patented Dec. 31, 1889.

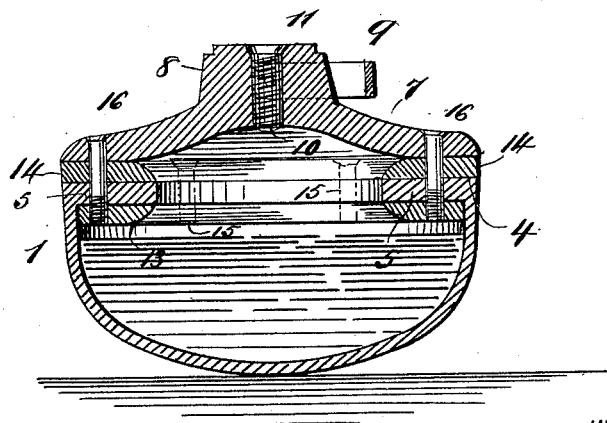
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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BY

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# UNITED STATES PATENT OFFICE.

WILLIAM J. WALKER, OF FISHKILL-ON-THE-HUDSON, NEW YORK.

## HAT-CROWN PRESS.

SPECIFICATION forming part of Letters Patent No. 418,392, dated December 31, 1889.

Application filed April 20, 1889. Serial No. 307,998. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. WALKER, of Fishkill-on-the-Hudson, in the county of Dutchess and State of New York, have invented a new and Improved Hat-Crown Press, of which the following is a full, clear, and exact description.

This invention relates to presses for molding the crowns of all kinds of hats, and has for its object to provide a press of this kind which will be inexpensive and effective in use.

The invention consists in a press for molding the crowns of hats, constructed and arranged as hereinafter described and claimed. Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the invention. Fig. 2 is a vertical section on the line *xx*, Fig. 1; and Fig. 3 is a view in vertical section of a modification of the plug.

In the construction of hat-crown presses for hats a hollow heavy metallic die internally shaped according to the form of the hat-crown to be molded has been employed. In connection with this die a plunger or plug is used, which consists of a solid piece of rubber shaped to correspond with the interior of the die and to fit snugly therein when pressed into the die against the material to be molded. There have been found to be two objections to this plunger, viz: First, owing to its being of solid rubber, the hat-crown is not accurately shaped, there being little yield in the surface of the plunger as it is pressed into the die against the material to be molded, and, second, owing to the expense of the rubber plunger being solid. To obviate these objections I construct the plunger as follows:

1 indicates a plug or plunger for hat-crown presses, which consists of a flexible rubber shell shaped to fit into the interior of the die 2, having the form of the hat-crown to be molded. The die 2 consists of a heavy piece of metal with a level bottom 3 to adapt it to rest on a support. The upper edge 4 of the plunger 1 is formed with an internal flange 5, and the latter, with the edge 4, is of greater thickness than the shell of the plunger, so as to stand the pressure brought to bear at that

point when wedged down against the edge 6 of the die 2.

7 represents a metallic plate forming the top of the plunger, and having the central elevated portion 8, provided with a lifting-handle 9, a perforation 10, for the admission of a fluid, and a screw 11, or other suitable form of stopper, fitting therein. The plate 7 rests on the flange 5, and is secured thereto by screws 12, which pass through the flange 5 and engage a metallic strip 13, located beneath the flange 5. In this way the flange 5 is clamped between the metallic strip 13 and the plate 7, and the shell is thereby firmly held to its top. The metallic strip 13 avoids the danger of the flange 5 being cut or torn by the securing-screws.

In using the foregoing-described press, water or other suitable fluid is preferably introduced into the shell through the perforation 10, and the stopper 11 then screwed up tight. The hat-crown to be molded is then placed in the die 2 and the plunger 1 is pressed into the die 2. It will be found that by means of the rubber shell containing a fluid the plunger will yield at all points of its surface and adapt itself to the shape of the die.

In Fig. 3 is shown a modified form of hat-press plug, in which, in addition to the metallic strip 13 beneath the flange 5, a second metallic strip 14 is employed, which is located above the flange 5. The flange 5 is secured to and clamped between the strips 13 and 14 by means of screws 15, and the plate 7, resting on the strip 14, is secured in place by means of screws 16, which project through the strip 14 and flange 5 and engage the strip 13. By this means the plate 7 may be removed and a semi-liquid paste be introduced into the shell instead of water. The semi-liquid paste inclosed in the plunger will be also found to be effective in loading the plunger and in adapting it to yield and conform to the die in pressing the hat-crown.

In either case the rubber shell may be used with or without the filling, and I do not desire, therefore, to limit myself to the use of the plunger with a filling.

I am aware that a diaphragm or flexible bag by means of which hats are pressed into shape by the pressure of a fluid on the bag

in connection with a die or mold is old, and to such apparatus I lay no claim.

I am aware that a hat-press in which there is a die in connection with a core consisting of a flexible diaphragm and a piston and cylinder to which the flexible diaphragm is secured is old.

I am also aware that a hat-press in which there is a water-chamber, a flexible diaphragm secured thereto, and a mold is old; and to none of these constructions do I lay any claim. Nor do I claim, broadly, in a hat-press, a flexible diaphragm or core.

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

1. A plug for pressing hat-crowns, consisting of a flexible shell having the form of the crown to be molded, with an inturned flange at its top, the flange and the upper portion of the shell adjacent thereto being of greater thickness than the rest of the shell, a rigid strip secured to the flange, and a solid top of rigid material secured to the flange and rigid strip and provided with an opening and stopper, substantially as shown and described.

2. A plug for pressing hat-crowns, consisting of a flexible shell having the form of the crown to be molded, with an inturned flange at its top, the flange and the upper portion of the shell adjacent thereto being of greater thickness than the rest of the shell, a solid top of rigid material with an opening and stopper, and continuous strips located on the sides of the inturned flange and secured thereto, the solid top, inturned flange, and strips being also secured together, substantially as shown and described.

3. A plug for pressing hat-crowns, consisting of the flexible rubber shell 1, having the form of the crown to be molded, with an in-

turned flange 5, the flange 5 and the upper portion of the shell adjacent thereto being of greater thickness than the rest of the shell, the metallic strip 13, secured to the flange 5, and the solid metallic top 7, detachably secured to flange 5 and strip 13, with opening 10, and stopper 11, substantially as shown and described.

4. A plug for pressing hat-crowns, consisting of a flexible shell having the form of the crown to be molded, with an inturned flange at its top integral therewith, the flange and the upper portion of the shell adjacent thereto being of greater thickness than the rest of the shell, and a solid top of rigid material secured to the flange of the shell and having an opening and stopper, substantially as shown and described.

5. A plug for pressing hat-crowns, consisting of a flexible shell having the form of the crown to be molded, with an inturned flange at its top integral therewith, the flange and the upper portion of the shell adjacent thereto being of greater thickness than the rest of the shell, and a solid top of rigid material secured to the flange, substantially as shown and described.

6. A hat-crown press consisting of a hollow die, in combination with the flexible shell having the form of the crown to be molded, with an inturned flange at its top integral therewith, the flange and the upper portion of the shell adjacent thereto being of greater thickness than the rest of the shell, and a solid top of rigid material detachably secured to the flange, substantially as shown and described.

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Witnesses:

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