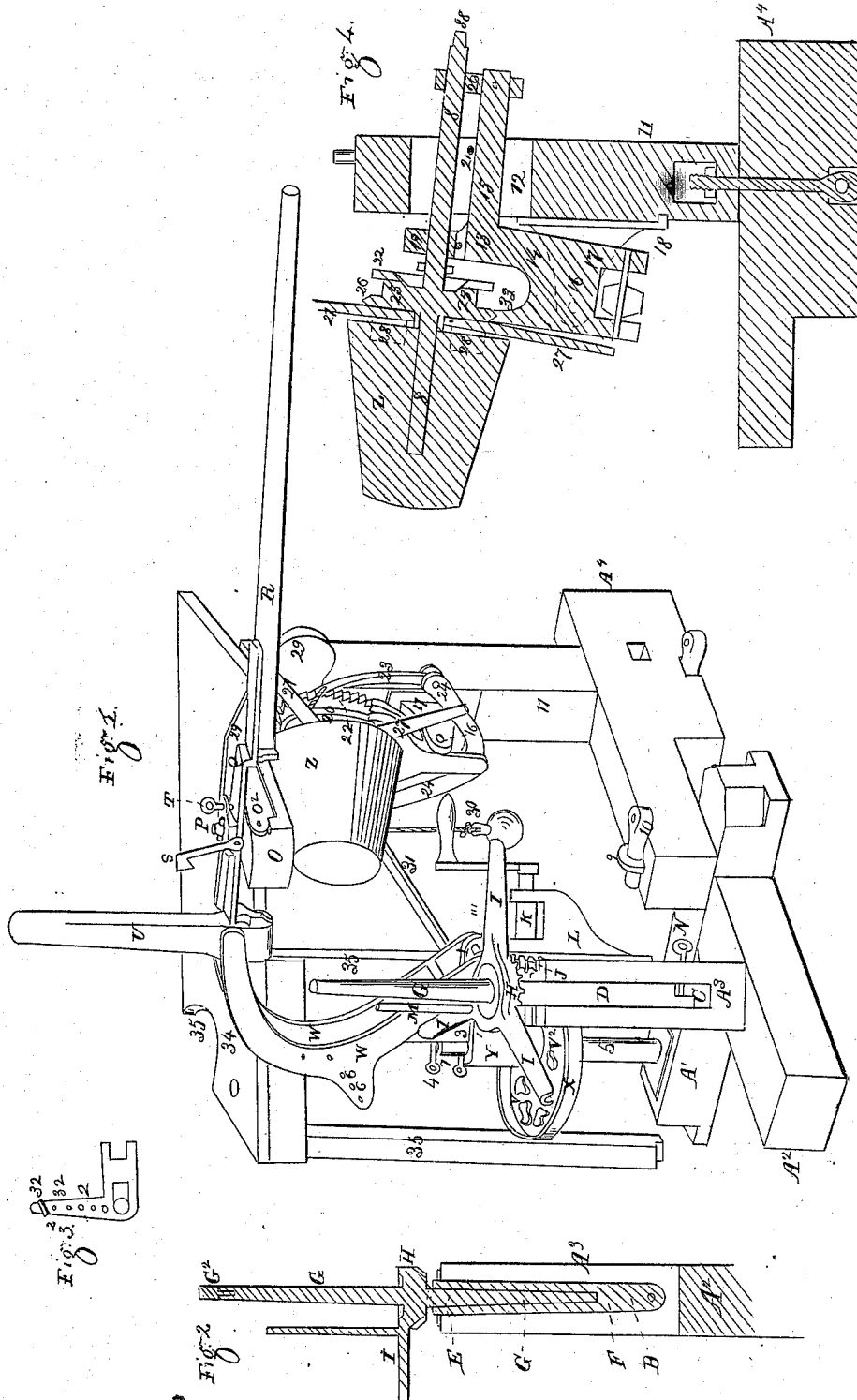


R. Murdoch.
Ironing Hats.

No. 2817.

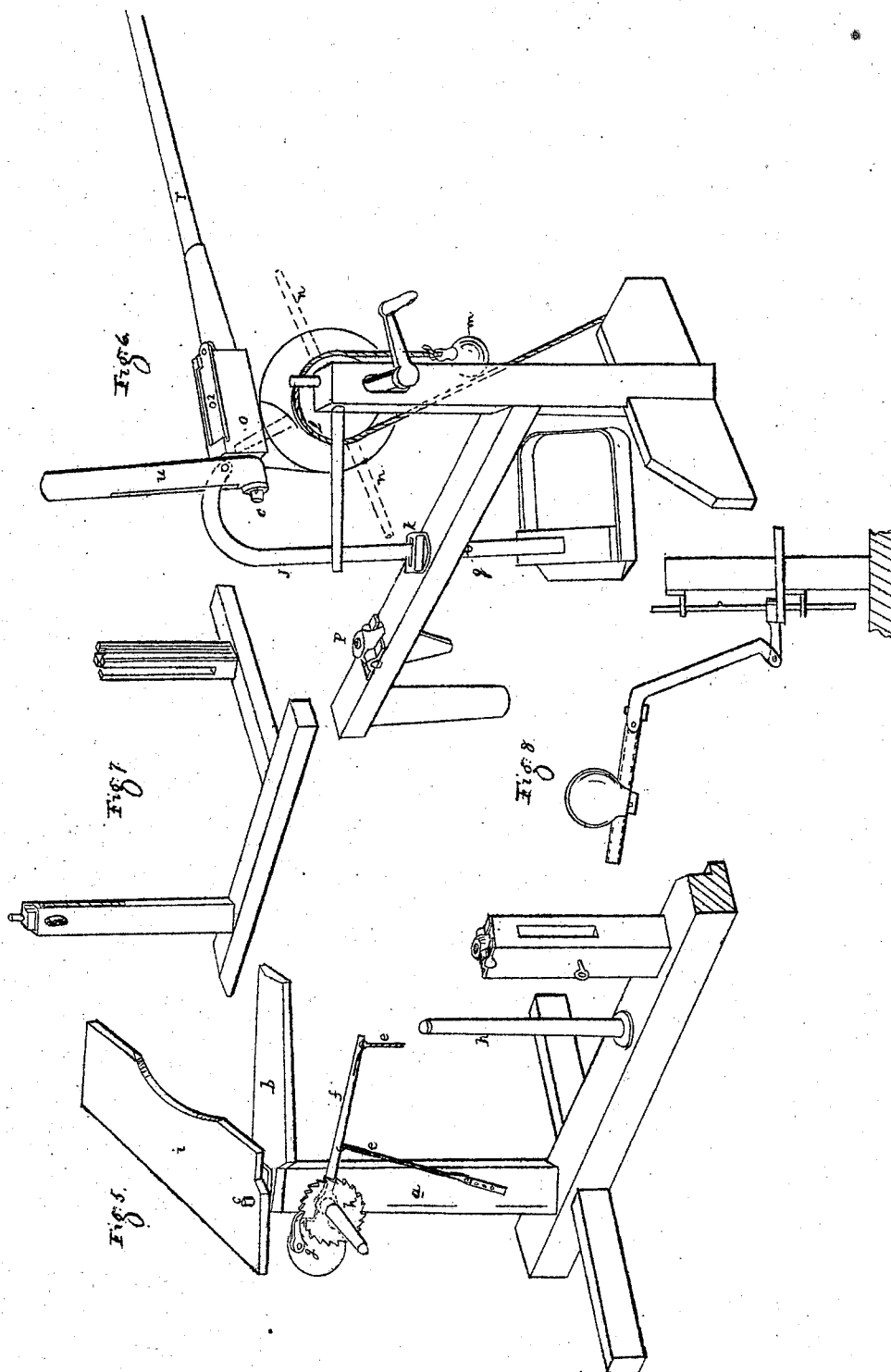
Patented Oct. 12. 1842.



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UNITED STATES PATENT OFFICE.

RICHARD MURDOCK, OF BALTIMORE, MARYLAND.

MACHINERY FOR PRESSING BONNETS, &c.

Specification of Letters Patent No. 2,817, dated October 12, 1842.

To all whom it may concern:

Be it known that I, RICHARD MURDOCK, of the city of Baltimore and State of Maryland, have invented new and useful Improvements on my Patented Machinery for Pressing Bonnets, Hats, and other Articles and for other Uses, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of the machine; Fig. 2, vertical section of the post, seat and spindle; Fig. 3, horizontal section of the hub and arms 1, 2; Fig. 4, section of the post shaft and seat for holding the block in a horizontal or inclined position; Fig. 5, perspective view of the frame, convex table, vibrating table, &c.; Fig. 6, perspective view of a frame convex and concave box iron, rod and weight, pulley cord and weight; Fig. 7, another modification of the frame; Fig. 8, shows the weight and spindle attached rising and falling together; Fig. 9, stirrups and post connected.

The frame, lettered A', is composed of a stout piece of timber of the required size—say about two feet long and 4 or 5 inches thick placed in a horizontal position having another horizontal timber A² of the same thickness but of less length mortised and tenoned into the same near one end thereof. A post A³ is let into the last mentioned timber A² and fastened with a wedge or in any convenient way. This post is slit down the center thereof from the top to near the bottom forming a rectangular mortise C into which is placed a metallic seat D having two trunnions E at the upper end thereof on which it turns in the aforesaid mortise—said trunnions turning on the head of the post. This vibrating seat is made open in the center or perforated with an oblong mortise F. It is also perforated vertically with a round aperture for the admission or insertion of a vertical spindle G. The aforesaid vibrating seat D is for the purpose of allowing the block on which the bonnet to be pressed is placed and which block is put on the spindle to adapt itself to the various changes of the pressing iron. The spindle G is nearly twice the length of the post and of any required diameter tapered at the lower end where it is inserted into a step or cavity formed in the seat.

The upper end G² of the spindle is made

separate from the main body thereof so that it can be taken off and removed when it is required to lower the block to adapt itself to the height of the pressing iron and for this purpose it is perforated in the middle for the insertion of a dowel pin which fits into a corresponding aperture in the head of the spindle. Or the height of the block may be altered in various ways. On this spindle near the middle thereof is fixed a horizontal bevel wheel H with three or more radiating arms I for turning it by hand but it may be turned by a vertical bevel wheel J into which it works fixed on a horizontal crank shaft K turning in boxes or ears on a plate L screwed to the post. Said bevel gear or arm, or crank is for the purpose of turning the hat block horizontally during the operation of pressing the bonnet on the block resting upon the bevel wheel and kept from turning round on the spindle by a vertical pin M resting upon the bevel wheel and entering the block. When it is required to retain the spindle in a vertical position a pin N is inserted horizontally through the post and seat which holds it securely. Only one cap is required for one trunnion the other being held down by the end of the crank shaft K entering the cavity in the outer end of the trunnion. These trunnions, as before stated are for giving the seat with the spindle and block a movement in the open post; and this I consider as one of my improvements with the arrangement of the radiating arms I on the bevel wheel for turning the spindle and block.

The iron O for ironing the bonnet is made hollow and is called a "box iron." One of its sides O² is hinged so that it can be opened to admit the hot iron or heater for heating the box. And when the heater is inserted said hinged side is shut down and secured by a catch or fastened in any convenient way.

A round stud P projects from the top of the box and passes through a corresponding round aperture in a cast iron frame Q fastened to the end of the lever R and through the part of the stud projecting through the frame a pin is inserted above a washer for holding the parts together and to allow the box to have sufficient play and in order to give the box still more play the stud is made tapering and the aperture oblong.

A catch S is attached to the side of the

frame Q by a round pin on which it turns dropping into a notch in the end of the box and bearing against the front part of the frame to prevent the box from turning when its convex face is used. One or more vertical screws T pass through the frame and bear against the top of the box to adjust it and keep it steady. When the iron is turned horizontally in a transverse position it is held in that position by a vertical pin passed through the frame and into the box.

A counter weight U is fastened in the outer end of the iron frame Q of the lever containing the box, in an upright position when the box is horizontal. The weight receiver V² for containing the weight for giving the required pressure is attached to the end of the iron frame Q of the lever R to which the counter weight U is attached by means of a double perforated curved stirrup W and loose joints. In the center of the weight receiver which in this modification of the invention is a circular platform with a circular curb or rim X having in its center a cast iron perforated flanged hub Y with two arms 1, 2, Fig. 3, projecting therefrom to the outer extremity of one of said arms (1) the lower end of the stirrup W is attached by a loose joint *m* the upper end of said stirrup being attached to the counter weight U on the end of the iron frame Q by a similarly constructed joint. The platform V² rests upon the flange of the hub. From the center of the last mentioned arm there rises a post 3 perforated with a number of holes into which is inserted a pin 4 for retaining the weight at any given height in the manner to be described. The weight holder V² is guided in its vertical ascent and descent by a round post or spindle 5 inserted into the frame of the machine.

The stirrups are perforated with a segment row of apertures 6 for the insertion of pins that come against the sides of the post 3 rising from the arm 1; or one of said pins may pass through the post and stirrup for connecting them together. In Fig. 1 these are represented as separated.

The pin 4 inserted through the perforated post strikes upon the head of the spindle 5 which governs the descent of the weight upon which post a piece of leather 7 is placed on the head of the spindle to lessen the jar and noise.

The aforesaid manner of attaching the weight of the lever of the box iron by means of the curved jointed stirrup W and hub Y moving over the vertical round spindle 5 on which the weight turns horizontally and rises and falls vertically allows the box to be moved in almost every possible direction around and over the bonnet to be pressed with the greatest ease and facility the weight rising and falling on the spindle as the box is passed over the bonnet by raising and de-

pressing the lever and allowing it to turn horizontally on the spindle as the lever is turned to the right and left.

The above described mode of attaching the box iron to the lever and of weighting the same and of adjusting the rise and fall of the weight constitutes another important improvement in the machine.

The shaft 8 for retaining the bonnet blocks in a horizontal or inclined position for pressing the sides of the crowns and the the fronts when the bonnets are in one piece and for other uses is arranged and turned in the following manner. A horizontal timber A⁴ is connected to the before described frame by means of an eye bolt 9 and turning wedge 10. From this timber, rises a post 11 attached to the horizontal timber by an eye bolt screw and nut and wedge bolt. In this post 11 is made a mortise 12 to admit the seat of the shaft 8 which has a movement therein for adjusting the same. The seat consists of a right angled casting 13 one branch of which 14 being vertical and the other 15 horizontal when the shaft is to lie horizontal. This right-angled casting or seat turns on a horizontal pin 16 passed through the same near the lower end of its vertical limb and an ear 17 projecting from a casting 18 screwed to the side of the post which serves as a fulcrum. At the angle of the casting or top of its vertical limb is a mortise with dovetailed sides in which is placed a block 19 with corresponding grooves on its sides in which block is formed a semicircular depression in which the shaft 8 turns. To the outer end of the horizontal arm of the seat is attached by mortise and tenon a vertical casting 20 in which is made a round aperture to admit the outer end of the shaft 8 to turn therein. By raising or lowering this end of the horizontal arm 15 the angle of inclination of the shaft 8 is changed being held at any angle required by a pin 21 passed horizontally through the post above the seat. The shaft 8 is a plain cylindrical bar of iron of any required length and diameter made square at one end 8, 8 for a crank if needed but this is seldom used as the shaft is turned by a ratchet wheel 22 and hands 23 the latter attached to a bell crank or elbow 24 vibrated in the manner hereafter described.

The ratchet wheel 22 is fixed to the end of a hub 25 which is fixed to and turns with the shaft. A circular plate 26 with its periphery brought to an edge is fixed to the other end of the hub; sockets are formed on the outside of this plate to receive the ends of corresponding arms 27 or levers inserted therein for turning the block by hand. Two projections or cogs 28 are fastened to two of the arms for entering corresponding cavities in the end of the bonnet block *z* for preventing it from turning on the shaft 8 and