(No Model.)

R. EICKEMEYER.

SETTING PRESS FOR CURLING HAT BRIMS.

No. 338,498. Patented Mar. 23, 1886.

Fig. 1.

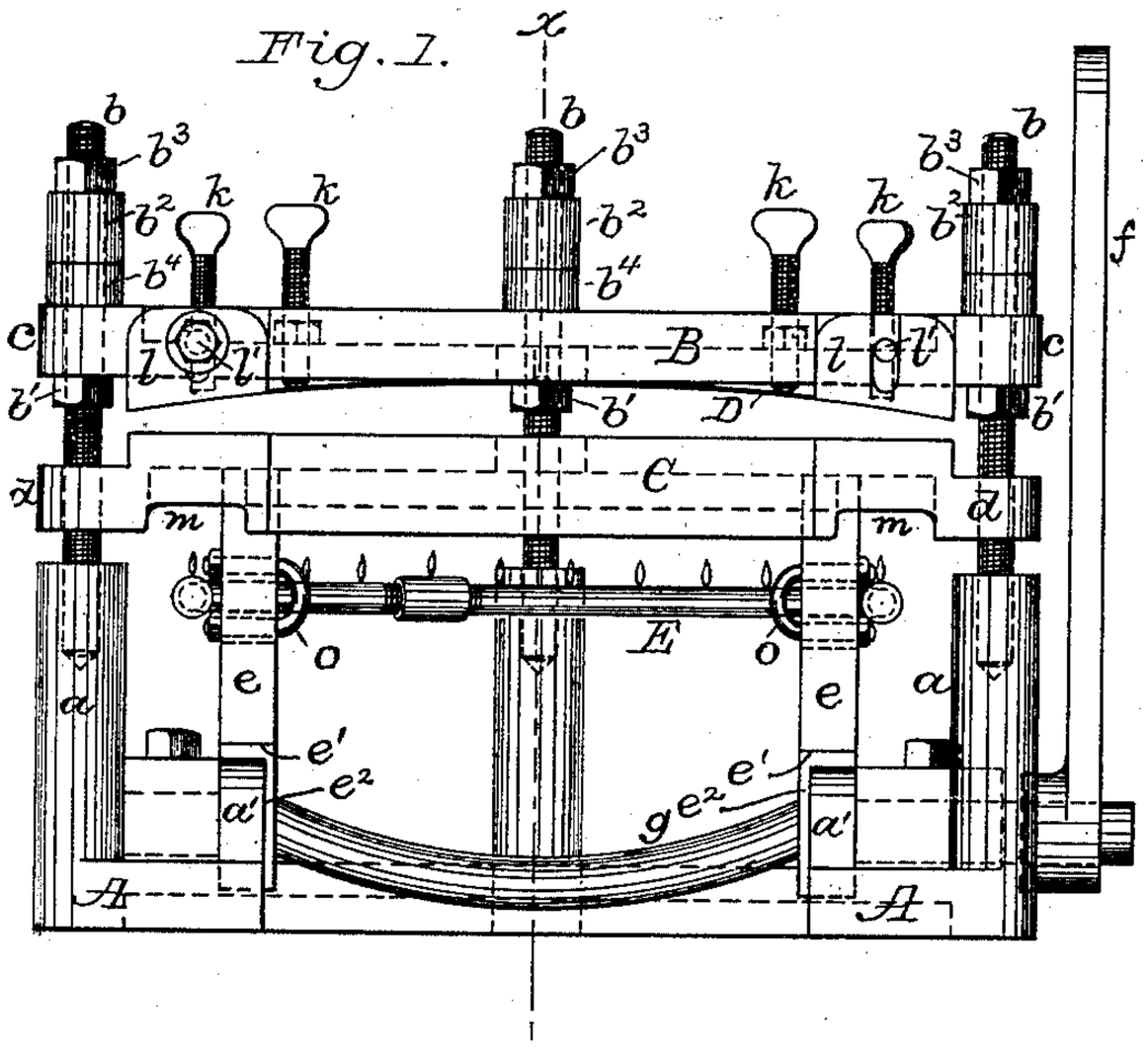


Fig. 3.

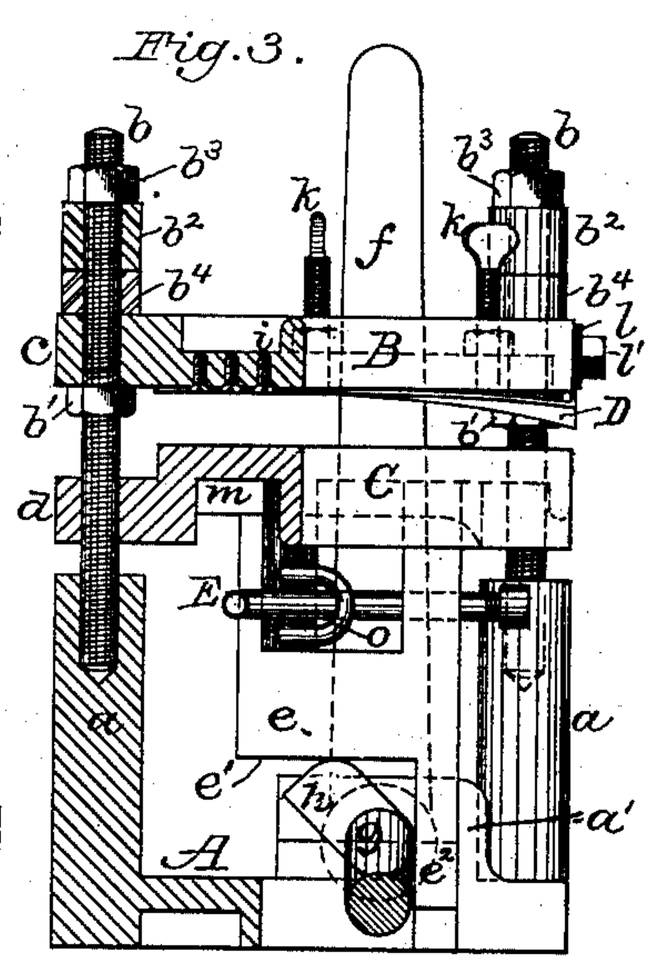


Fig. 2.

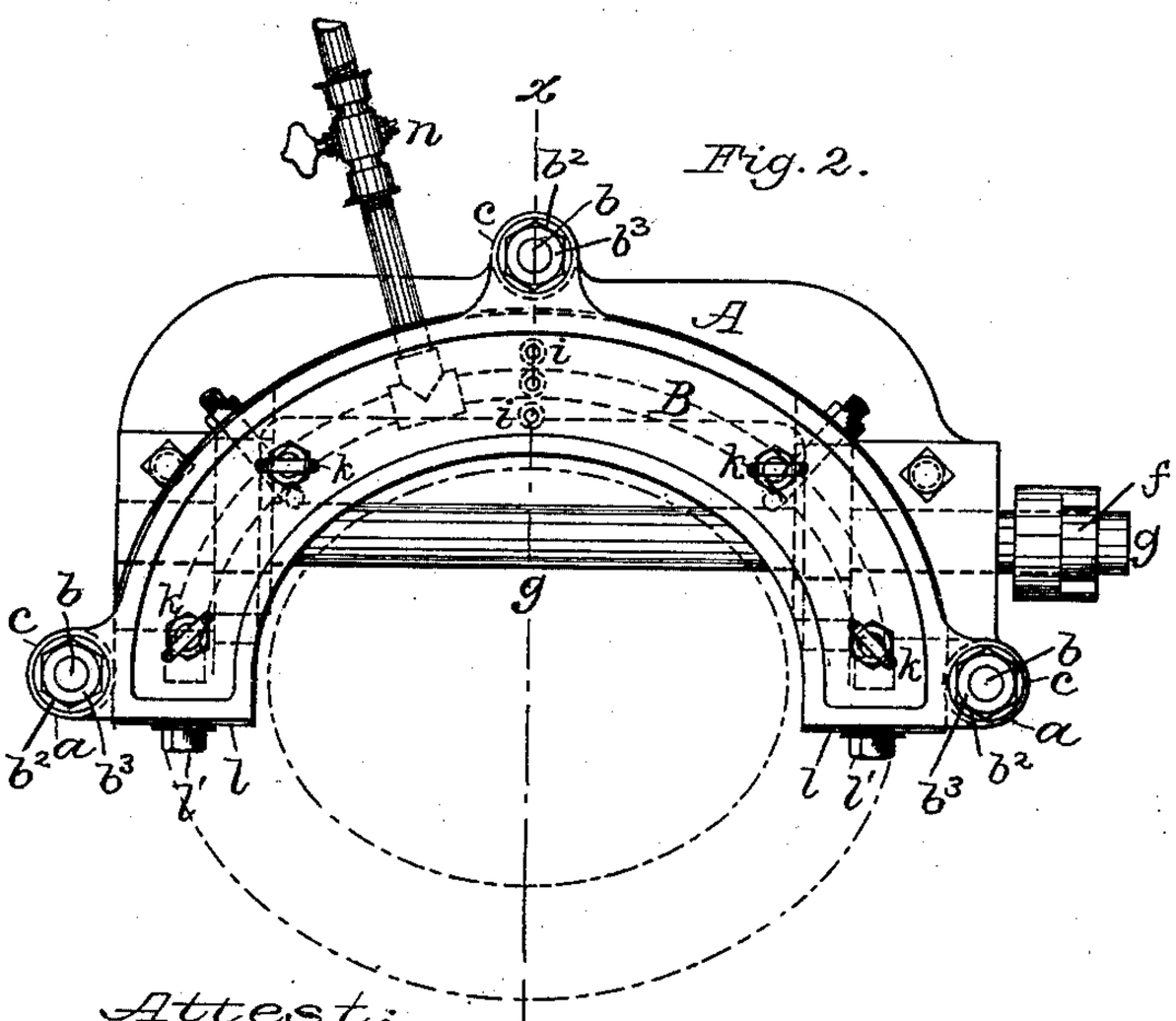
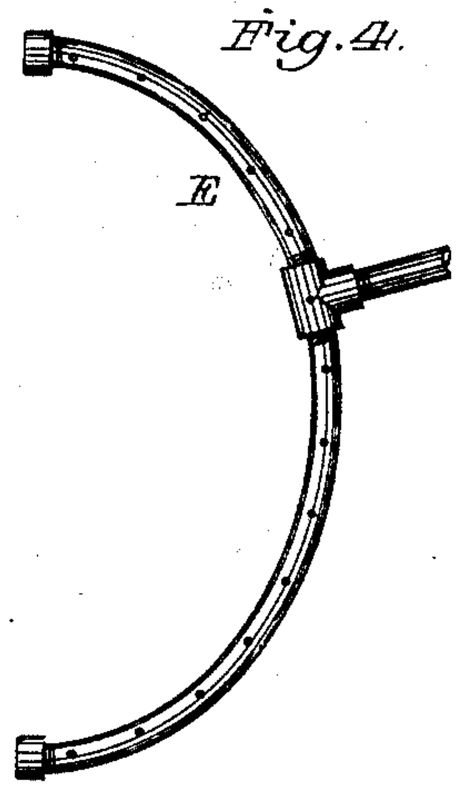


Fig. 4.



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UNITED STATES PATENT OFFICE.

RUDOLF EICKEMEYER, OF YONKERS, NEW YORK.

SETTING-PRESS FOR CURLING HAT-BRIMS.

SPECIFICATION forming part of Letters Patent No. 338,498, dated March 23, 1886.

Application filed December 17, 1885. Serial No. 185,965. (No model.)

To all whom it may concern:

Be it known that I, RUDOLF EICKEMEYER, of Yonkers, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Setting-Presses for Use in the Operation of Curling Hat-Brims; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part thereof, is a clear, true, and complete description of my invention.

It is to be understood that the work which my present presses are intended to perform can be much more economically accomplished by the use of certain presses heretofore devised by me, and fully disclosed in my application for Letters Patent filed July 10, A. D. 1884, Serial No. 137,332, and in operating with my present presses the best results will be obtained by adopting the method disclosed in my application for Letters Patent filed May 12, 1885, Serial No. 165,213. Under said method, and with my said prior presses, the folded edge of a hat-brim is compressed while cold, then heated under pressure, and then while still compressed the brim is cooled, although good but somewhat less desirable results will accrue if the initial pressure be applied to the brim while heated, and then cooled while under pressure in the same press, or in another press under pressure. In my said prior presses the entire brim is at once compressed and involves one operation; but certain old and well-known presses are adapted to compress only one-half of a brim at a time, thus requiring two operations for each hat-brim.

One object of my present invention is to improve said old forms of press, so that they may be better adapted to operate in accordance with my before-mentioned method, although, instead of operating with a single press, at least two will be required, respectively for cold and for hot pressing.

Small presses of the general variety referred to have heretofore been heated by steam, as well as the larger presses devised by me, and while under favorable circumstances any desired temperatures can thereby be attained, it is well known that in hat-factories the available pressure of steam is seldom sufficient for obtaining such high temperatures as are frequently desirable. I have therefore now devised a gas-heating appliance, and so combined it with the movable press-bed that the flames for the gas-jets will always occupy a uniform position with relation thereto, regardless of the movements of said press-bed.

Inasmuch as the use of gas does not practically admit of the alternate heating and cooling of the same press-head as can be done when steam is used, it is obvious that the cold pressing must be done in another press; but under my present invention a press can be used, as may be desired, either for hot or cold pressing.

It is to be understood in this connection that such of my present improvements as relate to heating the press-bed are equally applicable to my prior presses.

In a certain machine heretofore devised by me as one of a series of machines employed in curling hat-brims I have embodied a flexible and adjustable brim-plate, which can be made to conform to the varied curves of hat-brims during the operation of folding the edge of a brim flatly upon itself, and I have now for the first time, as I believe, interposed a flexible adjustable brim-plate in a setting-press between the faces of the head and bed thereof, whether it be of the old general form of press or of the variety heretofore devised by me.

In the old form of press I have combined with the press-head and secured to its face an oval brim-plate, (whether segmental or in full form,) which is flexible, and is backed by adjusting-screws, by means of which, in substance, the press-head face is made to present a practically flat smooth surface, or it is made to assume varied curvatures, according to the shape of the hat-brim to be operated upon.

Certain minor improvements have also been made by me, and after fully describing these and those before referred to, in connection with the drawings herewith, the features deemed novel will be specified in the several clauses of claim hereunto annexed.

It is to be understood that I am well aware that presses embodying more or less of my present improvements are practically serviceable for use in operating upon hat-brims without reference to the particular method referred to—as, for instance, said presses can be used with good results in performing certain fin-

ishing operations upon the folded edges of brims, as distinguished from what may be termed "preliminary" or "intermediate" operations.

Referring to the drawings, Figure 1 is a front view of a setting-press embodying the several features of my invention. Fig. 2 is a top or plan view of the same, and in dotted lines illustrates a hat as when in position for pressing the edge of one-half of its brim. Fig. 3 is a vertical central section of the same on lines *x*, Figs. 1 and 2. Fig. 4 is a plan view of the gas-burner which is relied upon for heating the press-bed.

The frame A may be widely varied in form and construction so long as due provision is made for properly mounting therein the several parts to be hereinafter described.

The press may be constructed with legs, so as to stand upon a floor; but as here shown it has a flat bearing-surface, so as to enable it to be firmly mounted upon an ordinary work-bench, and it embodies a base-plate having a series of vertical triangularly-located posts, *a*, and four vertical lugs, *a'*, these latter being located at opposite ends of the base-plate, and in pairs, so that their coincident faces may serve as guides, as will be hereinafter more fully explained. Each of said three posts, *a*, is centrally bored and tapped to firmly receive a vertical screw or screw-post, *b*, and this series of screws serve not only as means for adjustably supporting the press-head B, but also as guides for the vertically-reciprocating press-bed C. The press-head B has a half or semi oval outline, and is provided with three lateral projecting ears or lugs, *c*, located in positions to exactly correspond with the positions of the three screws *b*. These screws loosely occupy holes in said ears, and are enabled to support said head by means of the nuts *b'*, and these latter enable the head to be vertically adjusted and held at any desired position. Above said ears or lugs each screw *b* is encircled by a rubber or other form of spring, b^2, surrounded by a compressing-nut, b^3, by means of which the compressive power of the springs may be widely varied, and for insulating said springs (when made of rubber) from the press-head intervening washers b^4, of wood or other good non-conducting material, are employed. The press-bed C corresponds in outline with the press-head, and it is provided with similar lugs or ears, *d*, which are bored to loosely receive the screws *b*, which therefore serve as vertical guides for said bed. This bed has also two parallel pendent legs, *e*, each having a flat bearing-surface, *e'*, at its lower end, and each having a downwardly-extended foot or tail piece, e^2, which is fitted to slide accurately between the coincident parallel faces of each pair of vertical lugs *a'*, before described. It will be seen that the three posts *b*, the lugs *a'*, and the tail-pieces e^2 will accurately limit the press-bed to truly vertical movements.

Power may be applied for reciprocating the press-bed either by the foot, hand, or otherwise; but as here shown this is done by means of the hand-lever *f*, which is secured to the rock-shaft *g*, properly mounted in suitable bearings on the base-plate. As here shown, the rock-shaft between its bearings is bent or curved, so that its central portion by striking against a portion of the base-plate will serve as a stop and limit the movement of the hand-lever in one direction. Below the pendent legs, and in line with their bearing-surfaces *e'*, said rock-shaft is provided with cams *h*, of proper form to enable them to engage with a lifting contact against said bearing-surfaces, and to cause the press-bed to be raised and lowered as a result of swinging said hand-lever to and fro.

As thus far described the press is adapted for cold pressing, but can only operate on flat hat-brims, and to enable it to also operate on curved brims I have introduced the flexible brim-plate D. This brim-plate is the half of an oval or semi-oval in outline, and in that respect corresponds with the face of the press-bed and press-head, and it is firmly attached to the latter at a central point by means of one or more small bolts, *i*, which are so applied to said plate as to not impair its smooth lower surface. This brim-plate, being secured to the press-head only at its center, is obviously free to be deflected at its two ends, and it is therefore capable of being made to assume a curved or arched form. As here shown, this variation is accomplished by means of the four vertical thumb-screws *k*, which are fitted into tapped holes in the press-head, and have well-rounded ends for contact with the rear side of the brim-plate, so that they may also serve as abutments for said plate when it is arched or curved; or they may be wholly withdrawn when said plate is desired to serve as a mere flat face for the press-head. At each end said brim-plate is turned upwardly, as at *l*, and it is slotted vertically for the reception of a clamping-bolt, so that by means of nuts *l'* on said bolts the ends of said brim-plate may be firmly secured in any one of its various positions of adjustment.

Inasmuch as the brim of a hat is supported on the press-bed, it is obvious that the latter should be heated in preference to the press-head, and especially if the latter is provided with the flexible brim-plate.

For enabling the heat from gas-flames to be favorably applied to the press-bed, the latter is recessed or chambered, as at *m*, on its under side, as clearly shown, and below this there is a bow-shaped pipe or gas-burner, E, provided with numerous jet-apertures arranged to afford vertical flames, although many of the well-known forms of gas-burners may be inserted into larger holes in the bow-shaped pipe and employed to good advantage.

A gas-cock at *n* enables a convenient graduation of heat.

The burner E is secured to the movable press-bed by means of loops or staples *o*, and

the free movement of said bed is in no manner impaired thereby, connection with adjacent permanent gas pipes or fixtures being made by means of well-known ordinary flexible gas-tubing.

With a press of this form the folded edges of brims may be properly set, whether the edges are folded upon the upper side of the brim, as is usual, or upon the under side; and if this latter operation should be desired on curved brims, the press-bed may then be provided with the flexible adjustable brim-plate, and with the bed above the gas-burners then so perforated as to admit of a proper upward delivery of heat the brim-plate would be always well heated.

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

1. In a hat-brim-setting press, the combination, substantially as hereinbefore described, of a press-head, a vertically-reciprocating press-bed below said head, and a gas-pipe which is below said bed and provided with jet-apertures, whereby burning-gas may be employed for heating said bed.

2. In a hat-brim-setting press, the combination, substantially as hereinbefore described, of a press-head, a press-bed, and a flexible adjustable brim-plate located between the faces of said head and bed, substantially as and for the purposes specified.

3. In a hat-brim-setting press, the combination, substantially as hereinbefore described, of a press-head, a flexible adjustable brim-plate mounted upon the face of said head, and a press-bed which co-operates with said head and brim-plate, substantially as and for the purposes specified.

4. In a hat-brim-setting press adapted to operate on one-half of a brim, the combination, with one of the press-faces, of a semi-oval flexible brim-plate attached thereto, adjusting abutting screws acting against the rear side of said plate, and the clamping-screws, by which the two ends of said plate may be firmly secured in any desired position of adjustment, substantially as described.

5. In a hat-brim-setting press, the combination of a bed plate or frame, a vertically-reciprocating press-bed, a press-head, the springs, and a series of vertical screw-posts, which serve as guides for said springs and for the press-bed, and by means of nuts thereon serve also as adjustable supports for the press-head, substantially as described.

6. In a hat-brim-setting press, the combination of a press-head and its springs, a vertically-reciprocating press-bed provided with depending legs, a bed plate or frame provided with a series of screw-posts, which serve as guides for said springs and said bed, and also as supports for said head, and vertical guiding-lugs on said bed-plate, which co-operate with said depending legs and the screw-posts in limiting said bed to a truly vertical movement, substantially as described.

RUDOLF EICKEMEYER.

Witnesses:
JAMES S. FITCH,
ANDREW R. TUTKINS.