Jan. 4, 1944. G. R. BICKNELL ET AL 2,338,087

COLLAR PROTECTING HOOD AND SPRAY DAMPENER FOR PRESSES

Filed Feb. 7, 1941 3 Sheets-Sheet 1

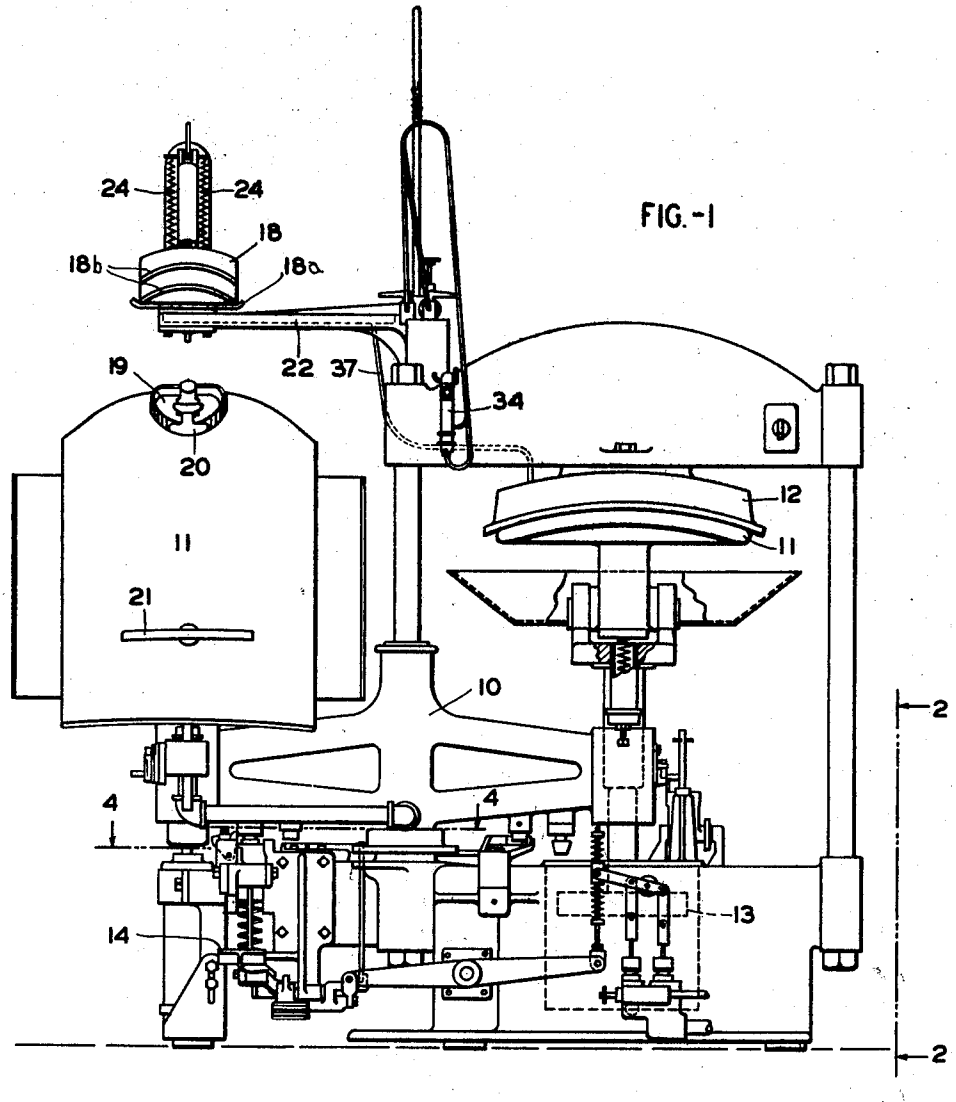


FIG.-1

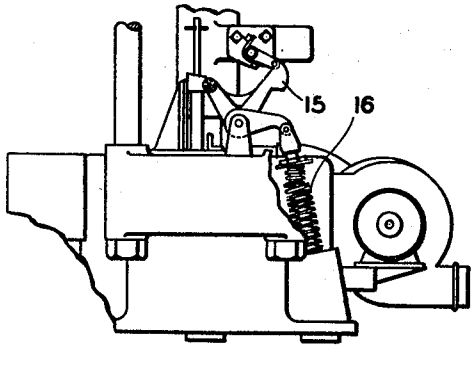


FIG.-2

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Filed Feb. 7, 1941 3 Sheets-Sheet 2

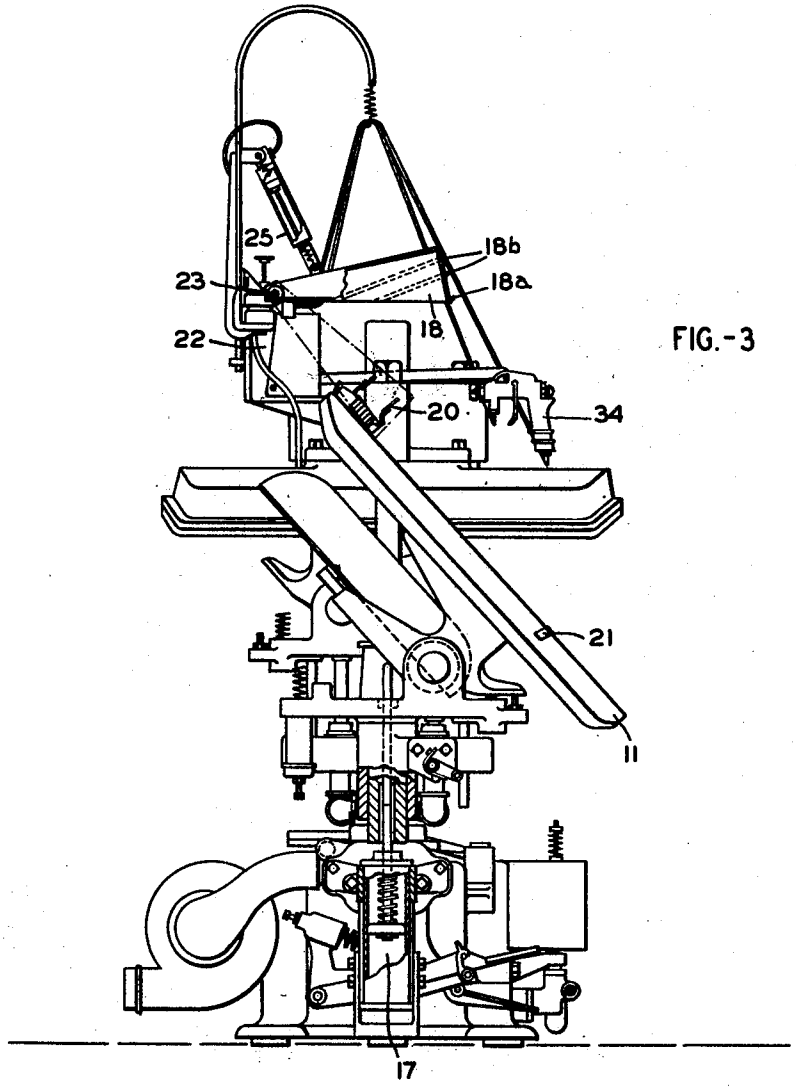


FIG.-3

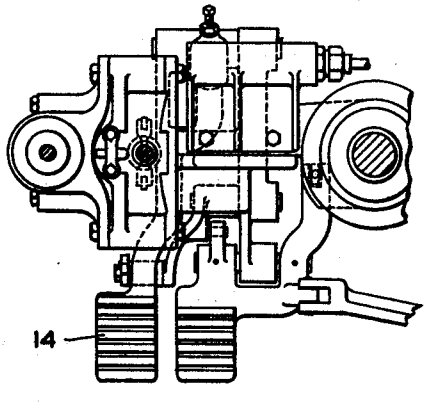


FIG.-4

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Filed Feb. 7, 1941 3 Sheets-Sheet 3

FIG.-5

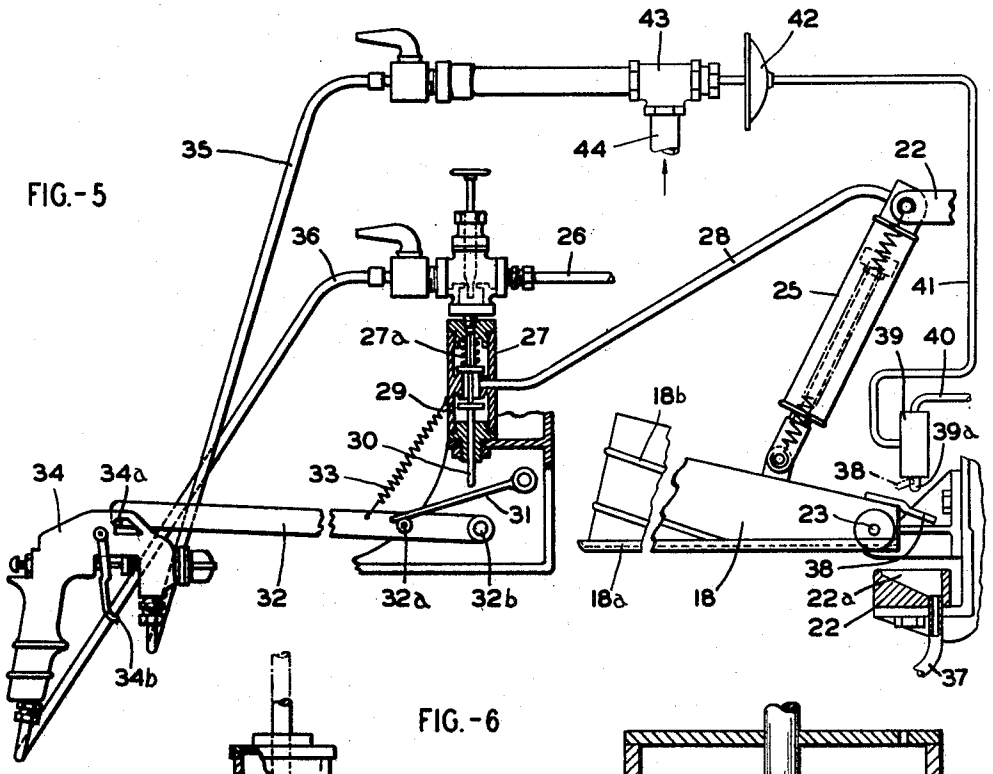


FIG.-6

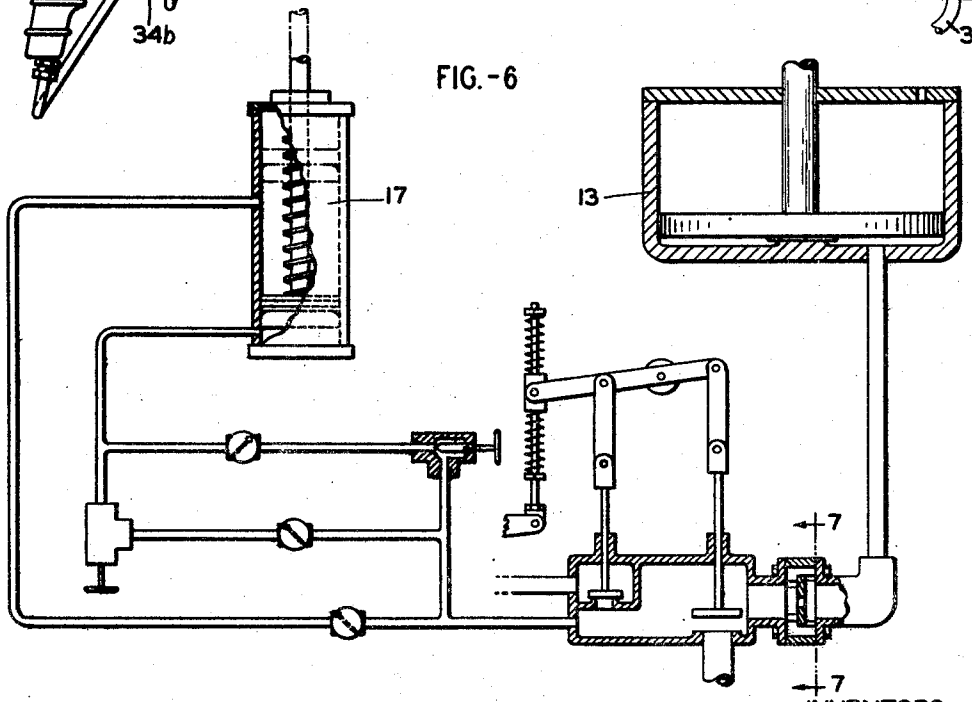


FIG.-7



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Patented Jan. 4, 1944 2,338,087

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2,338,087

COLLAR PROTECTING HOOD AND SPRAY DAMPENER FOR PRESSES

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Application February 7, 1941, Serial No. 377,924

4 Claims. (Cl. 38—3)

This invention relates to improvements in means for protecting the collar portion of a partially ironed shirt while another portion of the shirt is dampened for ironing.

Certain advantages are realized in the machine ironing of mens' shirts when the front or bosom portion thereof is ironed last. One such instance is fully disclosed in the copending application of George R. Bicknell, Serial No. 377,923, filed Feb. 7, 1941, for Method and apparatus for finishing a shirt.

An object of the present invention is to provide novel means for protecting the collar portion of a partially finished shirt while dampening the front portion of the shirt preparatory to ironing. The present application discloses a protecting hood mounted adjacent the board on which the shirt is dressed in position to be moved down over the collar portion while the shirt front is dampened preferably by the use of a spray gun. The invention includes the novel arrangement of the parts and also novel operating mechanism therefor as will appear in the accompanying description and drawings and the essential features thereof will be set forth in the claims.

In the drawings, Fig. 1 is a front elevation of a turret-type press equipped with our invention; Fig. 2 is a fragmental view looking in the direction of the arrows 2—2 of Fig. 1; Fig. 3 is a side elevation of the same press looking from the left side of Fig. 1; Fig. 4 is a fragmental sectional view taken on the line 4—4 of Fig. 1; Fig. 5 is a diagrammatic view of the control mechanism for the collar protecting hood and spray dampener shown in Figs. 1 and 3; Fig. 6 is a diagrammatic view of the control of the press of Figs. 1 and 3; while Fig. 7 is a detail sectional view taken on the line 7—7 of Fig. 6.

Our invention is applicable to any press utilized for ironing the front of a man's shirt but is here shown as adapted to a turret type of press such as is generally shown in Patent No. 1,997,219 granted April 9, 1935 to Oscar W. Johnson, to which reference may be had for the construction generally and more specific details will be found in the above mentioned copending application of George R. Bicknell.

Briefly stated, the press here disclosed comprises a rotatable turret frame 10 adapted to carry one of the press beds 11 out of engagement with the heated chest 12 to a dressing position near the operator while simultaneously moving the other bed beneath the heated chest 12 and then into ironing engagement therewith. A fluid motor 13 accomplishes all of this automatically in response to operator actuation of treadle 14, the turret turning operation being specifically performed by a turret kicking lever 15 actuated by spring 16 which is loaded at the proper time by motor 13. The tilting of the shirt board or buck 11 in the dressing position is accomplished by motor 17 automatically as the board swings around to the operator.

Whether or not the buck or board on which the shirt is draped is movable away from the operator into engagement with a heated ironing surface or remains stationary for the ironing operation is immaterial to the present invention. Our invention broadly includes any means for protecting the collar portion of a shirt as it is draped on a board to be ironed, whether or not that board is moved out of that position for the ironing operation. The essential point is that the collar protecting means should be adjacent the collar portion of the shirt as it is dressed on the board so as to be readily moved into and out of protecting position while the shirt front is dampened for ironing.

In the present instance the collar protecting hood 18 shown in Figs. 1 and 3, and fragmentally in Fig. 5, is preferably closed at the sides and top and open at the bottom and of sufficient dimensions to completely house and enclose the collar portion of the shirt when the edges of the hood engage the substantially flat portion of the board. The equipment here shown includes a neckband former 19 with a clamp 20 for holding the front portion of the collar or neckband clamped to the block with the front of the shirt draped along the board and the tail portions thereof held beneath a clamp 21.

The mounting for the hood 18 is here shown as comprising a fixed bracket 22 to which the hood is pivotally connected at 23 in such position that when the board is in the shirt dressing position shown in Figs. 1 and 3, the hood may be oscillated about the pivot 23 from the full line position of Fig. 3 to the dot-dash position thereof. The hood is normally biased to its uppermost position by a pair of springs 24.

While the hood might be moved into protecting position by hand, we prefer power operation so as to save the operator's time. In the present disclosure a fluid actuated motor 25 is mounted with one of its movable members fastened to the bracket 22 and the other movable member connected with the hood. The supply of pressure fluid to motor 25 is by way of supply

conduit 26, normally closed valve 27 and conduit 28. The valve 27 has a normally closed inlet and a normally open exhaust, there being the usual exhaust port 29. The valve stem 30 is engageable by a pivoted lever 31, the free end of which is actuated by the pin 32a on the spray gun supporting rack 32. This rack is pivotally mounted at 32b and is normally biased upwardly by spring 33 but is normally held down against a stop (not shown) by the weight of the spray gun 34 which rests on the supporting pin 34a. This spray gun is in position easily reached by the operator as she stands in the position to dress a shirt on the board 11 and preferably in the average case at her right hand. The spray gun may be supplied by flexible conduit 35 with water and by flexible conduit 36 with air.

The operation of the device is as follows: With one of the boards 11 in the dressing position and tilted as shown in Figs. 1 and 3, the operator arranges a shirt on the board with the neckband or collar draped about the block 19 and secured by the clamp 20. The front and tails of the shirt are draped downwardly on the board and secured beneath the clamp 21. The operator then removes the spray gun 34 from the pin 34a and immediately spring 33 raises finger 31 to engage stem 30 and to cause opening of the inlet valve 27 because spring 33 is stronger than the valve spring 27a. Air is then admitted to motor 25, causing downward movement of hood 18 to the dot-dash position of Fig. 3 where it completely encloses and protects the already finished collar or neckband of the shirt. The hood comes down so quickly that it is in position by the time the operator has manipulated the gun to proper position and depressed the gun trigger or actuating lever 34b. She quickly sprays the front portions of the shirt, taking no care about the collar portions because of the protecting hood. She then places the spray gun back on the pin 34a where its weight overcomes spring 33, returning the parts to the position of Fig. 5 whereupon motor 25 is evacuated through conduit 28 and port 29, permitting springs 24 to again raise the hood to the full line position of Fig. 3. Meanwhile the operator has stepped on treadle 14 and the press automatically reverses the position of the boards 11, carrying the shirt just dressed into horizontal position and then into pressure engagement with the heated chest 12 and bringing the other board to dressing position and tilting it where the already ironed shirt is removed and the above operations are repeated.

Preferably means is provided for draining away moisture from the outer surface of the hood 18. As here shown, the hood is provided with a lip or through 18a extending outwardly around its lower peripheral edge. Beads 18b are formed on the outer surface of the side walls of the hood leading downwardly to the lip 18a. All moisture is thus collected in the lip and when the hood is raised to the position shown in Fig. 5, this moisture will drop into a trough 22a which is formed in the upper surface of the arm of bracket 22. The moisture is drained away from this arm by conduit 37 to the heated chest 12 where it is evaporated.

Preferably means is provided for preventing the actual delivery of liquid from the spray gun except when the collar protecting hood is fully lowered to protecting position. The means here shown comprises a tongue 38 provided at the rear end of hood 18 and adapted when the hood reaches fully protecting position (corresponding to the dot-dash position of tongue 38 Fig. 5) the stem 39a of a normally closed air valve 39 is open so as to admit air from conduit 40 to conduit 41 and thence to diaphragm 42 so as to cause opening of the normally closed water control valve 43. This will admit water from the source 44 to the flexible hose 35 and to the spray gun 34 only when the hood 18 is in lowered collar protecting position. It has been thought unnecessary to show the parts of valve 39 as it is substantially identical with valve 27.

What we claim is:

1. In combination, a pressing surface for supporting a shirt front in position for ironing and with the shirt collar portion at one end of said surface, and a hood impervious to moisture supported near said one end for controlled movement to a position enclosing said collar portion only when it is desired to dampen said shirt front, said hood in said position completely protecting said collar portion from a spray directed toward the shirt front.

2. In combination, a pressing surface for supporting a shirt front in position for ironing and with the shirt collar portion at one end of said surface, a hood movable into or out of a position enclosing said collar portion when it is desired to dampen said shirt front, means for dampening said shirt, and means operated thereby for controlling hood movement.

3. In combination, a pressing surface for supporting a shirt front in position for ironing and with the shirt collar portion at one end of said surface, a hood adapted to be moved to a position enclosing said collar portion when it is desired to dampen said shirt front, a spray gun for dampening said shirt, a support for said spray gun, power means for moving said hood to collar enclosing position, and means for energizing said power means responsive to movement of said gun from said support.

4. In combination with a pressing surface for supporting a shirt front in position for ironing and with the shirt collar portion at one end of said surface, protecting means adapted to be moved from an inoperative position to a position protecting said collar portion from moisture when it is desired to dampen said shirt front, a spray gun having a liquid supply for dampening said shirt front, and means operated by said protecting means for controlling the flow of liquid from the supply thereof to said spray gun.

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