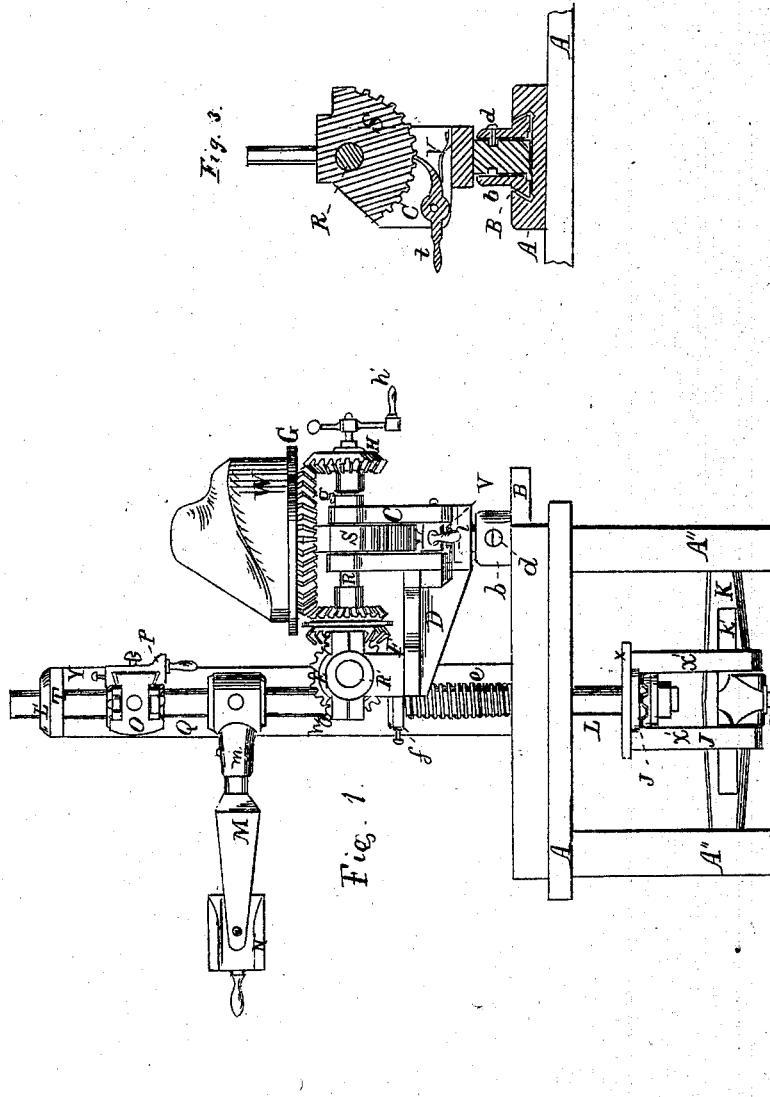


E. Cohleston.
Ironing Hats.

2 Sheets Sheet 1.

No. 49,384.

Patented Aug. 15. 1865



Witnesses:
James P. Hall.

Inventor:
Edwin Cohleston
Per Munnis H. G.
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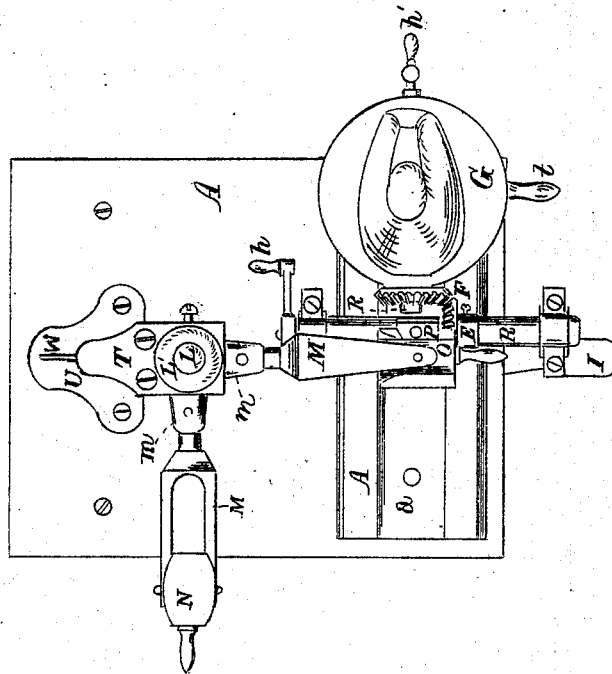
2 Sheets. Sheet 2.

*E. Copleston,
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Fig. 2.



Witness:

*James P. Hall
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Inventor:

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UNITED STATES PATENT OFFICE.

EDWIN COPLESTON, OF WRENTHAM, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR PRESSING BONNETS AND HATS.

Specification forming part of Letters Patent No. 49,384, dated August 15, 1865.

To all whom it may concern:

Be it known that I, EDWIN COPLESTON, of Wrentham, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Machines for Pressing Bonnets and Hats; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others 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 represents an elevation of my machine, seen from the front; Fig. 2, a plan view of the same. Fig. 3 is an elevation of the standard C, one of its sides being removed.

Similar letters of reference indicate like parts.

The object of my invention is to produce a machine which will enable the operator to adjust its parts so as to press either bonnets or hats; also, to save the expense and trouble of the present mode of working, which requires three machines to complete the pressing of a hat; also, to decrease the expense of the castings and other parts of the machinery used in this manufacture.

A' is the table which sustains the press, itself supported upon legs A'', the back pair of which (not seen) sustain a rock-shaft, K, which has a mortise, K', for receiving the short end of the treadle I, which acts as a lever of the second order, the rock-shaft being its fulcrum. The treadle passes between the forks of the frame J, to which it is attached by a journal-pin which passes through the treadle, which is enlarged into a hub at that point.

The frame J is composed of the forks connected by the cross-piece X on their upper ends, to which cross-piece is secured the upper leaf, J'', of the clutch, the lower leaf, J', of which is attached to the lower end of an upright shaft, L, which passes through the center of the cross-piece X and the clutch-leaf J''. The shaft L is not only depressed by means of the treadle, but so soon as the clutch is engaged it becomes incapable of any rotary motion, except treadle-frame J also swings about with it. The shaft L passes through the table A', and is held above in a bearing, T, secured to the standard Y, which is steadied by a stay-piece,

U, secured upon the table A', and by a bracket, W, extending along the back of the standard its whole height, and helping also to sustain the outer end of the bearing T. A collar, L', on the top of the bearing T holds the shaft L steady. A collar, f, is secured to the shaft L at any suitable height, in order to confine a spiral spring, e, which is slipped down upon the shaft, and the lower end of which rests upon the table A'.

Ironing-arms M, two of which are here shown, are attached by collar and set-screws to the upright shaft at any desired positions, so as to move with it. They are forked at their outer ends to carry flats N O, which are pivoted to them so as to revolve around their pivot-pins, and the arms M are also free to revolve on their own axis within the hubs m of the collars, as shown in the drawings. A shoe, P, is secured to the upper face of the flat O by means of a set-screw, as seen in Fig. 1. This implement is of a peculiar shape for doing a special kind of work, and can be secured to either side of the flats.

A platform, A, is screwed to the table A' at its outer end, having a depression, a, throughout its length, the sides of which are set at an angle, so as to fit the bed B in the manner of a dovetail joint. The lower edges of the angular sides of the depression are guttered, as shown in Fig. 3, to allow any foreign or refuse matter to pass off without fouling the platform and causing the parts to bind in their movements.

An upright collar, b, secured upon the top of the bed B, receives the shaft of the revolving frame C, which shaft is grooved to receive the end of a guiding-pin, d, set in the collar. The frame C is made of the form seen in Figs. 1 and 3, being bifurcated from above to receive a segment, S, of a gear or ratchet, which revolves upon a pin or fixed shaft, R, passing through the forks of the frame, and which shaft extends on each side so as to carry the bevel-gear wheel H and the double bevel-gear wheel F.

A detent, t, pivoted in the lower part of the sides of the frame and pressed up against the teeth of the segment by a spring, V, serves to hold the segment, and with it the hat-block, in any desired position. The detent has a handle to enable the operator to disengage it by press-

ing it against the spring, and thus releasing the segment. A radial pin, *r*, springs from the upper side of the segment *S*, which enters a hole in the center of the lower face of the hat-block *W*, which latter is free to revolve upon the pin as its axis. A bevel-gear, *g*, is secured upon the lower face of the hat-block, taking into the bevel-gear *H* upon one side and into the double bevel-gear wheel *F* upon the other side. The bevel-gear wheels *H* and *F* are mounted respectively upon collars which revolve freely upon the fixed pin *R*, being only secured so as not to have end-play thereon. The outermost wheel of the double bevel-gear *F* meshes with the bevel-gear *E* of the shaft *R*, which is supported in bearings upon the outer end of the bracket *D*, which is secured to the frame *C*, and moves with it upon its shaft. The gear *E* moves with its shaft *R'*, and that is moved by means of a crank, *h*, or a pulley.

The parts here shown and described are not all that belong to the machine as it is fitted up and adjusted for use, but only such are shown as are necessary to illustrate my invention.

The operation is as follows: The hat-block *W*, of whatever shape it may be, being in place upon the frame *C*, the arms *M* are adjusted at a proper position on the upright shaft to bear upon the different parts of the block. The block is turned so as to present the proper face of the block to the flats, both at the beginning and during the continuance of the operation of pressing the hat, by means of the crank *h* on the shaft *R'*, which causes the hat-block to rotate under and against the flats through the bevel-gears *E*, *F*, and *g*.

The treadle *I* must be depressed in order to bring the flats down to the proper level, when they are also prevented from moving away from their work by reason of the clutch, which, being then engaged, prevents the shaft from revolving upon its axis, and as the collars of the arms are rigidly secured to the shaft they are also prevented from swinging until the treadle is released and the spring *e* disengages the clutch.

The crank *h'* is rigidly secured to the sleeve

of the bevel-gear *H*, and this device is used for the purpose of tipping bonnets and other parts of the work wherein only a slight movement of the gears is required. The edges (or one of them) of the upper faces of the flats are made angular, so as to enable the shoes to be easily secured thereto.

It will be seen that the axis about which the hat-block revolves lies in the same plane with the axis of the bevel-gear wheels *H* and *F*, which cause the hat-block to revolve about its vertical axis. It follows that the bevel-gear *g* on the hat-block will continue to mesh with those bevel-gears whatever the inclination of its vertical axis, and as a consequence these parts will continue their operation at all angles within an arc of more than one hundred degrees in this illustration of my invention.

My machine will "rim" a greater variety of shapes than any machine known to me, and it will rim all the shapes now in fashion, whereas the machines heretofore known cannot rim any of them. I therefore am able to effect a saving of about fifty per cent. of the labor required in this part of the work. My machine will also press all kinds of crowns, from a taper to a bell shape, and with either piece blocks or full blocks.

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

1. In machines for pressing hats and bonnets, the combination of the traveling bed *B*, the frame *C*, which revolves upon it, the segment-ratchet *S*, with a hat-block, *W*, the said plates being constructed and operated substantially as and for the purpose above described.

2. The combination of the parts mentioned in the preceding claim, which presents the hat-block in different positions, with the arms which carry the flats and with the revolving upright shaft, *L*, the said arms and shaft being constructed and operated substantially as above described.

EDWIN COPLESTON.

Witnesses:

SAMUEL WARNER,
MARY N. STONE.