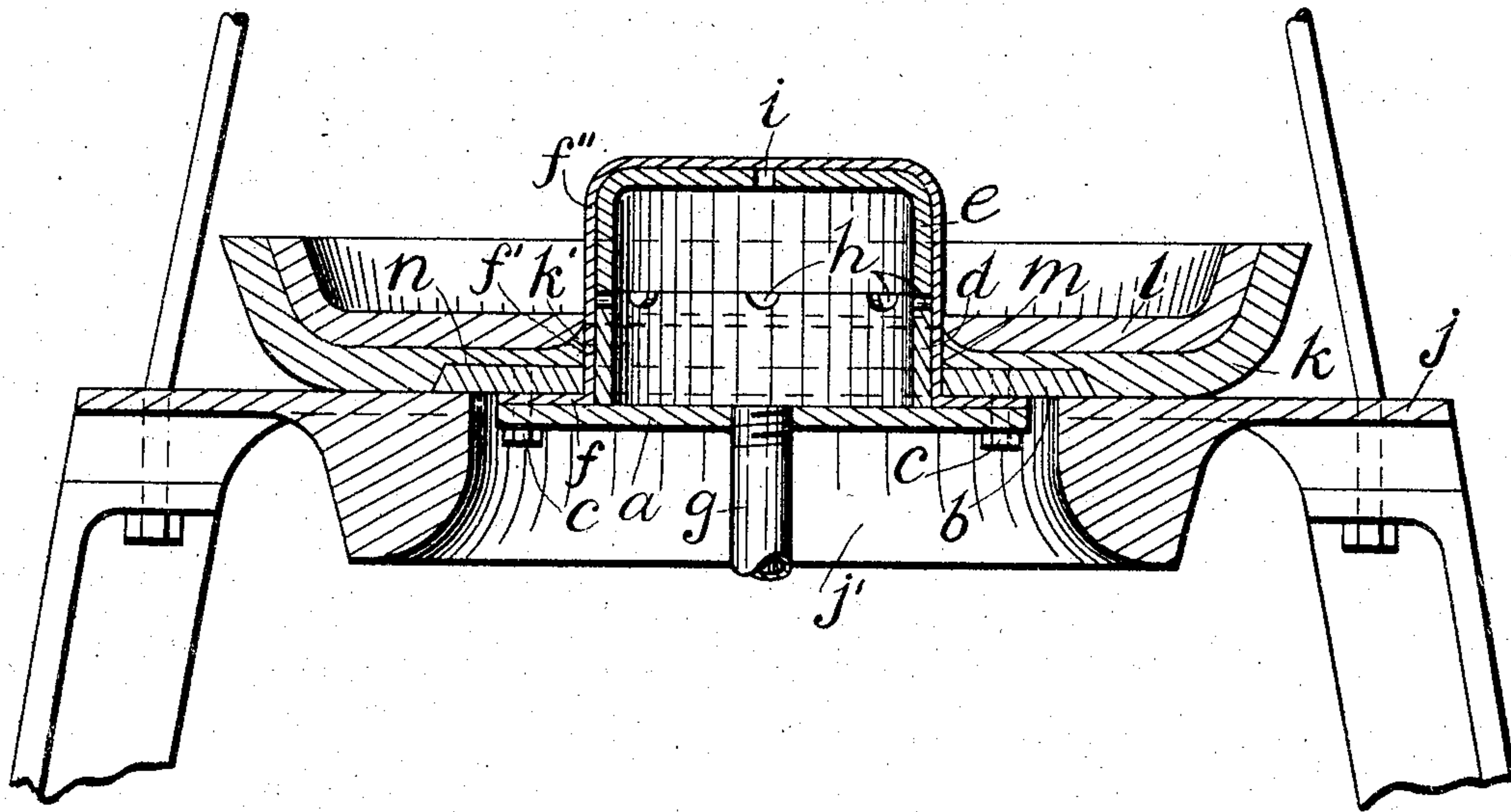


No. 780,749.

PATENTED JAN. 24, 1905.

F. H. HAWLEY.
HEAD FOR HAT PRESSES.
APPLICATION FILED JULY 11, 1903.



Witnesses

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UNITED STATES PATENT OFFICE.

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HEAD FOR HAT-PRESSES.

SPECIFICATION forming part of Letters Patent No. 780,749, dated January 24, 1905.

Application filed July 11, 1903. Serial No. 165,071.

To all whom it may concern:

Be it known that I, FRED H. HAWLEY, a citizen of the United States of America, residing at Amherst, in the county of Hampshire and Commonwealth of Massachusetts, have invented a new and useful Head for Hat-Presses, of which the following is a specification.

My invention relates to improvements in male dies or heads used for pressing and finishing hats, and pertains to that class of machines illustrated in United States Letters Patent, dated May 14, 1901, No. 674,132.

The object of my improvement is to effect a saving in time, labor, and expense by providing a male die or head for hat-presses which comprises a removable and interchangeable brim separable from the plug, whereby the work is done in a practicable and efficient manner.

Heretofore the breaking of the plug entailed the expense of an entire new head. Differences in shape of brim or height of crown required as many complete heads as there were different shapes and heights, and it was necessary at a considerable expenditure of time and labor to disconnect the plug from the water-pipes for each change in shape of brim or height of crown and connect the parts again, all of which objections I have overcome or obviated in the present invention.

The invention consists in the novel arrangements and constructions of parts, all substantially as herein set forth, reference being had to the accompanying drawing, which is a central vertical section through the head and table of the press.

Similar letters refer to similar parts.

The head of the present invention may be said to consist of two general divisions in a measure independent of each other—that is, independent to the extent of being separable—such divisions being the brim and the plug. Proceeding first with a description of the plug, it is seen that the same comprises a bottom plate or base *a*, an irregularly-shaped or elliptical ring or flange *b* above and securely connected with said plate by bolts *c* or otherwise, an elliptical ring *d* on the plate, a shell *e* ellip-

tical in plan and mounted on said ring, all preferably of metal, and a gasket *f*, interposed between the plate and flange and having parts extending upward around the ring *d* and sides of the shell and over the latter, of rubber or other suitable packing and expansive material. The neck *f'* of the gasket *f* is vulcanized to the ring *d*, but the upper portion or hood *f''* above said neck is non-attached to the members inclosed thereby. A pipe *g*, adapted to admit water to the plug and receive it therefrom, is attached to the plate *a*, through which it opens into the chamber above. Slots or notches *h* are provided in the upper edge of the ring *d* and a hole *i* in the top of the shell *e* to permit the water forced into the plug to come into contact with the hood *f''* and distend the same. When the water is withdrawn from the plug, the elastic nature of the hood causes it to contract.

The pipe *g* is in practice connected with suitable inlet and outlet pipes. (Not shown in the drawing.) The flange *b* is supported by its edge upon the machine-table *j*, which has an opening *j'* therein.

The brim comprises a shallow rim *k* of suitable material, as metal, and a lining *l*, preferably of rubber, which is vulcanized to the top of said rim and to the inside face of the upturned border thereof. The plan of the exposed surface of the lining *l*, with the possible exception of its upturned edge, is of the shape and size of the largest hat-brim which is adapted to be operated upon thereby. The brim has a central elliptical opening *m* to receive the plug and an elliptical channel *n* in the bottom of the rim *k* to receive the flange *b*, by which latter said brim is centered and held in position. A ridge *k'* around the opening *m* serves to retain the lining *l* in place and prevent it from creeping over the edge of said opening. The space between the edge of the opening *m* and the ring *d* is filled by the neck *f'*, and there is no appreciable external break between the plug and brim when assembled. It is to be understood that the plug externally and above the junction of itself with the brim

is of substantially the shape and size which the crown portion of the hat to be operated upon is to assume. The top of the plug externally is also of the same shape as the corresponding part of the hat.

In practice a hat ready for the pressing and finishing process is placed over the plug, with its brim on the brim of the device. A heated female die of proper construction and form is then forced over and onto the hat thus placed, and finally water under pressure is turned into the plug to distend or expand the hood f'' , so as to fill the hat-crown, all as explained in the aforesaid Letters Patent and in United States Letters Patent, dated January 30, 1900, No. 642,419. At the time the lining l is vulcanized to the rim k the opening in the latter may be filled with a core of zinc or other metal or composition possessing similar characteristics, so as to have the aperture in said lining exactly the same size as that of the aperture in said rim.

The hood f'' may or may not be of less thickness than the neck f' , and it is immaterial whether or not the gasket f and said neck and hood are all in one piece initially, provided they become such by vulcanization or other uniting process. This construction prevents leakage of water at or near the joint between the plug and brim, as such leakage, if it occurred so that the water managed to work in between the rim k and lining l , would interfere with the pressing and finishing results, and if so the water escaped above said lining would injure the brim of the hat on the head or die. To further guard against leakage, the gasket f is usually vulcanized to the plate a and may also be vulcanized to the ring b , and said gasket is tightly clamped between these two members by the bolts c .

Seldom, if ever, is the brim of a head broken, while the usefulness of the plug is quite frequently destroyed. Instead of being obliged to discard the whole head or die when the only injury is to the plug it is now simply necessary to procure a new plug for use with the old brim, since the two divisions can be easily separated or united, while formerly they became practically an inseparable whole by the process of vulcanizing. It has been found to be extremely difficult and quite impracticable to separate the rubber from the metal after being vulcanized thereto. Hence the inability heretofore experienced of making use of the brim when the plug became damaged. In this connection it will be perceived that my device is economical to a marked degree.

The invention further excels in respect to economy not only of money, but of time and labor and in general utility, inasmuch as differently-shaped brims can be used with the same plug, also brims of greater or less thickness designed to operate upon hats with crowns of correspondingly less or more depth, but

otherwise the same, changes which can be made by simply lifting one brim from the flange b and placing another thereon without disturbing the pipe or other connections. In further explanation of the foregoing it may be added that a low-crowned hat requires a die-brim of greater thickness above the flange b than a high-crowned hat, the only change necessary in said brim (provided the same shape and size are to be maintained) being in the thickness of the rim k where it rests upon said flange. The great value of this last-mentioned feature alone is very apparent, and it is also clear that the other advantages hereinbefore pointed out are no less valuable in one way or another.

As a well-known equivalent and substitute for a flange-and-groove or channel construction such as I have illustrated and described as the means by which the brim is positioned lugs or pins and corresponding holes to receive them may be provided.

Although the centering and positioning of the brim is largely and preferably dependent upon the flange, it is plain that the upper members of the plug serve as a guide for the brim and that the latter might be centered and positioned by such members alone, the flange being omitted from the construction.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A head for a hat-press, comprising a plug and a brim, the plug comprising a base, a ring resting on said base, a shell mounted on said ring, and a covering for the ring and shell, said plug members collectively forming a complete appliance with which and from which the brim is adapted to be united and separated at will substantially as shown.

2. A head for a hat-press, comprising a plug and a brim, the plug comprising a base, a ring resting on said base, a shell mounted on said ring, and a covering for the ring and shell, and the brim comprising an apertured rim adapted to fit around the plug-ring and its covering, and a lining fitting closely around said ring-covering when the brim is in place, the plug members collectively forming a complete appliance, and the brim members collectively forming another complete appliance adapted to be united with and separated from the first appliance at will, all substantially as shown.

3. The combination, in a head for a hat-press, a plug comprising a base, a ring resting on said base, a shell mounted on said ring, and a covering for the ring and shell, said plug members forming collectively a complete appliance, a brim adapted to be united with and separated from such appliance at will, and guides to position or center said brim relative to said plug.

4. The combination, in a head for a hat-press, of a plug comprising a base, a ring resting on said base, a shell mounted on said ring,

5 a covering for the ring and shell, and an irregularly-shaped flange surrounding the ring, the plug members collectively forming a complete appliance, and a separable brim apertured to receive the upstanding portion of the plug and channeled to receive said flange.

10 5. The combination, in a head for hat-presses, of a base, an irregularly-shaped flange, a gasket between said base and flange, means to secure the flange to the base, a ring resting on the base and a shell mounted on said ring the walls of the chamber thus formed being perforated, a continuation of said gasket upward around and over said ring and shell,
15 an apertured rim adapted to fit around the ring and its covering, having a channel in its bottom to receive the flange, and a lining attached to said rim, fitting closely around said

ring-covering, the rim with its lining being removable at will. 20

6. The combination, in a head for a hat-press, of a plug comprising a base, a ring resting thereon, a shell mounted on said ring, and a covering for the ring and shell, and a brim comprising an apertured rim provided with a 25 ridge rising from the margin of the aperture, and an apertured rim-lining extending onto said ridge.

In testimony whereof I have signed my name to this specification in the presence of two sub- 30 scribing witnesses.

FRED H. HAWLEY.

Witnesses:

LEONARD W. HILLS,
DWIGHT M. BILLINGS.