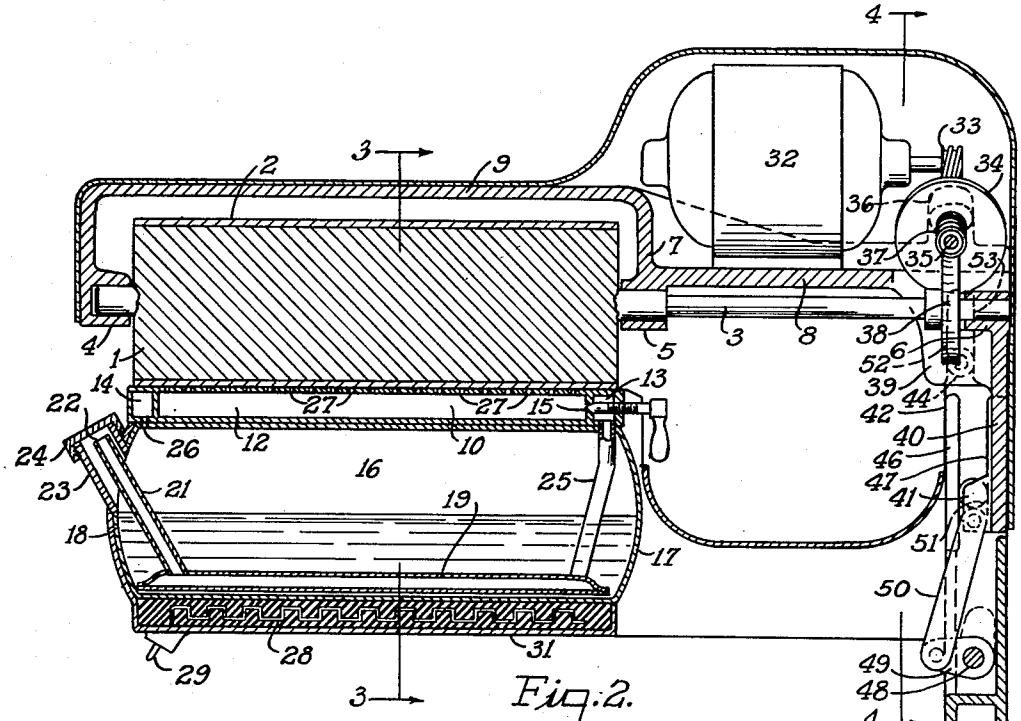
March 31, 1936. G. B. HAMM 2,035,959

ELECTRIC PRESSER AND IRONER

Filed April 24, 1935 2 Sheets-Sheet 1



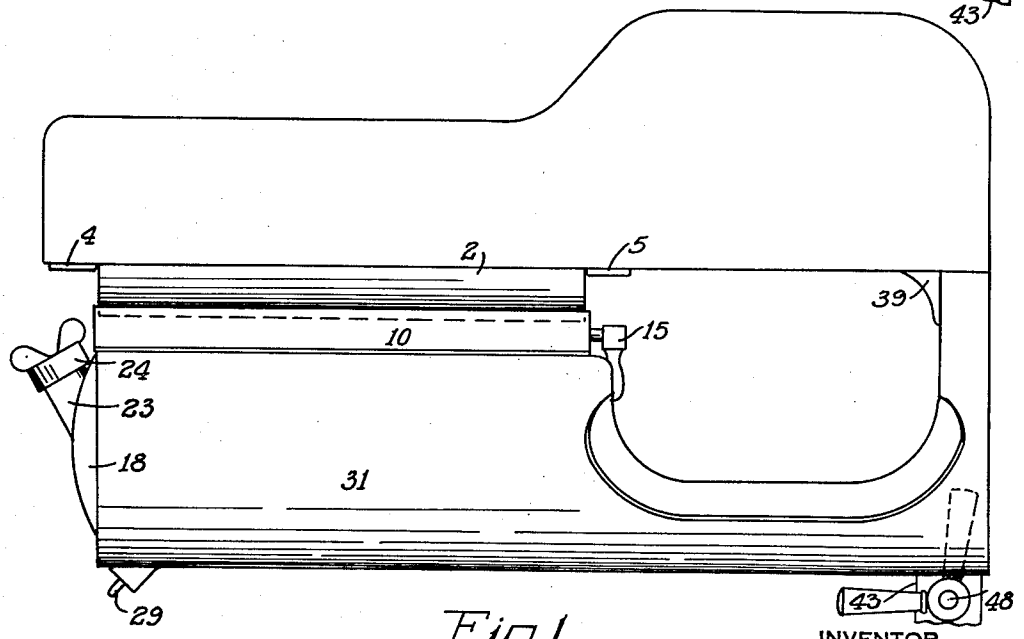


Fig. 1.

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ELECTRIC PRESSER AND IRONER

Filed April 24, 1935 2 Sheets-Sheet 2

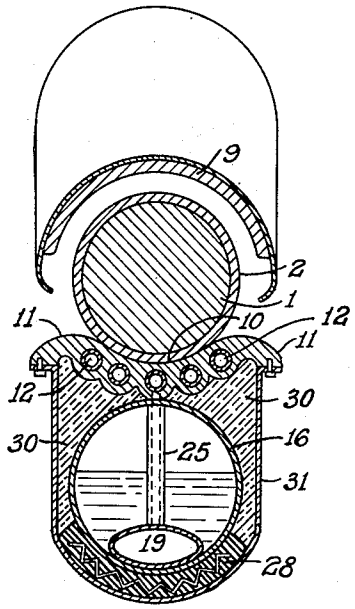


Fig. 3.

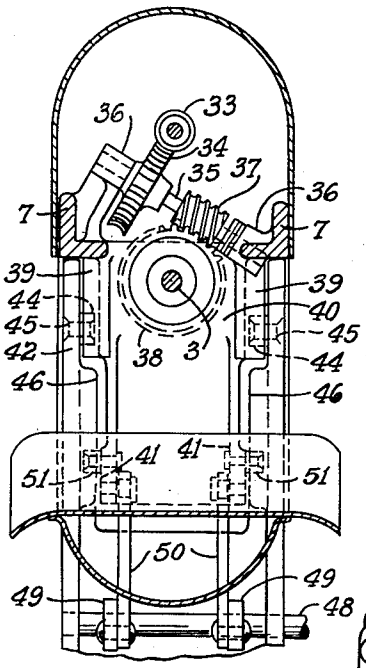


Fig. 4.

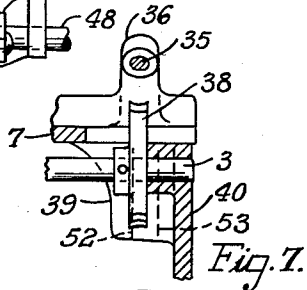


Fig. 7.

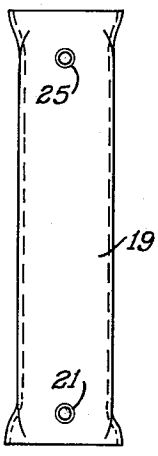


Fig. 5.

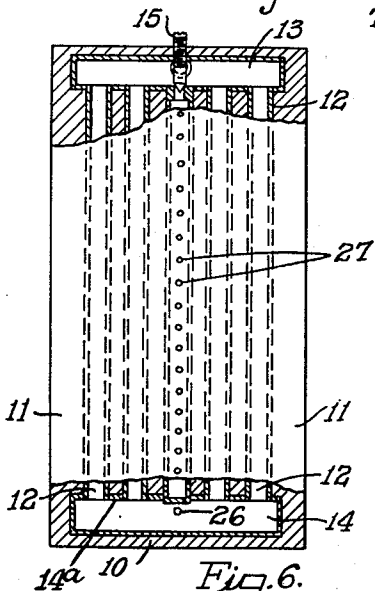


Fig. 6.

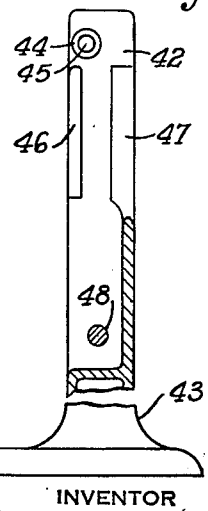


Fig. 8.

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2,035,959

UNITED STATES PATENT OFFICE

2,035,959

ELECTRIC PRESSER AND IRONER

Glenn B. Hamm, Dayton, Ohio

Application April 24, 1935, Serial No. 17,986

6 Claims. (Cl. 68—9)

This invention relates to new and useful improvements in electric pressers and ironers.

It is one of the principal objects of my invention to provide a portable electric presser and ironer which can readily be set up and attached to a source of electric current for pressing and ironing garments and other fabrics. Its compactness, efficiency and portability are qualities that commend themselves to a person who occasionally presses trousers and other articles of clothing at home or elsewhere. It is equally well adapted for ironing various fabric articles, and may be used to good advantage by a press shop in the pressing of suits while one waits.

It is one of the particular objects of my invention to discharge steam through a heated bed to dampen the fabrics being pressed or ironed. If the bed were not heated, the steam would condense and pass through the discharge orifices as water, nor would the bed itself be hot enough for an efficient pressing or ironing operation.

It is another object of my invention to provide lever means for raising the roll above the bed to a position from which it may be easily tipped back to permit the insertion of the fabrics to be pressed or ironed, between the roll and the bed.

Pressing and ironing with my device is an easy, quick and economical operation, and one which insures excellent results.

Other important and incidental objects will be brought out in the following specification and particularly set forth in the subjoined claims.

In the accompanying drawings illustrating one form of embodiment of my invention, Figure 1 is a side view of my pressing machine. Figure 2 is a longitudinal-sectional view taken through the machine. Figure 3 is a transverse, sectional view taken on the line 3—3 of Figure 2. Figure 4 is a transverse sectional view taken on the line 4—4 in Figure 2. Figure 5 is a detail view of the dryer tube. Figure 6 is a detailed view of the heated bed. Figure 7 is a detail view of the inner end of the roll bracket. And Figure 8 is a detail view of the support.

Referring now to the accompanying drawings for a detailed description of my invention, the numeral 1 designates a rotatable pressing roll having thereon a conventional fabric covering 2. The roll 1 is mounted upon a shaft 3 journalled in an outboard bearing 4, a center bearing 5 and an inner bearing 6. The bearings 4, 5 and 6 are cast integral with a bracket 7, having at its inner end a suitable motor mounting pad 8. At its outer end the bracket is formed with an inverted circular portion 9 above the roll 1. (See Figures 2, 3 and 4).

Supported below and in alinement with the axis of the roll 1 is a stationary bed 10. The central portion of the face of the bed 10 is formed to the contour of the roll 1, while its longitudinal edges 11, 11 are formed downwardly to facilitate entry of the material to be pressed. (See Figure 3).

As shown in Figures 2, 3 and 6, the bed 10 is formed with a series of longitudinally positioned tubes 12, whose open ends are received within an inlet header 13 at one end of the bed, and an outlet header 14 at the outer end thereof, whose inner wall 14a is apertured to receive the tube ends. This assembly of tubes 12 and headers 13 and 14 are then cast enblock to form the bed. As shown in Figure 6, the center tube 12 is slightly longer than the remainder of the tubes, having its outer end permanently closed within the header 14 and its inner end provided with a needle valve 15 by which steam is admitted to it from the header 13.

Positioned below the bed 10, and attached thereto, is a cylindrical boiler 16 of substantially the length of the roll and bed. This boiler is preferably formed from steel tubing having welded convex heads 17 and 18. As shown in Figure 2, the boiler is positioned with its axis horizontal, and has secured in the bottom thereof a dryer tube 19. This tube, as shown in Figures 2, 3 and 5, is elliptical, having open ends which are pressed together and welded to exclude water therefrom.

Communicating with the dryer tube 19, and attached to the outer end thereof, is a wet steam inlet tube 21. The upper open end 22 of this tube projects into a filler neck 23, welded to the outer head 18 of the boiler 16. When this filler neck 23 is closed by a suitable cap 24, steam will enter the dryer tube 19 through the inlet tube 21. (See Figures 2, 3 and 5).

Communicating with the dryer tube 19 at its inner end, is a dry steam outlet tube 25 whose upper end is secured to, and discharges into, the inlet header 13. When the dry steam enters the header 13, it flows through the tubes 12 except the center one thereof. The steam thus entering the tubes 12 will maintain the bed at a relatively high temperature. The condensation from the steam flowing through these tubes, will flow into the header 14, and, through a small orifice 26, will return to the boiler.

When a garment to be pressed is passed between the roll 1 and the bed 10, the valve 15 is opened to admit dry steam from the header 13 to

the center tube 12. This tube is provided with a plurality of small orifices or jets 27 extending through the center of the bed 10 and below the roll 1. The steam thus released through these jets in the heated bed will not be readily condensed thereby, but the moisture from the steam will sufficiently dampen the cloth to aid the pressing thereof.

Positioned beneath the boiler 16, and formed to the contour thereof, is an electric heating element 28 of conventional form, and having terminals 29 for connection with an electric circuit (not shown). Surrounding the heater element 28 and the boiler 16 is a heat-retaining insulation 30 such as asbestos and encased in a metal apron 31 that extends upwardly to the bed 10 and to which it is secured.

Rotation of the roll 1 is effected by a motor 32 secured to the pad 8. Mounted on the motor shaft is a worm 33 in mesh with a worm gear 34. The worm gear 34 is secured to a short shaft 35 journaled in bearings 36, 36 integral with the bracket 7. Also attached to the shaft 35 is another worm 37 that drives a worm gear 38 keyed to the shaft 3.

The means for raising the roll structure above the bed to permit the insertion of the garments to be pressed or ironed, will now be described. The bracket 7, at its inner end and adjacent the bearing 6, is formed downward to provide two oppositely disposed side flanges 39, 39 joined by a transverse web 40. This web projects downwardly below the bearing 6 and has formed on its outer face at its marginal edges flanges 41, 41. (See Figures 2, 3 and 7).

The bracket 7 is slidably received between the upper forked ends 42, 42 of a support 43. Secured to the inner face of each of the forked ends 42, 42 is a roller 44 freely mounted on a stud 45. Below the rollers 44, the forked ends have formed on their inner and oppositely disposed faces, parallel ribs 46 and 47. Projecting transversely through the forked ends 42, 42, and below the ribs 46 and 47, is a shaft 48 to which spaced lever arms 49, 49 are secured. To the outer ends of the arms 49—49, links 50—50 are pivotally connected. At their upper ends these links 50—50 are pivotally secured to the lower ends of the ribs 41, 41.

On the outer faces of the ribs 41, 41, I have provided rollers 51, 51 that are received between the ribs 46, 47. When so positioned between these ribs, the bracket 7 is permitted a vertical travel when the shaft 48 is rotated to move the links 50 vertically.

Formed on the opposite outer faces of the side flanges 39, 39 are short parallel ribs 52 and 53 between which each roller 44 passes when the bracket is lowered. (See Figures 2, 4, 7 and 8).

When the bracket 7 is raised by the rotation of the shaft 48, the ribs 52 and 53 on the opposite flanges 39—39 will be raised above the rollers 44. This will permit the bracket 7, roll 1 and associated mechanism mounted thereon to be rotated clockwise as viewed in Figures 1 and 2. When the bracket is thus rotated, it will revolve about the rollers 51—51 maintained between the ribs 46 and 47, thus permitting the roll structure to be easily tipped back a sufficient distance to allow the garment to be inserted between the roll and the bed. For the purpose of lowering the roll 1 to press the garment against the face of the bed 10, the shaft 48 is rotated counterclockwise as viewed in Figure 2. The ribs 39 and 40 will then engage the rollers 44, 44 to maintain the roll and bed in firm engagement with each other throughout their lengths during the pressing or ironing operation.

Having described my invention, I claim:

1. In a device of the type described, a bed, a pressing roll supported adjacent the bed to move the fabric over, and in contact with the latter, a liquid containing boiler attached to the under surface of said bed, said bed being formed with orifices for discharging steam against the articles upon it, means attached to the boiler for heating it, and means for conducting steam generated in said boiler to said bed.

2. In a device of the type described, a bed, a pressing roll supported above the bed to move a fabric article over, and in contact with, the latter, said bed being formed to the contour of said roll, a central steam tube in said bed, side tubes in said bed, a boiler attached to the under surface of the bed, a steam dryer tube in said boiler, a wet steam inlet tube in said boiler to conduct steam formed in the boiler to the dryer tube, one end of the central steam tube in the bed being closed, said central tube containing orifices that extend through the top portion of the bed to discharge steam against the article upon it, means for connecting the steam dryer tube with said central tube and said side tubes, the latter being open at both ends to permit a continuous flow of steam through them to heat the bed, and a valve for admitting steam from the dryer tube to the central tube for the pressing or ironing operation.

3. In a device of the type described, a bed, a pressing roll supported above the bed to move a fabric article over, and in contact with the latter, said bed being formed to the contour of said roll, a central steam tube in said bed, side tubes in said mandrel, an inlet header and an outlet header receiving the ends of said tubes, a boiler attached to the under surface of said bed, an elliptical steam dryer tube in said boiler, a wet steam inlet tube in said boiler for conducting steam formed therein to the dryer tube, a tube connected between the dryer tube and the inlet header to conduct dry steam thereto, and a valve for admitting steam from said inlet header to the central tube, the latter tube being closed at its other end and being formed with orifices that extend through the top of the bed to discharge steam against the article upon it, the side tubes being open at both ends to said headers to permit a continuous flow of steam therethrough to heat the bed.

4. In a device of the type described, a bed, a roll, means for supporting said roll above the bed, a motor carried by said supporting means for revolving said roll to move a fabric article over the bed, a vertically sliding bracket for raising and lowering said roll and motor support, a shaft, lever arms attached to said shaft, and links connected between said lever arms and bracket to raise said roll and motor support when the shaft is turned in a clockwise direction, and to lower it when the shaft is rotated in a counterclockwise direction.

5. In a device of the type described, a bed, a roll, means for supporting said roll above the bed, a motor carried by said supporting means for revolving said roll to move a fabric article over the bed, a vertically sliding bracket for raising and lowering said roll and motor support, a shaft, lever arms attached to said shaft, links connected between said lever arms and bracket, to raise said roll and motor support when the shaft is turned in a clockwise direction, and to

lower it when the shaft is rotated in a counter-clockwise direction, and means upon which said bracket may pivot at a predetermined point in its upward travel to permit the roll and motor support to be tipped rearwardly to allow an article to be placed upon the bed under the roll.

6. In a device of the type described, a bed, a pressing roll supported adjacent the bed to move the fabric over, and in contact with, the latter, a boiler attached to the under surface of the bed, said bed being formed with orifices for discharging steam against the articles upon it, an electric heating element beneath the boiler for heating the latter, a steam drying tube in the bottom of the boiler adjacent the electric heating element, conduit means within said boiler for conducting steam from the top thereof to the steam drying tube, and tubular means for conducting steam from the drying tube to the bed.

GLENN B. HAMM.