(No Model.) 2 Sheets—Sheet 1.

J. B. HOWE.

HAT CLAMPING DEVICE.

No. 540,446. Patented June 4, 1895.

Fig. 1

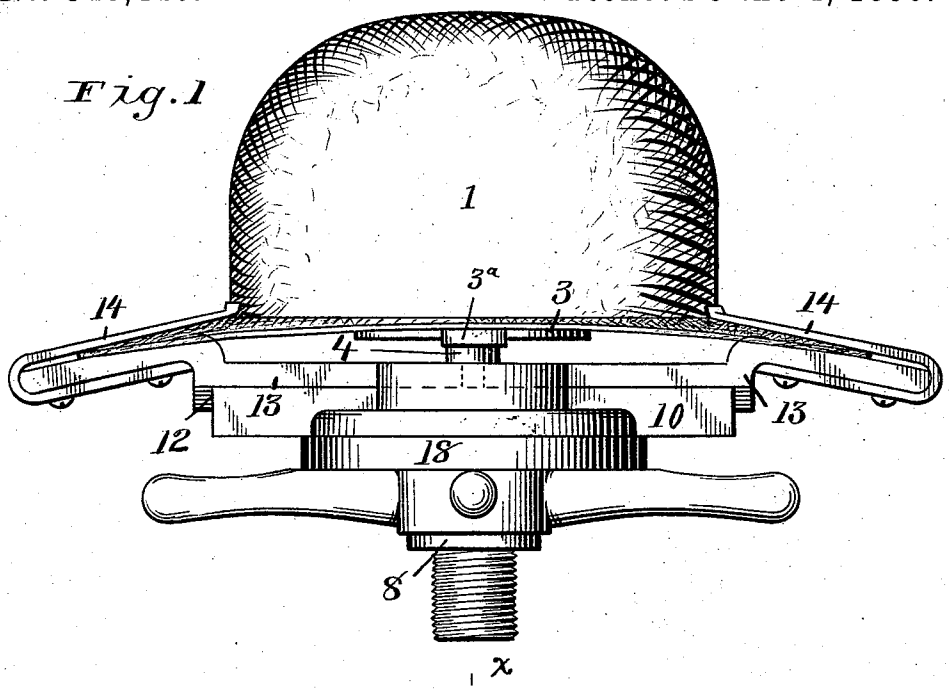
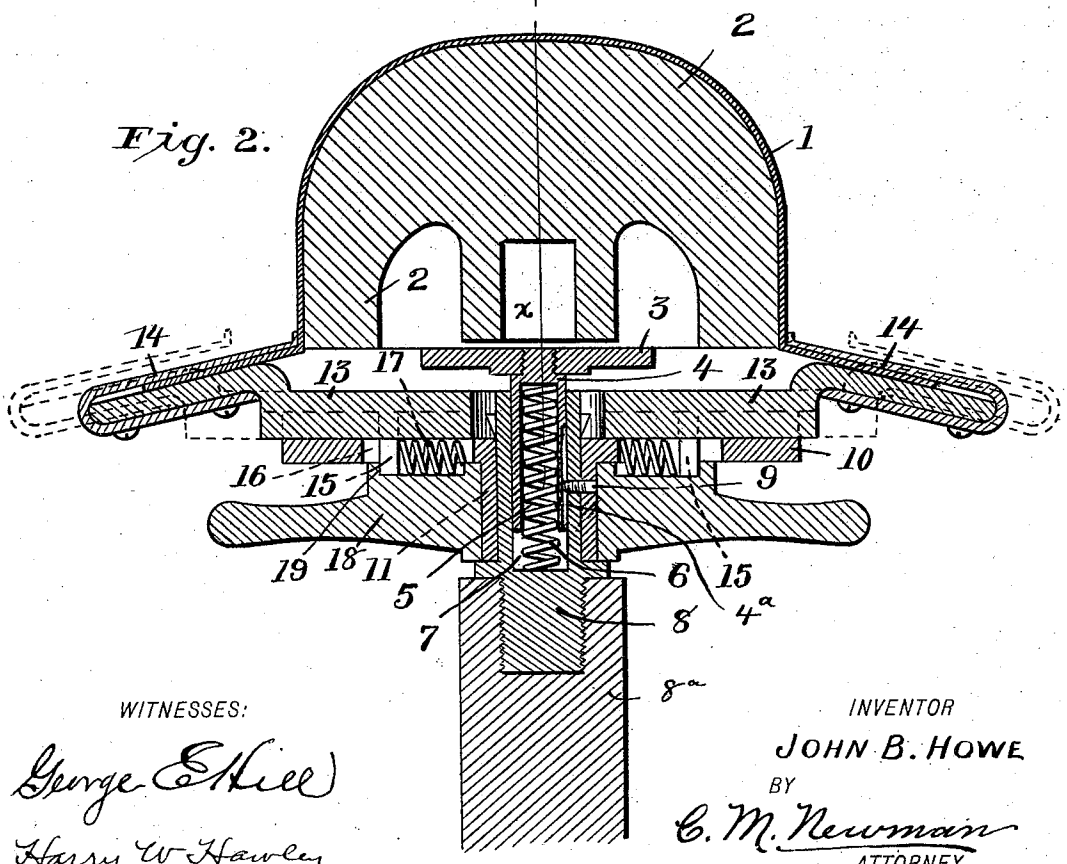


Fig. 2.



WITNESSES:

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(No Model.) 2 Sheets—Sheet 2.

J. B. HOWE.

HAT CLAMPING DEVICE.

No. 540,446. Patented June 4, 1895.

Fig. 3.

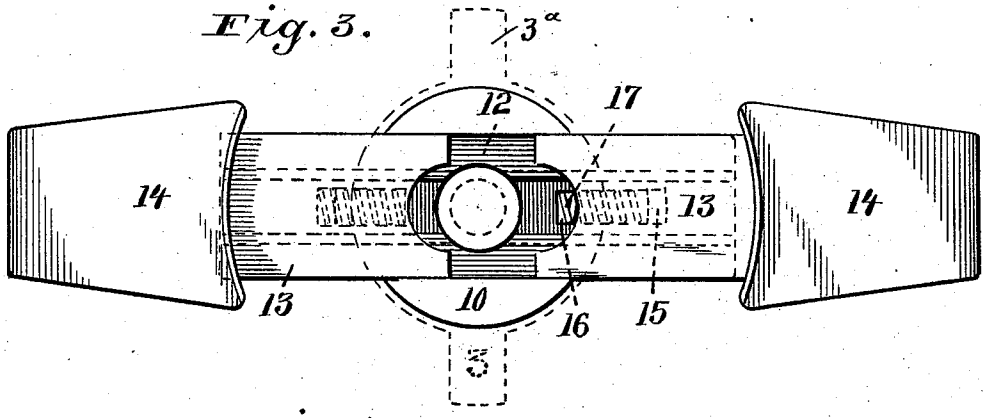


Fig. 4.

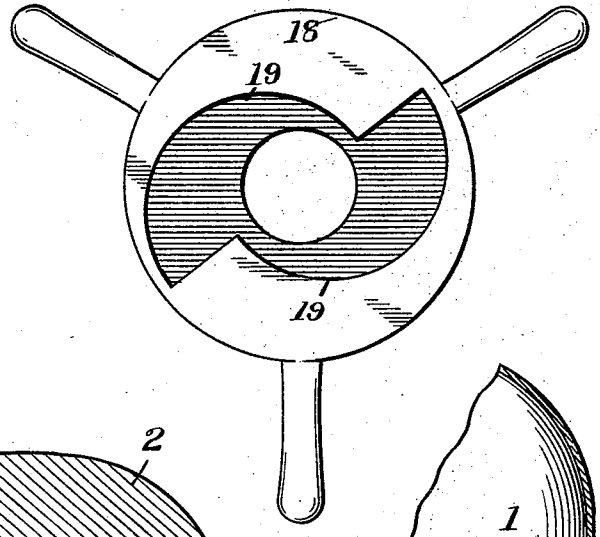


Fig. 5.

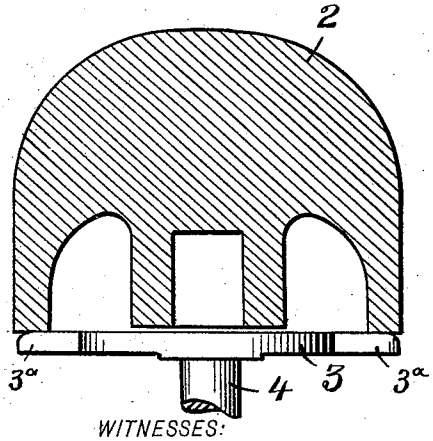
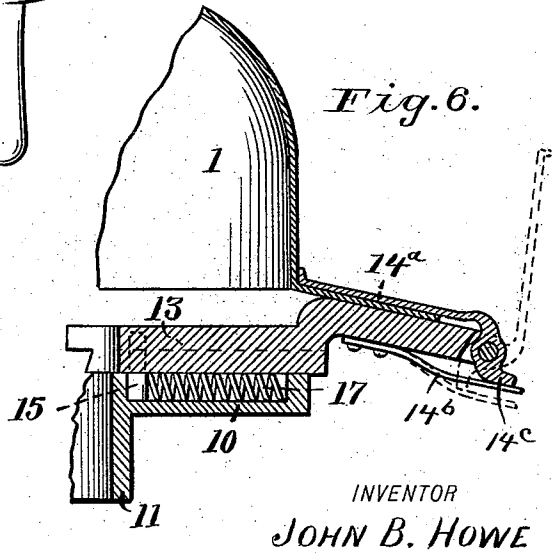


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN B. HOWE, OF DANBURY, CONNECTICUT.

HAT-CLAMPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 540,446, dated June 4, 1895.

Application filed October 27, 1893. Serial No. 489,266. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. HOWE, a citizen of the United States, and a resident of Danbury, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Hat-Clamping Devices, of which the following is a specification.

This invention relates to hat machines, and particularly to the construction of the hat block employed in connection with a pouncing machine or lathe, and means for securing hats to said block; and also to means for attaching the hat block to the spindle of said machine.

It is not sufficient in treating soft hats to depend upon the block to prevent independent movement of the hat, and it is objectionable to provide the apparatus with spurs to puncture the crown, and therefore it is my object to provide a simple and effective device capable of holding the hat during the rotation of the spindle irrespective of the style of the hat or the shape of the block presenting the entire outer surface of the crown for operation free from engagement or obstruction; and to provide means for holding the block firmly in place within the hat crown.

Figure 1 is a side view of a clamping device embodying my invention with a hat secured thereby. Fig. 2 is a vertical section of the hat-block and clamping device, showing in dotted lines the extended position of the sliding hat-clamps. Fig. 3 is a plan view of the hat-clamps and supporting-plates, showing in dotted lines the relative position of the block-supporting plate. Fig. 4 is a detached plan view of the operating cam-plate. Fig. 5 is a section of the hat-block, taken on line *x x* of Fig. 2 and showing the manner in which the block is supported upon the ears of the plate. Fig. 6 is a detail cross-section of a hat, slide, &c., showing a slight modification in the construction of the hat-clamp.

Similar numerals denote like parts on all figures of the drawings.

The improved device is applicable to any form of lathe, whether of the common or oval construction, and may be operated either horizontally or vertically, as shown.

1 designates a hat-body and 2 the block fitting therein and mounted upon a supporting plate 3, this plate being provided with lateral ears 3^a, which engage the block near its sides, as shown in Fig. 5, and thus support the same at its sides rather than at its ends. Depending from the plate is a tubular shank 4 in the bore 5 of which is arranged a coiled actuating spring 6; and this shank fits slidably in an axial recess 7 in the post 8. The lower end of this post is screw-threaded to engage a suitable socket in a spindle, shown at 8^a in Fig. 2, whereby the post is fixed to and is adapted to rotate with said spindle. Other means of attachment of the post may be employed.

The shank is provided with an exterior longitudinal groove 4^a to receive the extremity of a screw 9 carried by the post, thus, in effect, feathering said shank and post together, whereby the block-supporting plate is capable of free vertical movement by the action of the spring 6. This insures the accurate fitting of the block in the hat crown, and when the hat and block are placed upon the machine the plate may be forced down until the hat is properly adjusted.

10 represents a plate having a hub 11 fitted upon the post 8, and in the upper side of said plate are formed dovetail grooves 12 in which are fitted the dovetail slides 13 of the hat clamps 14. Depending from the slides 13 are studs 15 which pass through radial slots 16 in the plate 10, and within the slots 16 are arranged springs 17 which engage said studs and normally hold the hat clamps extended, as shown in dotted lines in Fig. 2.

Mounted upon the hub 11 is a rotary operating plate 18, provided in its upper side with cam grooves 19 to engage the lower ends of the studs 15, whereby when the operating plate is turned in the proper direction the hat clamps are drawn in, as shown in full lines in Fig. 2.

In Figs. 1, 2 and 3, the hat clamps are shown as plates bent upon themselves and secured to the under sides of the slides 13 at their outer ends, the upper sides of said clamps extending inward to and holding the crown firmly against the surface of the block; but in Fig. 6 said clamps are provided with hinged leaves 14^a, which are normally held in place by springs 14^b engaging feet or extensions 14^c of the leaves; whereby said clamps may be opened as indicated by dotted lines in Fig. 6.

In this modified form of clamp the slides are normally held retracted instead of normally extended, as in Fig. 1, the studs 15 being arranged at the inner ends of the radial slots instead of at the outer ends. This construction is rendered effective in this instance for the reason that the hinged leaves are not sprung down into position until the hat has been placed on the block. In this construction, also, it is possible to omit the operating cam plate for such a slight amount of movement only is necessary that it may be accomplished by hand without the use of a cam plate.

I do not wish to be limited to the precise details of construction shown and described, as they may be varied as to form, proportion and otherwise, without departing from the spirit of my invention.

I claim—

1. A hat clamping device comprising a spring actuated, block supporting plate, a pair of slides suitably supported below the plane of said block supporting plate, and clamping pieces carried by said slides having recesses between their faces adapted to receive the brim of the hat, the upper face of said clamps terminating contiguous to the hat block, whereby said hat is firmly held at the base of its crown; substantially as described.

2. A hat clamping device comprising a hat block supporting plate, a pair of slides suitably supported below the same, clamping pieces as 14 secured at one end to the slide and each bent to form a recess between its upper and lower faces, whereby the brim of the hat is clamped between the faces of the clamp, and means for operating said slides; substantially as described.

3. A hat clamping device comprising a rotatable post, a hat block supporting plate supported on said post, a second supporting plate having guiding grooves and radial slots, slides carrying hat brim clamps movable in said grooves and having lugs depending into said radial slots, springs in said radial slots bearing on the lugs, and means for reciprocating said slides; substantially as described.

4. A hat clamping device comprising a hat block supporting plate, a post, a plate 10 carried by said post, clamps slidably supported beneath the hat block supporting plate and within said plate 10 and adapted to engage the base of the crown of a hat, said hat block supporting plate being provided with a depending tubular shank fitting in the base of said post, and an actuating spring arranged within said tubular shank, whereby the hat block may be forced into the crown of the hat insuring an even and sure engagement of the block with the crown of the hat; substantially as described.

5. A hat clamping device comprising a hat block supporting plate having a tubular shank, the hollow post supporting said tubular shank, a spring arranged in said tubular shank, and a spindle for supporting the post, a plate 10 provided with a hub encircling the post and having dove-tail grooves, slides movable in said grooves and carrying hat brim clamps at their outer ends, said plate 10 having radial slots within which are placed springs, and said slides having depending lugs 15 projecting into said radial slots and adapted to be acted upon by the springs, and a hand wheel provided with a cam face engaging said lugs 15; substantially as described.

6. The combination with hat clamping devices, of a hat block supporting plate having lateral ears, a hat block resting upon said ears, said hat block supporting plate having a depending tubular shank, a spindle supporting said tubular shank and an actuating spring arranged within said tubular shank; substantially as described.

Signed at Danbury, in the county of Fairfield and State of Connecticut, this 21st day of October, A. D. 1893.

JOHN B. HOWE.

Witnesses:
HENRY BERND,
NORMAN HODGE.