

No. 674,132.

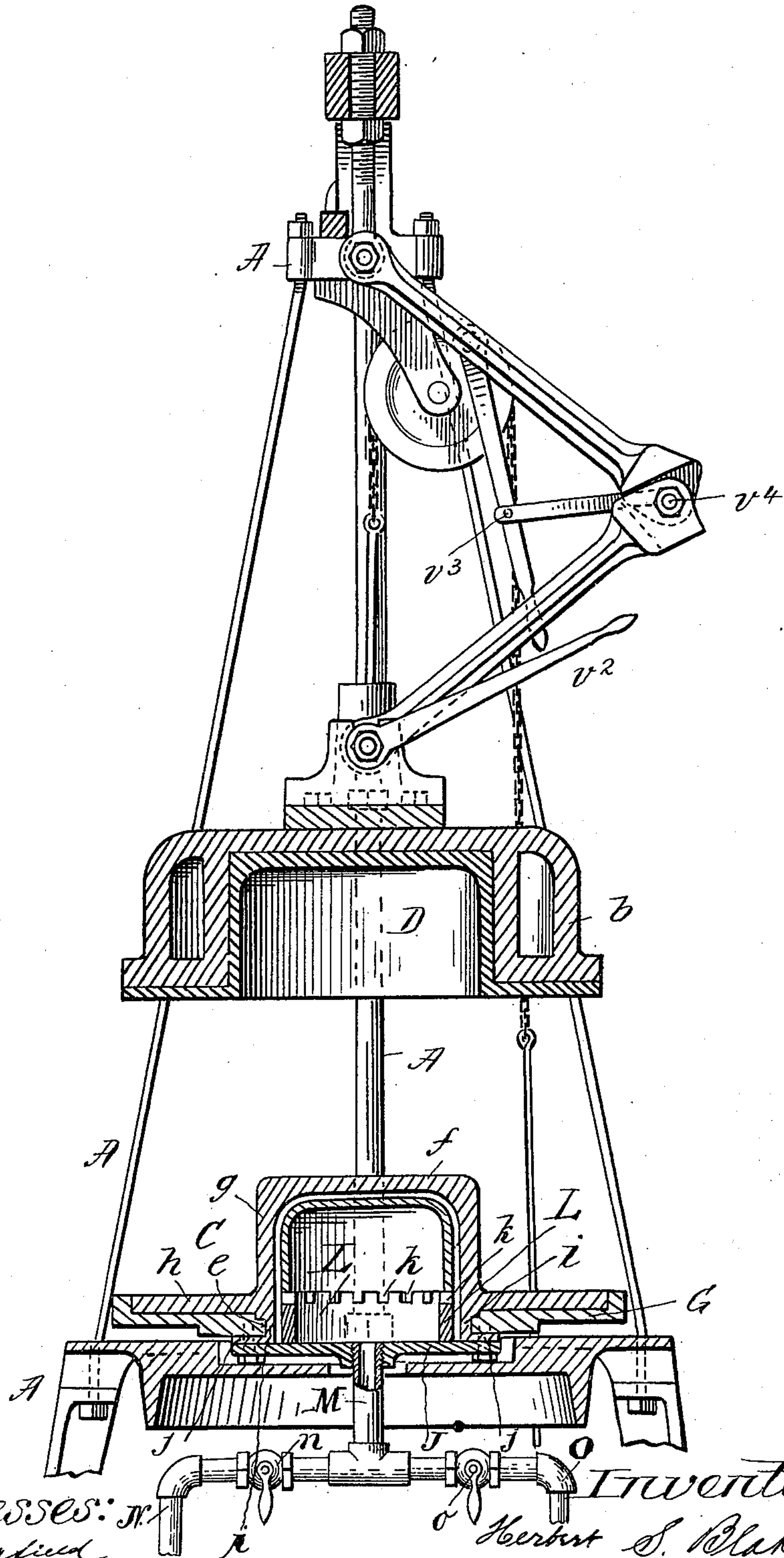
Patented May 14, 1901.

H. S. BLAKE.

MACHINE FOR PRESSING AND FINISHING HATS.

(Application filed Dec. 24, 1900.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

HERBERT S. BLAKE, OF AMHERST, MASSACHUSETTS.

## MACHINE FOR PRESSING AND FINISHING HATS.

SPECIFICATION forming part of Letters Patent No. 674,132, dated May 14, 1901.

Application filed December 24, 1900. Serial No. 40,875. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT S. BLAKE, a citizen of the United States of America, and a resident of Amherst, in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in Machines for Pressing and Finishing Hats, of which the following is a full, clear, and exact description.

This invention relates to improvements in machines for pressing and finishing hats, and particularly pertains to hat pressing or finishing machines of the general character illustrated in my former Letters Patent, dated January 30, 1900, No. 642,419.

One object of the present invention is to improve the appliances especially in regard to the male die, which is composed, as to the portion thereof which directly comes in contact with the surface of the hat, of india-rubber in any of its suitable elastic compounds or of equivalent flexible material, especially to the end of preventing leakage of the pressure fluid employed within the flexible die or matrix for distending the same.

Another object of the invention is to generally simplify and render the machine more practical and efficient.

The invention consists in the arrangements and constructions of the parts, all substantially as herein described, and set forth in the claims.

Reference is to be had to the accompanying drawing, in which the present improvements are illustrated and in which the figure is a substantially central vertical section through the machine and especially showing the structural character of the novel appliances.

In the drawing, A represents the frame of the press, of any suitable design having fitness to the purpose, comprising the transverse table or bench, on which is supported the lower or male die C, which is stationary, while working above said die is the female die D, movably mounted and vertically guided to descend upon and to inclose the crown portion of the male die and to rise away therefrom to the open position shown in the drawing under the operation of the toggle, to which the operating-lever  $v^2$  has pivotal and link connections at  $v^3$  and  $v^4$ . The lower die is of hat shape, with its crown upstanding, and the up-

per die is of a shape conformable thereto and is secured in and carried by a jacketed or steam-chambered die-seat  $b$ . A circulation of steam is maintained in the said chambered die-seat, and the heat is transmitted therefrom to the female die. The lower die comprises as a base therefor a shallow basin or metallic plate G, understood as having the form in plan of the brim of a hat and having a central elliptical opening  $e$ . The lower die further comprises as the portion thereof which directly comes in contact upon the inner and under side of the hat and brim the india-rubber or elastic-composition section of hat shape, comprising top  $f$ , elliptical side wall  $g$ , elliptical horizontal flange  $h$ , resting on the top of and vulcanized to the top of the basin G, the depending annular or continuous elliptical portion  $i$ , and the lower outturned flange or portion  $j$ , which lies in contact on the under side of the basin G, and J represents the bottom or wall of the chambered lower die, secured to the part G by bolts or screws, clamping between such plate and the said part G the said lower outturned portion  $j$  of the rubber appliance. There is also comprised in the lower die, resting on the plate-bottom J, the elliptical ring L, having at its upper edge a series of recesses or ports  $k$ , and resting on the upper edge of said ring L is a thin metallic shell having approximately the shape of the interior crown portion of the rubber appliance.

M represents a pipe leading in an upward direction into the lower chambered male die. N represents a water-inlet pipe, and O represents a water-outlet pipe, both having a common connection with the conduit M.  $n$  represents a shut-off cock in the pipe N for preventing the inflow of water to and through pipe-section M, and  $o$  represents a shut-off cock for preventing when closed the flow of water through the outlet-pipe O. These appliances are the same as illustrated in my aforementioned patent and for the same manner of use as therein fully explained.

The mode of operation of the present machine is substantially the same as that described for the machine constituting the subject-matter of my aforesaid patent.

It is to be perceived by the provision in the male or lower die of the depending portion  $j$  of



the rubber die-section, which fits the opening in the basin or lower plate G and which has the outwardly-turned portion or flange *j* vulcanized to the bottom of the plate G, (as well as the upper flange vulcanized to the top of the plate,) said lower flange or portion being disposed between and held subject to the clamping pressure of the base-plate, which is secured or bolted to the die-bottom, that there can be no leakage or oozing out of the pressure fluid at the place of contact between the top of the base-plate G and the wide flange of the said rubber appliance, which rests thereon and is preferably vulcanized thereto. In other words, the internal wall of the rubber part is continuous from its top down to the under plate J, and if any leakage or oozing from the interior of the die takes place it is below the base and never above it, and hence such could never injure the brim being pressed or finished or interfere with the quality of the pressing and finishing results.

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

1. In a hat pressing and finishing machine comprising the male and female dies, the male die composed of the hat-shaped part formed of rubber or analogous material, having tip-wall and crown-sides portions, a centrally-apertured metallic base G to which the brim-flange of the said rubber part is secured, and said rubber part having a depending section *i* conforming to the inner edge of the opening in said base G, means for closing the aperture in the bottom of the metallic base G, a pressure-fluid supply and exhaust for the male die; and the female die having means for imparting movements thereto relatively to the male die, substantially as described.

2. In a hat pressing and finishing machine comprising the male and female dies: the male die composed of the hat-shaped rubber part having tip-wall, crown-sides and brim-flange portions, a centrally-apertured metallic base G on which the brim-flange of the said rubber part is supported, and said rubber part having a depending section *i* conforming to the inner edge of the opening in said base G, and having the outwardly-turned portion *j* in contact against the under side of said base, the plate J, secured to the under side of the base G for closing the aperture therein, a pressure-fluid supply and exhaust passage for the male die; and the female die having means for imparting its movements thereto relatively to the male die, substantially as described.

3. In a hat pressing and finishing machine, the male die composed of the hat-shaped rubber part having tip-wall, and crown-sides and brim-flange portions, a centrally-apertured metallic base G to which the brim-flange of the said rubber part is secured, and said rubber part having a depending section *i* conforming to the inner edge of the opening in said base G, a plate secured against the under side of base G for closing the aperture therein, the ring resting on the base, and provided with a pressure-fluid supply and exhaust pipe for the male die, entering thereinto the apertures or ports, the inverted shell, resting on the ring, through said bottom-closing plate, substantially as described.

Signed by me at Springfield, Massachusetts, in presence of two subscribing witnesses.

HERBERT S. BLAKE.

Witnesses:

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