

N. B. Hooper,
Ironing Hats.

No. 53,826.

Patented April 10, 1866.

Fig. 1.

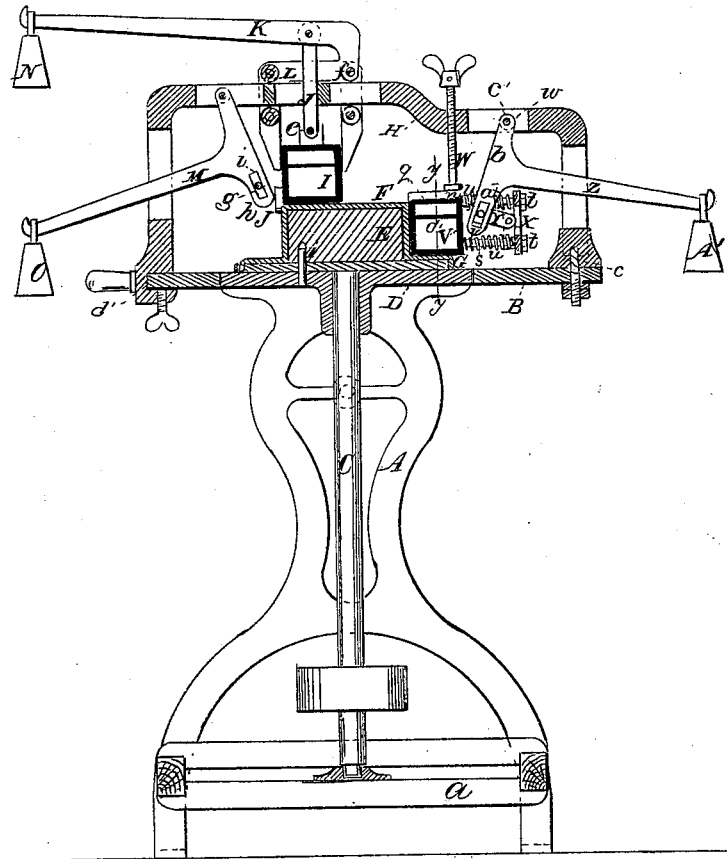
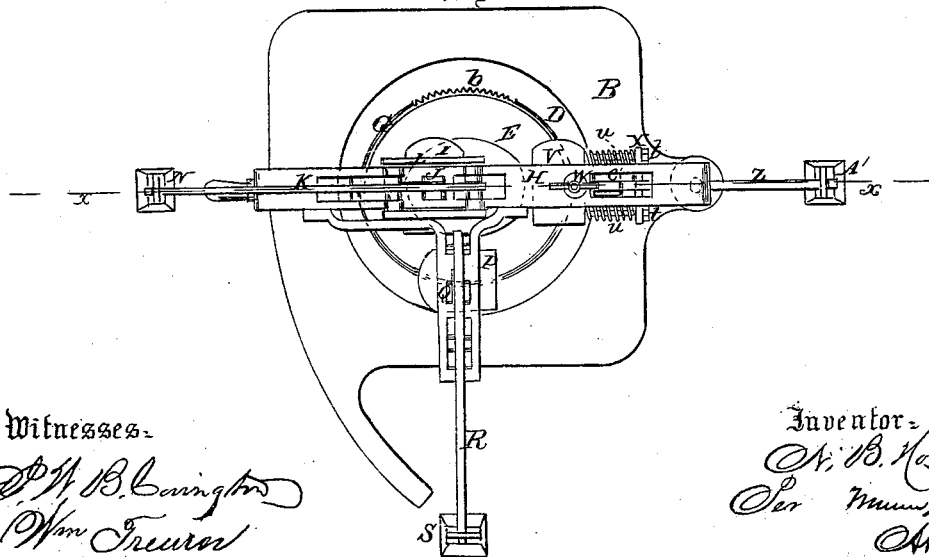


Fig. 2.



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Ironing Hats.

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Fig. 3.

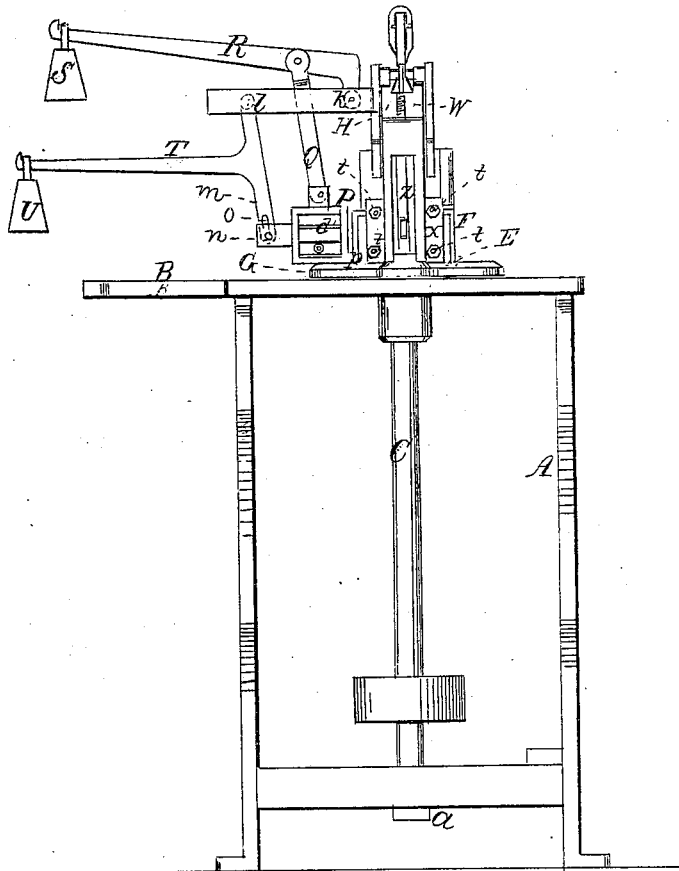
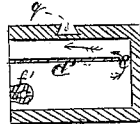


Fig. 4.



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UNITED STATES PATENT OFFICE.

NICHOLAS B. HOOPER, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN HAT-PRESSING MACHINES.

Specification forming part of Letters Patent No. 53,826, dated April 10, 1866.

To all whom it may concern:

Be it known that I, NICHOLAS B. HOOPER, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Machine for Pressing Hats; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, Sheet No. 1, is a vertical section of the same, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same; Fig. 3, Sheet No. 2, an elevation of the same; and Fig. 4, a detached vertical section of one of the irons, taken in the line *y y*, Fig. 1.

This invention relates to a new and useful machine for pressing or ironing hats, and is designed to supersede the ordinary manual process by expediting the work and performing it in a superior manner.

The invention consists in the employment or use of a rotary hat-block, in connection with irons properly heated, and having weights or their equivalents attached or applied in such a manner that the irons will bear or press upon the hat, so as to iron or press all parts of the same and make it conform to the shape of the block.

The invention also consists in a novel manner of heating the irons by means of gas, whereby the trouble and delay attending the use of heaters for that purpose are avoided, as well as the use of a fire for heating the heaters, which is oppressive in warm weather.

A represents a frame, which may be constructed in any proper manner, to support a horizontal plate or bed-piece, B, and C is a vertical shaft, placed centrally in the frame A, and having its lower end stepped in a cross-bar, *a*, said shaft having a circular disk, D, attached to its upper end, which is fitted and works in a circular opening in the bed-piece B, the upper surface of the disk and the bed-piece C being flush with each other, as shown clearly in Fig. 1.

On the upper surface of the disk D the hat-block E is secured by pins *a'*, the hat F to be ironed being fitted on the block.

H represents a frame, which, when the machine is at work, extends over the hat-block,

as shown clearly in Fig. 1. This frame H is secured at one end to the plate or bed-piece B by a pivot-bolt, *e*, and the opposite end of the frame is provided with a notch or groove, *d*, into which one edge or side of the plate or bed-piece B is fitted, said edge or side being rounded to form a portion of a circle, of which the pivot-bolt *e* is the center. (See Fig. 2.)

I represents an iron, of rectangular form in its transverse section, but having one end slightly rounded. The upper end of this iron is connected, by a pivot, *e*, with the lower end of a bar, J, the upper end of which is pivoted to a lever, K, said lever having its fulcrum *f* in a carriage, L, which is allowed to slide freely on the frame H; and this iron I is connected, by a pin, *g*, to the lower arm, *h*, of a T-shaped lever, M, the fulcrum of which is in the frame H. The pin *g* passes through an oblong slot, *i*, in the arm *h*, as shown clearly in Fig. 1.

The iron I rests upon the top of the crown of the hat, and is pressed down upon said top by a weight, N, on lever K, and the iron I is provided at the outer side of its bottom with a pendent flange, *j*, which is pressed against the side of the crown of the hat by a weight, O, on lever M, the oblong slot *i* in the arm *h* of said lever admitting of the lever M acting horizontally against said iron I, as will be fully understood by referring to Fig. 1. The object of the flange *j* is to press and form the square or corner made by the juncture of the tip and side crown in a better manner than can be done without the flange.

P is an iron, of similar construction to the iron I, with the exception that it is not provided with the flange *j*. This iron is connected at its top by a link, Q, with a lever, R, which also has its fulcrum *k* in the frame H, and has a weight, S, upon it. A T-shaped lever, T, which has its fulcrum *l* in the frame H, has its lower arm, *m*, connected to the outer side of the iron by means of a pin, *u*, which passes through an oblong slot, *e*, in the lower arm, *m*, as shown in Fig. 3.

The lever T has a weight, V, upon it, and at the inner side of the lower part of the iron P there is a laterally-projecting lip, *p*, which is pressed snugly, by the weight V of lever T, against the lower part of the crown of the hat at its junction with the brim, as shown in Fig. 3, for the purpose of forming and pressing the

band or corner made by the juncture of the side crown and brim in a better manner than can be done without the lip, the lever R, with its weight S, pressing the iron P down upon the brim.

V is an iron, constructed similarly to the irons I P, with the exception that it has no flange *j* nor lip *p*. This iron V has a dovetail slot, *g*, made transversely in its upper surface, and in this slot a dovetail projection, *r*, at the lower end of a screw-rod, W, is fitted. This screw-rod passes up vertically through the frame H, and serves as a guide for the iron V. (See Fig. 1.)

To the outer side of the iron V there are attached four rods, *s*, on which a plate, X, is fitted and allowed to slide freely, and retained thereon by nuts *t*.

On the rods *s*, between the iron V and the plate X, there are placed spiral springs *u*, and to the inner side of plate X there is attached an arm, V, to which the lever-arm *v* of a T-shaped lever, Z, is attached by a pin, *w*, said pin passing through an oblong slot, *a*^x, in the arm *v*. The upper arm, *b*', of the lever Z is secured in the frame H by a fulcrum-pin, *c*', and said lever has a weight, A', upon it, by which the iron V is pressed against the side of the crown of the hat.

From the above description it will be seen that when the shaft C is rotated the hat-block E will also be rotated, and the iron I will press the top of the crown of the hat, the flange *j* producing a proper angle at the junction of the top and side of the crown. The iron P presses the top of the brim of the hat, and the lip *p* presses the lower part of the crown at its junction with the brim snugly in against the block, and giving a proper angular form to the band portion of the hat. The iron V presses the side of the crown of the hat, and as the crown varies from a circle in its transverse section, the springs *u* admit of said iron yielding or giving to conform to the oval form of the crown as the hat-block rotates. The pressure of the iron V on the brim of the hat is graduated by turning the screw-rod W.

In order to iron the under side of the brim of the hat a hollow block is used and secured in an inverted position on the upper end of the shaft C, the iron P acting upon the under side of the brim in the same manner as it acted upon the upper surface.

In order to place a hat upon the block or remove it therefrom the frame H is turned around out of the way of the irons, of course moving with said frame. By this means different blocks may be applied to the disk D.

The irons I P V are treated as follows: Each iron has a horizontal partition, *d*', within it, a space, *e*', being between the inner end of said

plate and the closed end of the iron, (see Fig. 4), the opposite end of the irons being open. In the irons, at their open ends, between the partition-plates *d*', there are tubes *f*', having one or more burners or orifices at their inner sides. These tubes *f*' are made to communicate with any gas-pipe by means of flexible tubes, and it will be seen that the products of combustion pass underneath the plate or partition *d*', up through the space *e*', and thence back to the open end of the iron, as shown by the arrows in Fig. 4.

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

1. A revolving hat-block, in combination with a series of irons constructed and operating so as to be self-adjusting in conforming to the sizes and shapes of different hat-blocks, and capable of simultaneously pressing the tip, side crown, and brim, substantially as and for the purposes set forth.

2. The pivoted hanging frame H, when so constructed and arranged as to support and act in combination with a series of irons and their operating devices capable of pressing the side crown, tip, and brim, substantially as specified, for the purpose of simultaneously removing all of the irons from the hat by swinging the frame aside.

3. The rod J, carriage L, and levers K and M, in combination with an iron, I, substantially as specified, for the purpose of producing a self-adjusting vertical and lateral pressure of said iron upon the tip and square of a hat upon a revolving hat-block.

4. The slotted lever T, rods *n* and Q, and lever R, in combination with the frame H and an iron, P, substantially as specified, for the purpose of producing a self-adjusting vertical and lateral pressure of the said iron upon the brim and band of a hat upon a revolving hat-block.

5. The combination and arrangement of lever Z, rods Y and *t*, plate X, springs *u*, and an iron, V, substantially as specified, for the purpose of producing a self-adjusting lateral pressure upon the side crown of the hat, yielding in conformity to the oval shape of the side crown of the hat-block.

6. The iron V, when provided with the partition *d*', opening *e*', and burner *f*', substantially as and for the purposes set forth.

7. The combination and arrangement of the frame H, levers K R M T Z, irons I P V, table A B, and block-plate D, substantially as and for the purposes set forth.

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