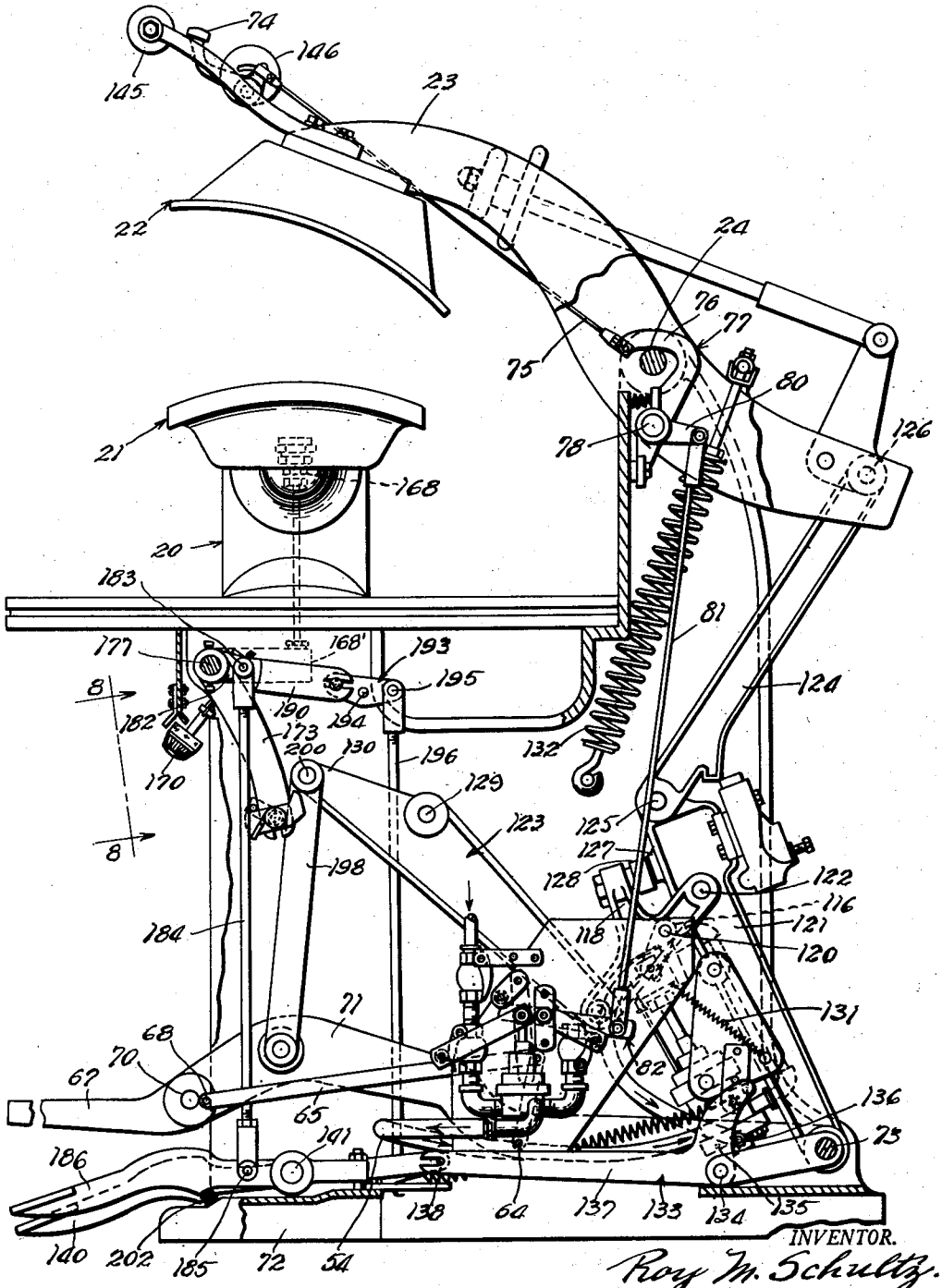
July 7, 1953 R. M. SCHULTZ 2,644,254

GARMENT PRESSING MACHINE

Filed Feb. 21, 1949 8 Sheets-Sheet 1



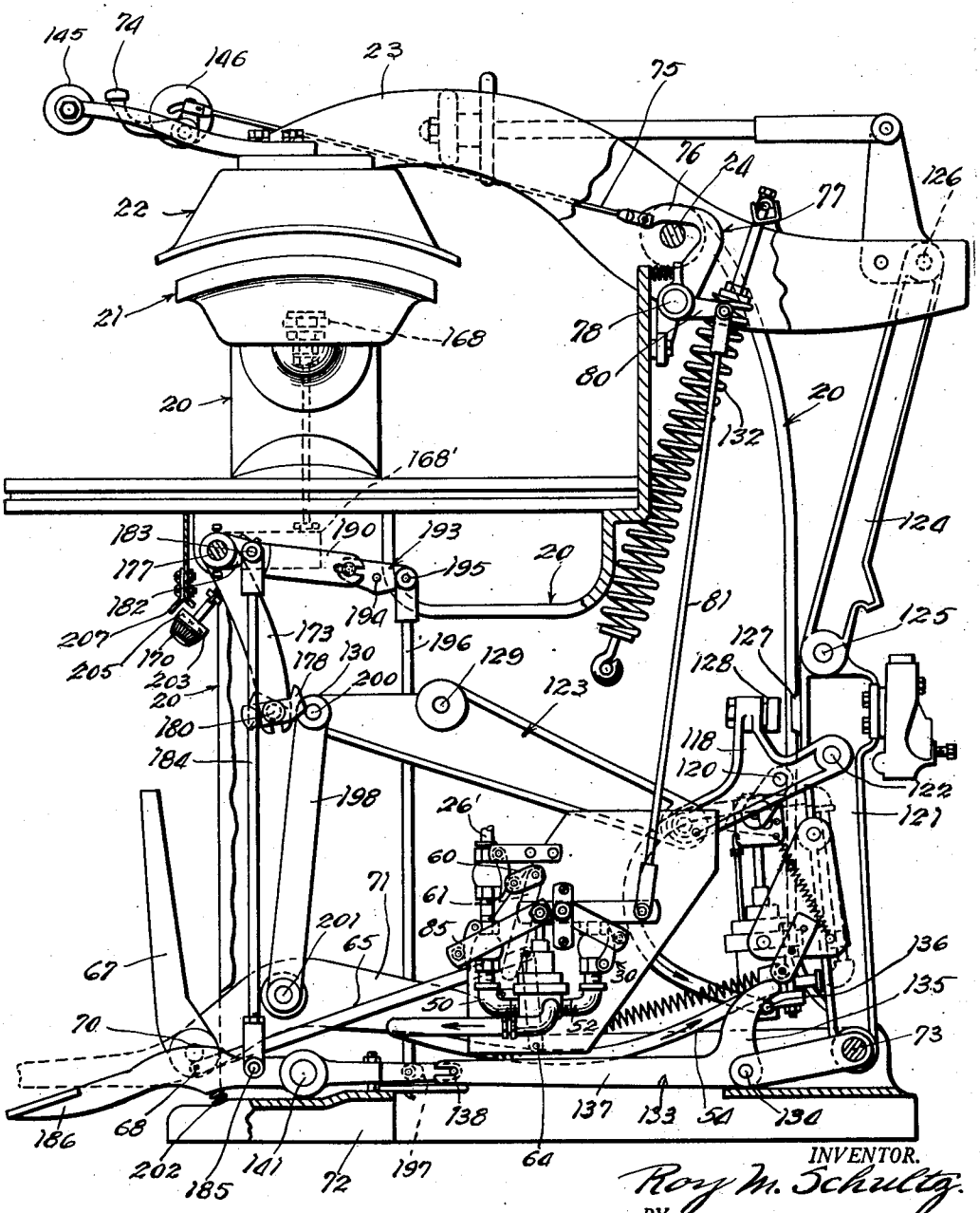
INVENTOR.
Roy M. Schultz.
BY.
Thiss, Olson & Mecklenburg.
Attys.

Fig. 1.

July 7, 1953 R. M. SCHULTZ 2,644,254

GARMENT PRESSING MACHINE

Filed Feb. 21, 1949 8 Sheets-Sheet 2



INVENTOR.
Roy M. Schultz.
BY.
Fig. 2. Thies, Olson & Mecklenburger.
Attys.

July 7, 1953 R. M. SCHULTZ 2,644,254

GARMENT PRESSING MACHINE

Filed Feb. 21, 1949 8 Sheets-Sheet 3

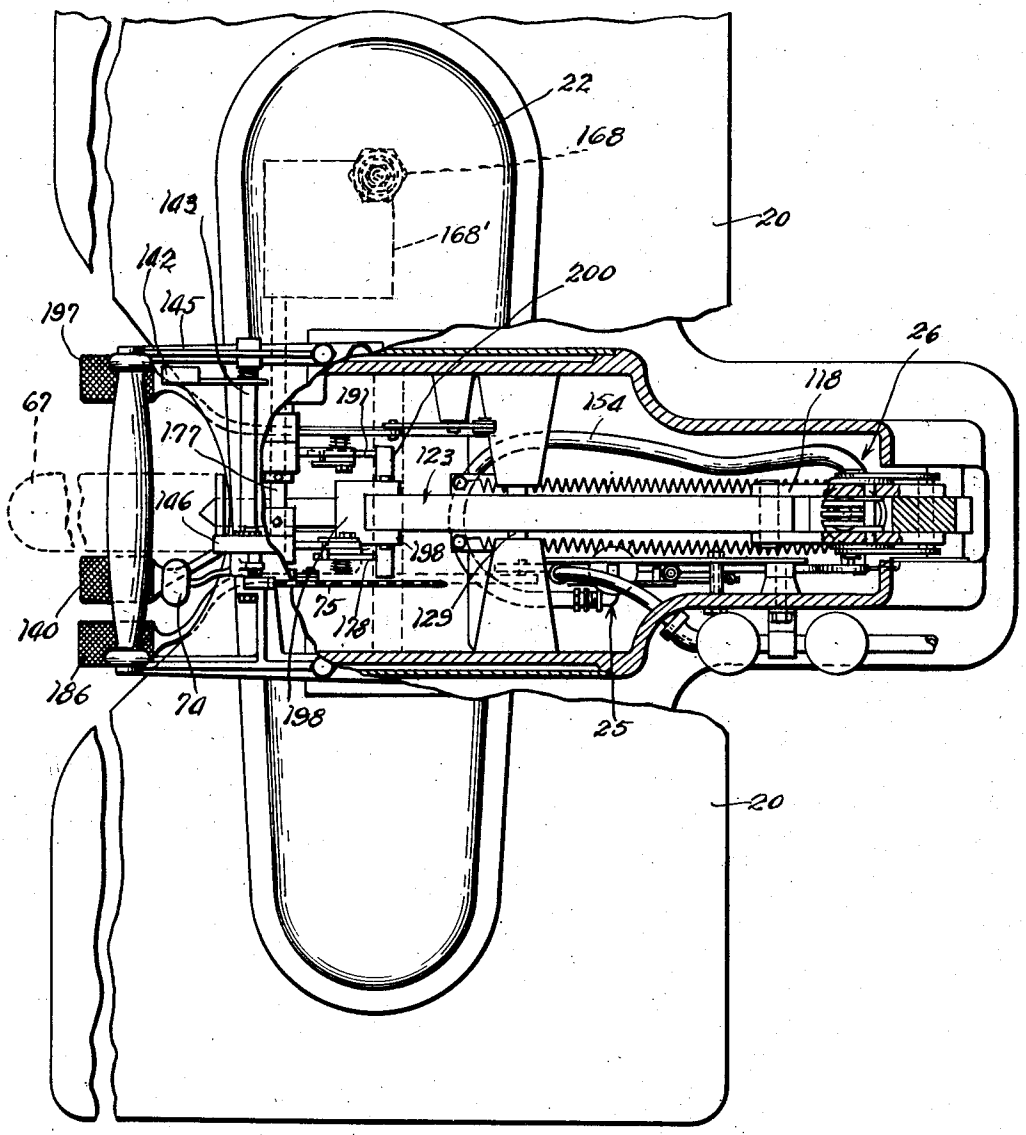


Fig. 3.

INVENTOR.
Roy M. Schultz.
BY
Thiess, Olson & Mecklenburger.
Attys.

July 7, 1953 R. M. SCHULTZ 2,644,254

GARMENT PRESSING MACHINE

Filed Feb. 21, 1949 8 Sheets-Sheet 4

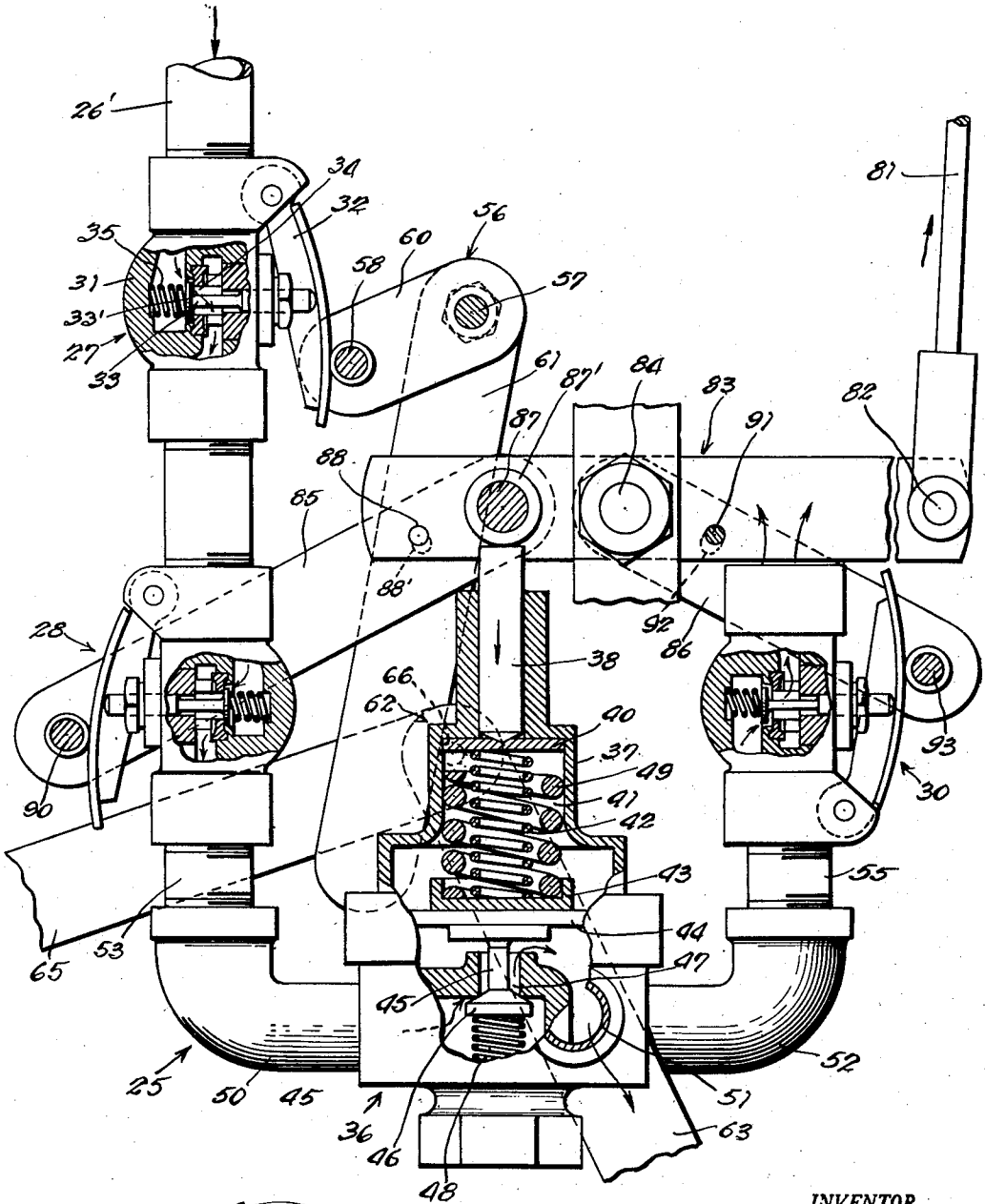


Fig. 4.

INVENTOR.
Roy M. Schultz.
BY
Thiess, Olson & Mecklenburger.
Attys

July 7, 1953 R. M. SCHULTZ 2,644,254

GARMENT PRESSING MACHINE

Filed Feb. 21, 1949 8 Sheets-Sheet 5

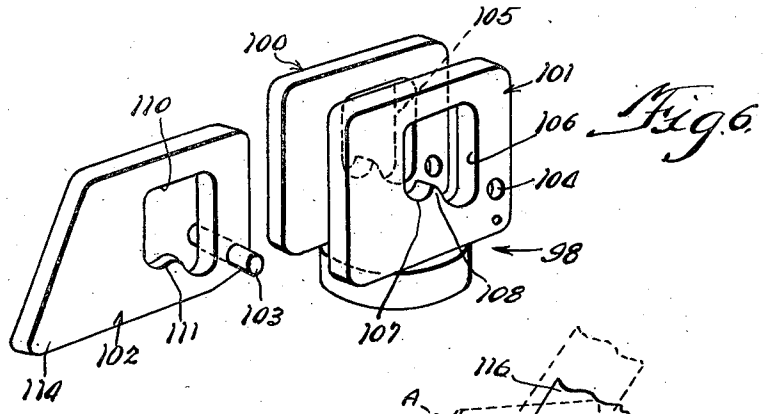


Fig. 6.

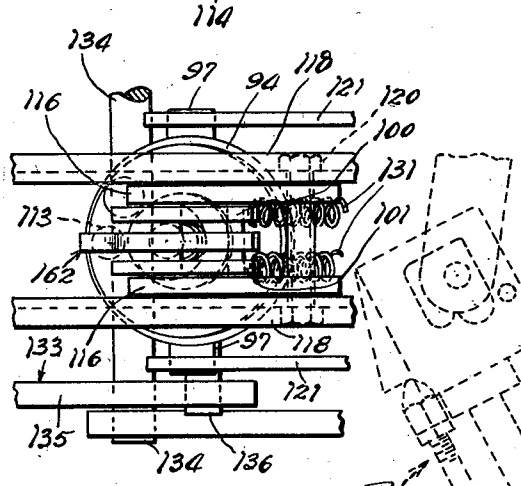


Fig. 7.

Fig. 5.

INVENTOR.
Roy M. Schultz
BY.
Thiss, Olson & Mecklenburg
Attys.

July 7, 1953 R. M. SCHULTZ 2,644,254

GARMENT PRESSING MACHINE

Filed Feb. 21, 1949 8 Sheets-Sheet 6

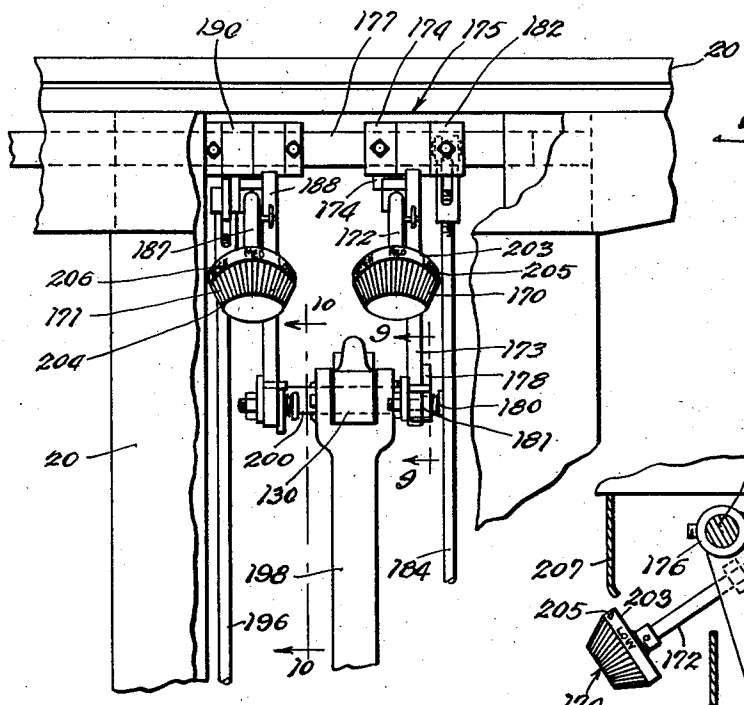


Fig. 8.

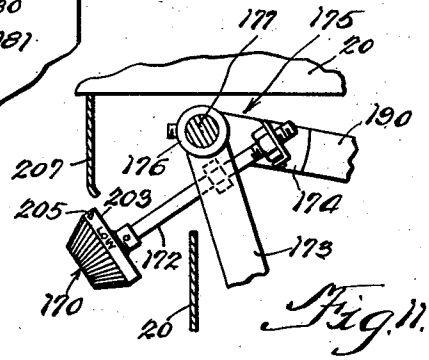


Fig. 11.

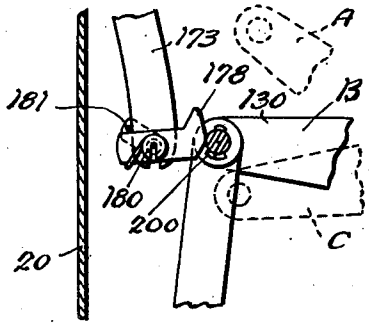


Fig. 9

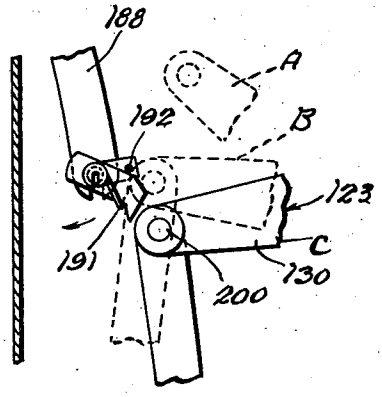


Fig. 10.

INVENTOR.
Roy M. Schultz.
BY.
Thiess, Olson & Mecklenburger.
Attys.

July 7, 1953 R. M. SCHULTZ 2,644,254

GARMENT PRESSING MACHINE

Filed Feb. 21, 1949 8 Sheets-Sheet 7

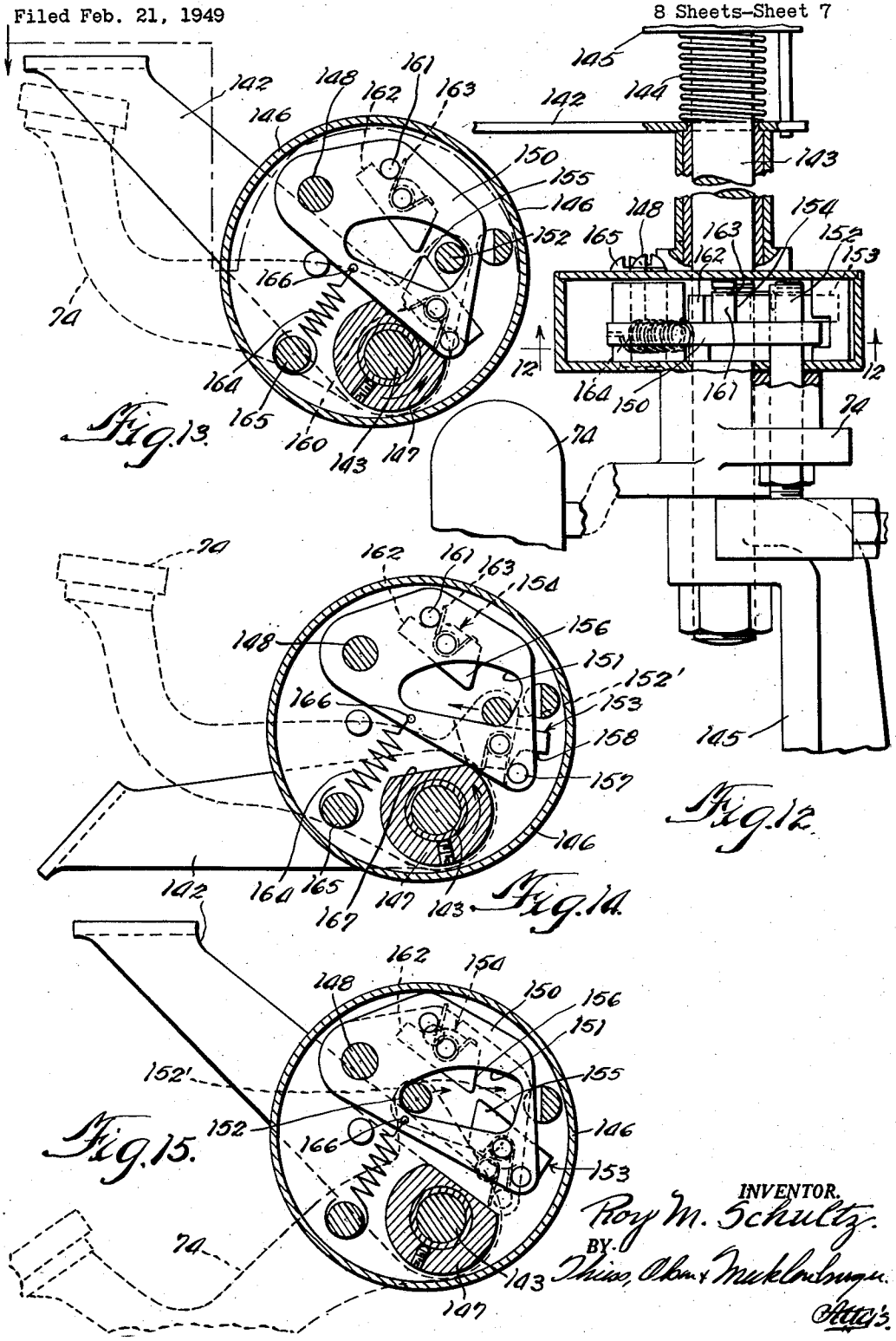


Fig. 13.

Fig. 12.

Fig. 14.

Fig. 15.

INVENTOR.
Roy M. Schultz.
BY
Thiess, Olson & Mecklenburger
Attys.

July 7, 1953 R. M. SCHULTZ 2,644,254

GARMENT PRESSING MACHINE

Filed Feb. 21, 1949 8 Sheets-Sheet 8

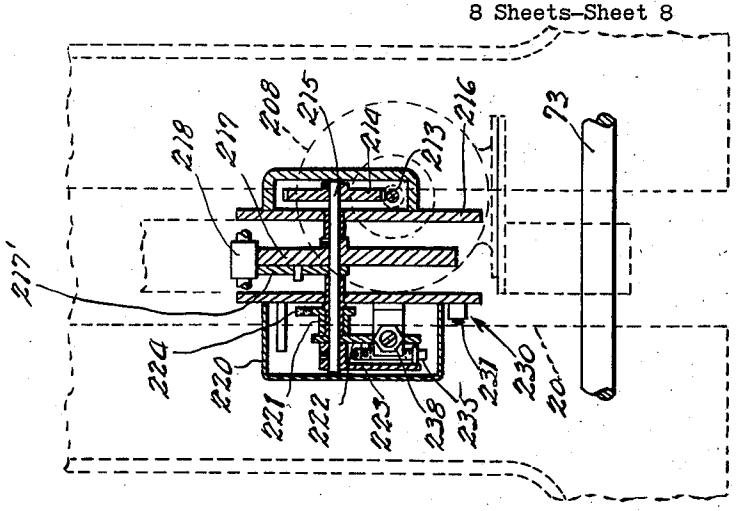


Fig. 17.

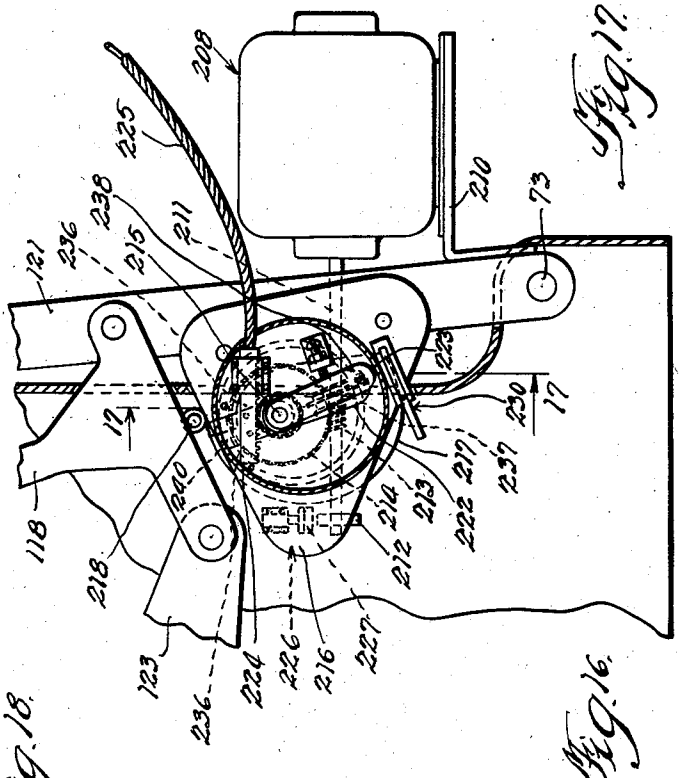


Fig. 16.

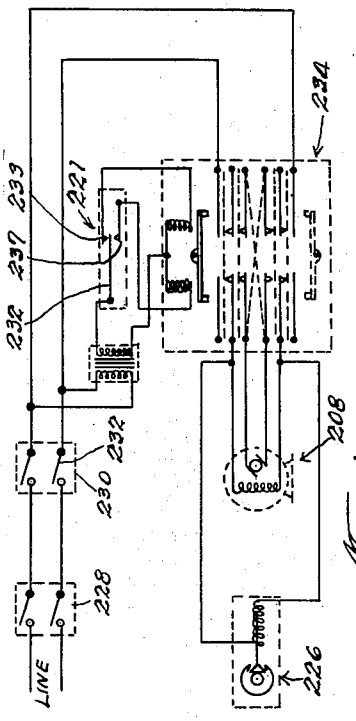


Fig. 18.

INVENTOR.
Roy M. Schultz
BY.
Thiess, Olson & Merkel Bruner
Attys.

Patented July 7, 1953

2,644,254

UNITED STATES PATENT OFFICE

2,644,254

GARMENT PRESSING MACHINE

Roy M. Schultz, Chicago, Ill., assignor to
David A. Freeman, Chicago, Ill.

Application February 21, 1949, Serial No. 77,566

25 Claims. (Cl. 38—15)

1

This invention relates to garment-pressing machines and, more particularly, to improvements in a power-operated machine adapted primarily for commercial use.

Because of the undesirable working conditions which are usually associated with this type of work, it is imperative that a machine be employed which will minimize the fatigue and expedite the work for the operator. To fulfill these requirements, various types of power-operated pressers have heretofore been proposed. However, while these machines reduced the fatigue of the operator and increased the work output, it was also found that there resulted a noticeable decrease in the quality of the finished work. The principal cause for this decrease in quality was that the closing pressure of the pressing elements was non-adjustable and, regardless of the texture and quality of the fabric, all garments were pressed alike causing the finished appearance of certain type of garments to be impaired.

When pressing a garment, it is necessary to steam it so as to soften the fabric fibers prior to the closing of the head on the buck. Also subsequent to the opening of the pressing elements, it is desirable to vacuum or partially dry the garment. Heretofore, this operation was performed by the operator manipulating various hand and foot levers, and frequently resulted in a waste of steam because the pressing elements were widely spaced apart and the steam was not confined to a limited space above the garment after having passed therethrough but was allowed to escape immediately into the atmosphere, and thereby not as readily steam the exposed surface of the garment. Also when drying the garment, the pressing elements were generally widely separated so that the heat from the head was not beneficial in preheating the dry air drawn through the garment and thereby increase its moisture-absorbing quality. As a result, to effectively steam and dry the garment, the pressing operation was delayed as well as the cost of operation increased.

Thus it is one of the objects of this invention to provide a power-actuated pressing machine having means whereby the operator may readily vary, by his finger tips, the closing pressure of the pressing elements to any amount desired within the limits of the machine.

It is a further object of this invention to provide a power-actuated pressing machine whereby the garment to be pressed may, if desired, be automatically steamed prior to the closing of the pressing elements when the elements are spaced

2

relatively close to one another and may be automatically vacuumed subsequent to the pressing of said garment when said pressing elements are likewise spaced relatively close to one another.

It is a further object of this invention to reduce the amount of steam required to soften the garment prior to its being pressed and reduce the amount of time required to dry the garment subsequent to its being pressed.

It is still a further object of this invention to provide attachments adapted to be mounted on any conventional type pressing machine which wil enable said machine to be power-operated and enable the operator to readily vary the closing pressure of the pressing elements, and automatically steam the garment prior to the pressing thereof and automatically vacuum the garment subsequent to the pressing thereof.

It is still a further object of this invention to provide a pressing machine which will expeditiously and efficiently perform the pressing operation, without impairing the quality of the work, as well as reduce the fatigue of the operator.

Further and additional objects will appear from the description, accompanying drawings, and appended claims.

In accordance with one embodiment of this invention, a pressing machine is provided having a pair of cooperating pressing elements mounted on a suitable frame whereby one element is adapted to be moved manually to a preliminary closed position, which is a predetermined distance from said other element, and temporarily held thereat. While the pressing elements are held in the preliminary closed position, the garment is automatically steamed. Upon simultaneous manipulation of control and safety levers mounted on the movable pressing element, the movable element is power-actuated into pressing engagement with the stationary element. The pressure of the closing engagement is varied by the operator through the control lever. Subsequent to the pressing engagement, the control and safety levers are released and the elements assume a preliminary open position and are temporarily held thereat. While the pressing elements are so positioned, the garment is automatically vacuumed or dried by dry air being drawn through the pressed garment. Upon pushing the movable pressing element by the operator or by manipulation of a foot-operated release lever, the movable pressing element may be raised to a fully-opened position to allow the finished garment to be removed from the machine.

For a more complete understanding of this invention, reference should now be had to the drawings wherein

Fig. 1 is a side-elevational view of the pressing machine with the movable pressing element in the fully-opened position.

Fig. 2 is a side-elevational view of the pressing machine with the movable element in the preliminary-closed (or preliminary-opened) position.

Fig. 3 is a fragmentary, top plan view of the pressing machine shown in Fig. 2 with a portion of the Y piece or arm for the movable pressing element removed to show the arrangement of the various inter-related parts.

Fig. 4 is a fragmentary, side-elevational view of the valve structure and showing, partly in section, the interlock, power intake, pressure regulating, and exhaust valves which comprise said structure and are actuated by the operator, through the control lever, for moving one of the pressing elements into and out of pressing engagement with the other pressing element.

Fig. 5 is a fragmentary, side-elevational view of the rockably-mounted cylinder assembly, shown partly in section, and exposing the piston thereof which, upon upward movement, causes the pressing elements to be actuated into pressing engagement.

Fig. 6 is a perspective, partly exploded, view of the latch cam mounted on the exposed or free end of the piston shown in Fig. 5.

Fig. 7 is a fragmentary, top plan view of the cylinder assembly shown in Fig. 5.

Fig. 8 is a fragmentary, front view of the automatic steam and vacuum controls taken along line 8—8 of Fig. 1.

Fig. 9 is a fragmentary, sectional view of the steam trip mechanism, taken along line 9—9 of Fig. 8, shown when the pressing elements are in the preliminary-closed position. The changed positions of the link pin are shown in dotted lines when the pressing elements are fully opened and closed.

Fig. 10 is a fragmentary view, taken along line 10—10 of Fig. 8, of the vacuum trip mechanism shown while the pressing elements are fully closed. The positions of the link pin when the pressing elements are preliminary-opened and fully-opened are shown in dotted lines.

Fig. 11 is a fragmentary, side-elevational view of the automatic steaming controls.

Fig. 12 is a fragmentary, top plan view of the control and safety levers shown partly in section.

Fig. 13 is a sectional, side-elevational view of the control and safety levers taken along line 12—12 of Fig. 12, in their normal positions; the control lever being shown in dotted lines.

Fig. 14 is like Fig. 13 showing the safety lever depressed and the control lever ready to be actuated by the operator to close the pressing elements.

Fig. 15 is like Fig. 13 showing the safety lever released and the control lever in the depressed position prior to the opening of the pressing elements.

Fig. 16 is a fragmentary, side-elevational view, partly in section, of a modified form of power means for actuating the pressing elements, showing an electric motor and cam arrangement which replaces the valve structure and the rockably mounted cylinder assembly shown in Figs. 4 and 5, respectively.

Fig. 17 is a fragmentary, sectional view of the electric motor and cam arrangement taken along lines 17—17 of Fig. 16.

Fig. 18 is a circuit diagram for the electrically-operated power means shown in Fig. 16.

Referring now to the drawings and, more particularly, to Figs. 1 and 2, a garment-pressing machine is shown comprising the usual frame 20 upon which is secured a buck or stationary pressing element 21. Cooperating with buck 21 is a head or movable pressing element 22 secured to a Y piece or arm 23 which, in turn, is pivotally connected to the frame 20 at point 24. Arm 23, in this instance, is actuated by means of a pneumatically-operated mechanism to cause the head 22 to move into pressing engagement with the buck 21.

The pneumatically-operated mechanism comprises a substantially U-shaped valve structure 25, shown in Fig. 4, and a rockably mounted cylinder assembly 26 shown in Fig. 5. The valve structure 25 is connected to a source of pneumatic power (not shown) at point 26'. Interlock valve 27 mounted on the structure acts as a cut-off valve for the mechanism and, when it is closed, the entire pneumatically-operated mechanism is inoperative. Interlock valve 27, intake valve 28, and exhaust valve 30 which make up a substantial part of the valve structure, are all of like construction comprising a housing 31, a hinged lever 32 mounted on said housing, and a valve stem 33 having a mushroom or enlarged head 33', adapted to seat in a suitable opening 34 by means of a coil spring 35, as seen in Fig. 4. Upon a force being applied to the hinged lever 32, the enlarged head of the valve stem 33 is unseated.

The pressure regulating valve 36 which is mounted on the base of the U-shaped structure comprises a housing 37, a plunger pin 38 slidably mounted within said housing and having the inner end thereof engaging a plate 40 movable within a suitable opening 41 in said housing. Plate 40 is held in place against pin 38 by means of a coil spring 42 which rests on a second plate 43. Plate 43 is secured to one side of a diaphragm 44 which extends transversely across said opening, that is, perpendicular with respect to plunger pin 38. To the underside of diaphragm 44 is secured the valve stem 45 which has an enlarged head 46 adapted to seat in a suitable opening 47. The valve head 46 is normally held, in a closed position, by spring 48. A buffer spring 49 encloses the coil spring 42 which separates plates 40 and 43.

At the base of the valve housing 37 is provided three ports 50, 51, and 52. Port 50 is connected by pipe section 53 to the outlet side of intake valve 28, which is positioned intermediate the interlock valve and regulating valve. Ports 51 and 52 are positioned on the outlet side of valve stem 45. Port 51 is connected to the rockably mounted cylinder assembly 26 and port 52 to the exhaust valve 30, by means of pipe or hose sections 54 and 55, respectively. Pipe or hose section 54 is adapted to flex slightly in order to accommodate the rocking motion of cylinder assembly 26. The amount of pneumatic pressure transmitted to cylinder assembly 26 is proportional to the amount of downward force applied to the coil spring 42 and diaphragm 44 by manipulation of control lever 74 by the operator, through a series of levers and linkages to be hereinafter described.

Interlock valve 27, as seen in Fig. 4, is actuated by means of a bell crank lever 56 which is pivot-

ally connected to the frame at point 57. A roller 58 mounted on the shorter arm 60 of lever 56 engages the hinged lever 32 of valve 27 and causes the valve to be opened upon a clockwise motion of bell crank lever 56. The longer arm 61 of lever 56 is actuated by means of a toggle joint lever arrangement 62. The lever arrangement comprises a short link 63, which is pivotally connected to the frame at its lower end at point 64 (see Figs. 1 and 2), and is connected at the other end to one end of the longer link 65 by pin 66.

Pin 66 which connects link 63 and link 65 engages the lower end of arm 61 of bell crank lever 56. The other end of the longer link 65 is pivotally connected to power pedal 67 (see Fig. 1 or 2), at point 68 which is offset with respect to axis of rotation 70 of said pedal so that, upon raising pedal 67 to the position shown in Fig. 2, the bell crank lever 56 is caused to rotate clockwise by pin 66 engaging arm 61 (see Fig. 2).

When power pedal 67 is in the position shown in Fig. 1, that is, substantially horizontal, the pneumatically-operated mechanism is rendered inoperative and the pressing elements 21 and 22 must be entirely operated manually by the operator. This enables the machine to be operated in case of a breakdown of the power mechanism. Power pedal 67 is pivotally connected at point 70 to the main foot lever 71 which extends rearwardly along the base 72 of the frame and is pivotally connected thereto at point 73, which is at the rear of the machine (see Figs. 1 and 2).

Intake valve 28, pressure regulating valve 36, and exhaust valve 30 are all actuated by means of a finger control lever 74, pivotally mounted on the head or movable pressing element 22. The movement of the control lever 74 and the Y-piece 23, to which the head 22 is connected, is transmitted to the valves by means of a linkage arrangement to be hereinafter described.

The control lever 74 is connected to a telescoping rod 75 which extends rearwardly from the head 22 and is pivotally connected to one leg 76 of a bell crank lever 77 which is rotatably mounted on the frame at point 78. To the other leg 80 of the bell crank lever 77 is pivotally connected a control pull rod 81, which extends downwardly and is pivotally connected at 82 to one end of a rockably mounted lever 83. Lever 83 is rockably mounted on the frame 20 at point 84. Angularly extending from lever 83 are two arms 85 and 86; the former actuating intake valve 28 and the latter actuating exhaust valve 30. Mounted on lever 83 and at a point on the opposite side of fulcrum point 84 from the pivotal connection of pull rod 81 is a stud 87 on which is mounted roller 87'. The roller 87' is adapted to contact plunger pin 38 of pressure valve 36. From stud 87 extends arm 95 which is adapted to be adjusted to various angular positions with respect to lever 83 by means of lock bolt 88 extending therethrough into a slot 88' formed in lever 95. On the outer end of arm 85 is mounted a roller 90 which engages the hinged lever of valve 28. Arm 86 is secured to lever 83 at fulcrum point 84 and is held in an angular position with respect to said lever by means of lock bolt 91. A slot 92 is likewise formed in lever 83 for lock bolt 91 to allow for slight adjustment of arm 86. A roller 93 is mounted on the outer end of arm 86 which engages the hinged lever of exhaust valve 30.

Upon depressing control lever 74, the pull rod 81 is caused to move upwardly imparting a counter-clockwise motion to lever 83, thereby causing valves 28 and 36 to be opened and valve 30 to remain closed. Upon release of the control lever 74, the head 22 assumes the position shown in Fig. 2 and the lever 83 moves clockwise closing valves 28 and 36 and opening valve 30 which allows the air in the rockably-mounted cylinder 26 to be released.

The rockably-mounted cylinder assembly shown in Fig. 5 is operatively connected to port 51 of valve structure 25 by means of a flexible connecting tube or pipe section 54 secured to the base of the cylinder housing 94. Slidably mounted within housing 94 is a piston 95 having the rod 96 thereof projecting outwardly therefrom. The cylinder housing 94 is journaled on the frame at point 97. Mounted to the exposed end of piston rod 96 is latch cam 98.

Cam 98, as seen in Fig. 6, comprises a pair of parallel flange pieces 100 and 101, which are arranged in a spaced face-to-face relationship. Disposed between the flange pieces is a latch plate 102 which is hingedly connected to said flange pieces by means of a pin 103 extending through suitable openings 104 provided in the flanges 100 and 101 and plate 102. Formed in the flange pieces are like slots 105 and 106. Each slot is provided with a ledge portion 107 having a lip 108 formed at the edge thereof. Latch plate 102 has a slot 110 of substantially similar design formed therein. The ledge portion 111, however, is not provided with a lip as in slots 105 and 106.

Mounted on and extending upwardly from the cylinder housing 94 and substantially parallel to the piston rod 96 is a post 112, to the upper end of which is threaded a latch-adjusting nut 113. The nut abuts against one corner 114 of the plate 102 and varies the relative position thereof with respect to the flange pieces 100 and 101. The effect of changing the relative position of plate 102 is to vary the holding effect of the lip 108, to be hereinafter discussed.

Extending through slots 105, 106, and 110 is a pin 115 which is secured at either end to arms 116 which, in turn, are rigidly secured to push link 118 at point 120. Push link 118 is pivotally secured at one end to the back lever 121 at point 122 and, at the other end, to the front toggle member 123. Back lever 121 is pivotally connected to the base 72 of the frame 20 at point 73 and, at the other end, to back lever link 124 at point 125. Back lever link 124 is joined at its other end 126 to Y arm 23. Back lever 121 and back lever link 124 cooperate with each other in a toggle joint action, so that when the lever 121 and lever link 124 are substantially in a straight line, the pressing elements 21 and 22 are closed. Push link 118 is adapted to swing about point 122 and push against a bumper cup 127 mounted on back lever 121. A cooperating bumper cap 128 is provided on push link 118 which may be adjusted to more readily engage bumper cup 127. Front toggle member 123 is rockably connected to the frame at point 129. The other end 130 of member 123 is adapted to actuate the automatic steam and vacuum mechanism, which will be described more fully later.

When pin 115 is positioned on the ledge 107, as shown in Fig. 5, the pressing elements 21 and 22 are held in the preliminary closed or latched position, approximately ¾" from each other, as shown in Fig. 2, and the head 22 cannot be moved by pneumatic pressure into pressing engagement with the buck 21 until the control lever 74 is actuated. Upon depressing control lever 74, the piston 95 is caused to move upwardly in the cylin-

der housing and the latch cam 96 and pin 115 will assume the position A, shown in Fig. 5. The pin 115 is caused to remain on ledge 107 by the lip 108 and a spring 131 which tends to pull the cylinder assembly 26 in a clockwise motion. Upon release of the control lever 74, the head 22 will return to a preliminary open or latched position, which is the same as the preliminary-closed position shown in Fig. 2, by means of the counterbalance spring 132 secured to Y arm 23. To release the head 22 from this latched preliminary open position to the fully-opened position, shown in Fig. 1, the cylinder assembly 26 is caused to rotate in a counter-clockwise direction by means of an L-shaped lever 133 which is pivotally connected to the frame at point 134. The short arm 135 of lever 133 is slightly curved and engages a roller 136 which is mounted on the cylinder housing 94 at a point below the axis of rotation 97 of said housing. The other, or longer, arm 137 of lever 133 terminates in a toggle joint arrangement 138 with foot release pedal 140 which is rockably mounted on the base 72 of frame 20 at point 141. By depressing pedal 140, the L-shaped lever 133 is caused to rotate clockwise about point 134 and forces stud 136 to move counter-clockwise about point 97. Upon counterclockwise movement of the cylinder assembly 26, the pin 115 is unseated from ledge 107 and the head may be moved with the aid of balance spring 132 to the fully-opened position. The relative position of the cylinder assembly with respect to the frame when the head 22 is fully-opened is shown in position B of Fig. 5.

By holding the release pedal 140 down, the head may be moved from the closed position to the fully-opened position without becoming latched. Also by turning the latch adjusting nut 113 on post 112, the lip 108 of ledge 107 may be reduced to such an extent that the pin 115 will not tend to remain on ledge 107 but will slip off whereby the head may be raised manually from its latched position without depressing the foot release pedal 140.

The movement of the control lever 74 is regulated by a safety lever 142 (see Figs. 12 through 15). Lever 142 is fastened at one end to shaft 143 and is adapted to rotate about the axis thereof. A coil spring 144 which encompasses the shaft 143 adjacent lever 142 causes said lever to be normally held in its up position, as seen in Figs. 13 and 15. The ends of shaft 143 are journaled in the side members of handle 145 which side members are secured to Y arm 23. Control lever 74 is rotatably mounted on shaft 143 and is spaced from safety lever 142 a distance such that the operator cannot manipulate both levers with one hand. This arrangement of the levers prevents any possibility of an accident occurring to the hands of the operator by the pressing elements. Control lever 74 rotates independently of shaft 143. Keyed to shaft 143 and enclosed within a housing 146 is a cam 147. Housing 146, as seen in Fig. 12, is disposed intermediate the two levers and adjacent to lever 74. Pivotally mounted at point 148 within housing 146 is a plate 150 which is actuated by cam 147. Plate 150 is provided with an aperture 151 through which extends a pin 152 which is transversely mounted on the short arm 152' of control lever 74. Rotatably mounted on plate 150 and disposed on either side of aperture 151 are latches 153 and 154. Tongues 155 and 156 of latches 153 and 154, respectively, project into aperture 151 and allow the pin 152 to travel in only one direction about the periphery of said aperture. Latch 153, which is disposed on the underside of the aperture, can only move in a counter-clockwise direction by reason of stop 157 mounted on plate 150, engaging shoulder 158 of said latch. Shoulder 158 is normally held against stop 157 by spring 160. Latch 154, which is disposed on the upper side of aperture 151, likewise can be moved in only a counter-clockwise direction by reason of stop 161 mounted on plate 150 engaging shoulder 162 of said latch. A spring 163 holds shoulder 162 in engagement with stop 161. Thus it will be seen that the pin 152 must make a complete cycle about the periphery of aperture 151 before returning to its starting position. Spring 164 which is secured at one end 165 to the housing and, at the outer end 166, to the plate 150 assures positive engagement of the cam 147 and plate at all times.

When the operator desires to actuate the head 22 into pressing engagement with the buck 21, the safety lever 142 is depressed causing cam 147 to rotate in a counter-clockwise direction, as seen in Fig. 14, which lifts plate 150 so that pin 152 rests on the bottom edge of aperture 151. The control lever 74, which functions like a bell crank lever, can now be depressed causing pin 152 to pass over latch 153. The head and buck are then in a closed position. To open the pressing elements, the safety lever must be released and allowed to assume its normal up position which causes the plate 150 to drop and rest on the flat side 157 of cam 147. The pin 152 now travels along the upper edge of aperture 151, upon release of the control lever 74 and passes over latch 154.

It is apparent that any act on the part of the operator to circumvent the use of the safety lever simultaneously with the control lever to close the pressing element will result in rendering the pressing elements inoperative. For example, tying the safety lever in its depressed position locks the pressing elements in a closed position. On the other hand, if the safety lever is held continually in its up position, the pressing elements are prevented from closing.

When the buck 21 and head 22 are in the preliminary-closed position, as seen in Fig. 2, the garment which is placed on the buck is automatically steamed in order to soften the fabric fibers so that the garment may be effectively pressed. In this instance, the steam which permeates the garment is supplied by the buck through spray nozzle 168 which is disposed beneath the exposed surface of said buck and connected to a steam valve, the latter, in turn, being mounted within a housing unit 168', shown in dotted lines in Figs. 1–3. A vacuum valve, to be hereinafter discussed, is likewise mounted within unit 168'. However, the steam may be supplied, if desired, from the head 22. Subsequent to the closing of the head on the buck and upon release of the safety and control levers 142 and 74, respectively, the head will normally assume a preliminary open position similar to that for the preliminary closed position, and the pressed garment will be automatically vacuumed or dried. This operation is performed by dry air being drawn through the garment and into nozzle 168 and out through the vacuum valve of unit 168'. The steam valve and vacuum valve included within unit 168', and nozzle 168 are of the conventional type well-known by those skilled in the art and, therefore, any further comment on their construction is considered unnecessary.

The automatic steaming and vacuuming are accomplished by means of a lever arrangement to be hereinafter described. Mounted on the

front side of the frame beneath the pressing elements are a pair of control knobs 170 and 171, the former adapted to regulate the amount of steam supplied, and the latter adapted to control the suction pressure. Knob 170 is mounted on one end of a differential bolt 172 which, in turn, is threaded through both legs 173 and 174 which are arranged to form adjustable bell-crank lever 175. Lever 175 is secured at 176 to a valve-operating shaft 177 the latter being mounted transversely on unit 168' and is adapted to rotate about the axis thereof. By rotation of the knob 170, the relative angular position of legs 173 and 174, the latter being fixed to the shaft 177, may be varied as seen in Fig. 11. To the free end of leg 173, which extends downwardly from shaft 177, is mounted a spring-actuated trip lever 178 which is adapted to rotate only in a counter-clockwise direction about pivot point 186. A stop 181 mounted on the leg prevents the trip lever 178 from rotating in the opposite direction. The trip lever 178 is actuated by end 130 of front toggle member 123 as it pivots about point 129.

Secured to operating shaft 177 and held in a fixed angular position relative thereto is an arm 182. On the outer or free end of arm 182 is pivotally mounted at 183 one end of the buck steam-operating rod 184; the other end of the rod is pivotally mounted at 185 on a foot-operated buck spray pedal 186. Pedal 186 is rockably-mounted on the base 72 of frame at 141 and actuates the steam valve of unit 168' and may be independently operated at any time by the operator if desired.

The controls for the automatic-vacuuming operation are of similar construction as those described for the automatic-steaming. Knob 171 is secured to one end of differential bolt 187 which is threaded through legs 188 and 190 and arranged to form an adjustable bell-crank lever. Both legs 188 and 190 are rotatably mounted on operating shaft 177 and their angular position relative to one another may be varied by rotating bolt 187. Leg 188 which extends downwardly from shaft 177 is provided at its lower end with a vacuum trip lever 191. The lever 191, which is similar to lever 178, is spring-actuated and adapted to rotate in only a clockwise direction. Stop 192, mounted on the leg adjacent the lever 191, prevents movement thereof in a counter-clockwise direction; the other leg 190 of the bell-crank arrangement cooperates in a toggle joint action with a rockably-mounted lever 193, which is pivotally mounted to the frame at 194. The opposite end 195 of lever 193 is pivotally connected to the vacuum-operating rod 196, which is pivotally connected, at its lower end, to a foot-operated vacuum pedal 197. Pedal 197 is rockably mounted on the base 72 of the frame and actuates the vacuum valve of unit 168'. Pedal 197 may likewise be independently operated by the operator at any time.

Vacuum trip lever 191 is likewise actuated by the end 130 of front toggle member 123.

End 130 of member 123 is linked to front toggle arm 198 by connecting link pin 200, transversely extending through suitable openings in member 123 and arm 198. The lower end of arm 198 is linked to the main foot lever 71 at point 201.

The outwardly-extending ends of link pin 200 engage trip levers 178 and 191 when member 123 moves about point 129. When the head 22 is in its fully-opened position, as shown in Fig. 1, the end 130 of toggle member 123 assumes the position A, as shown in Figs. 9 and 10, and neither trip lever is actuated. Upon manually moving the head to the preliminary-closed position, as shown in Fig. 2, the link pin 200 contacts trip levers 178 and 191, as shown in position B in Figs. 9 and 10. The vacuum trip lever 191, which is adapted to rotate in only a clockwise direction, is depressed and the leg 188 is undisturbed and remains in its normal position. The steam trip lever 178, on the other hand, is prevented from rotating in a clockwise direction by stop 181 and, therefore, the leg 173 is deflected to the left, or clockwise about shaft 177, causing said shaft 177 and arm 182 to turn in a like direction. The buck steam-operating rod 184 is, in turn, depressed and the steam valve of unit 168', actuated. When the head 22 is brought into pressing engagement with the buck 21, the steam is shut off. This occurs because the end 130 of toggle member 123 assumes position C (see Figs. 9 and 10), and the leg 173 is free to resume its normal position by the action of spring 202 (see Figs. 1 and 2), on buck spray pedal 186 which in turn closes the steam valve of unit 168'. Upon release of the control and safety levers 74 and 142, respectively, the head is moved to the preliminary-opened position, by the action of balance spring 132. The link pin 200 once again engages the trip levers and the reverse action occurs; trip lever 178 is depressed and leg 173 remains undisturbed, while trip lever 191, which is prevented from moving in a counter-clockwise direction by stop 192, causes leg 188 to be deflected to the left, or clockwise about shaft 177. The other leg 190, which is connected to leg 188 by differential bolt 187, likewise rotates in a clockwise direction and by a toggle joint action lever 193 is rotated counter-clockwise about pivot point 194 and vacuum-operating rod 196 is moved upwardly causing the vacuum valve of unit 168' to be opened.

The rims 203 and 204 of control knobs 170 and 171, respectively, are inscribed with suitable markings 205 and 206. The figures 205 on knob 170 indicate when very high, medium and relatively low steam pressure is being applied to the garment. This is indicated when the markings 205 are opposite a pointer 207 which is secured to the frame just above the knob. A pointer is also provided for knob 171. On knob 171, the amount of vacuum being created on the garment is indicated by markings 206. On both knobs there is marked an off position which results in legs 173 and 188 being spaced relatively far apart from legs 182 and 190, respectively, so that the connecting link pin 200 on front toggle member 123 will not contact trip levers 178 and 191 upon movement of said member and, therefore, neither the automatic steaming nor vacuuming will occur.

The buck steam pedal 186, the vacuum pedal 197, and the main foot lever 71, with the power pedal 67 in its lowered position, enable the operator to perform the entire pressing operation manually if he so desires. The pressing operation, on the other hand, may also be semi-automatic, that is to say, the movement of the head into pressing engagement with the buck is manual, yet the steaming and vacuuming during the preliminary-closed and preliminary-opened positions respectively are still automatic.

Mode of operation

The operation of the machine shown in Figs. 1 through 15, is as follows: (a) With the head 22 in its fully opened position (as shown in Fig. 1) the operator places the garment, to be pressed,

on buck 21, places foot pedal 67 in its up position (as shown in Fig. 2) thereby causing pneumatic power to be supplied to the valve structure 25 (shown in Fig. 4), and adjusts the settings of control knobs 170 and 171 (see Fig. 3) to effect proper steaming and vacuuming of the garment fabric; (b) the operator then manually lowers the head 22 to the preliminary closed position (shown in Fig. 2) whereupon the steam trip mechanism (shown in Fig. 9) is automatically actuated causing the garment to be steamed and the fabric thereof softened, while the head is in this preliminary closed position; (c) the operator then places both hands on the hand controls 74 and 142 mounted on the top of head 22, one hand on each control; (d) control lever 142 is then first depressed (as shown in Fig. 14), then lever 74 is depressed, while lever 142 remains depressed, whereupon the head 22 is caused to be moved into pressing contact with the buck 21, only a small amount of pressure is required to be exerted on lever 74 to effect a large amount of pressure exerted by the head on the buck; (e) as the head is moved into pressing relation the steaming of the garment is stopped; (f) to open the head from the buck, the operator releases both control levers whereupon the head resumes the preliminary closed (or open) position (as shown in Fig. 2); (g) upon the head resuming the preliminary closed position, the trip mechanism (shown in Fig. 10) is automatically actuated causing the garment to be vacuumed or dried while the head is in said preliminary closed position; and (h) the operator, when the garment is partially dried, then causes the head to resume its fully opened position by depressing foot pedal 140, or exerting an upward manual force on handle 145, which will cause pin 115 to become unseated from notch 107 (see position B in dotted lines in Fig. 5); when the head is moved to its fully opened position, the vacumming of the garment ceases.

It is assumed in following the above indicated mode of operation, that the latch-adjusting nut 113 (see Fig. 5) has been pre-set so that the pin 115 will readily seat in notch 107 formed in flange pieces 100 and 101.

It will be obvious that certain modifications of the specific embodiment shown may be made without departing from the spirit and scope of this invention. For example, as shown in Figs. 16, 17 and 18, an electrically-operated mechanism may replace the valve structure 25 and the rockably mounted cylinder assembly 26 for actuating the pressing elements 21 and 22 into and out of pressing engagement. The mechanism comprises a reversible capacitor-type motor 208 mounted on a suitable bracket 210 which, in turn, is secured to back lever 121. The motor shaft 211 extends forwardly from the motor 208 and has mounted a braking wheel 212 and a worm wheel 213, the former being positioned at the free end of said shaft. Worm wheel 213 meshes with a cooperating worm gear 214 which is secured to and adapted to rotate with shaft 215. The shaft 215 is rotatably mounted on a pair of bracket plates 216 which are bolted to back lever 121. Intermediate bracket plates 216 and secured to shaft 215 is a cam disc 217 and cam spring member 217' which cooperate with a roller 218 mounted on push link 118.

Mounted on the opposite end of shaft 215 from the worm gear 214 and enclosed within a housing 220 are a rack gear 221, limit switch 222, and an operating arm 223. Rack gear 221 and limit switch 222 are bolted together and are adapted to rotate independently of shaft 215 by movement of a rack 224 across said rack gear. The rack 224 is slidably secured to the adjacent bracket plate 216 and is actuated by a flexible pull cable 225. The cable 225 is attached at its other end, not shown, to the control lever 74. Associated with braking wheel 212, which is secured to the end of the motor shaft 211, is a magnetic-type brake 226 mounted on bracket plate 216 (see Fig. 16). The brake shoe 227 is normally held in its braking position.

As shown in the circuit diagram, Fig. 18, there is provided a main throw switch 228 which is of a conventional type, not shown in Figs. 16 and 17. A latch switch 230 shown adjacent to throw switch 228 in Fig. 18 is secured to the outside face of one of the bracket plates and is not actuated until the movable pressing element 22 is in the preliminary-closed position at which time the arm 231 of the switch 230 engages the adjacent frame 20 (see Fig. 17) and closes switch 220. Upon closing of latch switch 230, the mechanism is ready to be operated. First, the rack 224 is drawn across rack gear 221 by the operator, depressing the control lever 74 causing the limit switch 222 to rotate and the blade 232 thereof to make contact with point 233, thereby closing the circuit to the relay 234. The motor 208 and brake 226 are then actuated causing motor shaft 211 to rotate which, in turn, rotates shaft 215, through the worm wheel 213 and gear 214, and causes operating arm 223 to follow the limit switch 222. When the pressure of the head on the buck is deemed sufficient by the operator, the control lever 74 is not further depressed and limit switch 222 stops rotating while the motor continues to operate, rotating the operating arm 223 until the stud 235, mounted on the lower end of said arm, strikes the blade 232 and breaks the circuit which, in turn, applies the blade to stop the motor. Upon release of control lever 74, the rack 224 is pulled back to its starting position by springs 236 which, in turn, rotates the limit switch 222 in the opposite direction, causing blade 232 to make contact with point 237 of the relay 234 and thus reverses the rotation of the motor. The operating arm 223 will then lead the limit switch slightly until the switch reaches its starting position, as shown in Fig. 16, and strikes an adjustable stop 238, secured to bracket plate 216. Upon striking stop 238, blade 232 breaks contact with point 237 and opens motor and brake circuits.

Upon movement of the head 22 to the preliminary-closed position (see Fig. 2), the roller 218 mounted on the underside of push link 118 travels up the side of a recess 240 formed in the cam 217, and moves slightly beyond or away from the outer periphery of the cam whereupon the cam spring member 217' snaps in a clockwise direction into operating position, so as to provide a ledge upon which the roller may rest when the head is released by the operator. The spring member 217' prevents the roller 218 from dropping back into the recess 240. As the operator depresses the control lever 74, the shaft 215 moves in a clockwise direction and the roller rolls over the distorted periphery of the cam 217, causing the back lever 121 to be pushed to an upright position when the roller approaches the high point on the cam periphery.

Upon release of the control lever 74, the cam 217 is rotated, in the opposite direction, and the

roller 217' once again comes to rest on the edge of the cam spring member 249, at which point the head is in a preliminary open position. Upon the operator pushing the head upwardly, the component of the force exerted on the spring member by the roller causes the spring member to be deflected in a counter-clockwise direction and the roller allowed to drop back into the recess 249. When the roller is at the bottom of the recess, the head 22 is in its fully-opened position.

The magnetic brake 226, as seen in circuit diagram Fig. 18, is energized when the motor starts, causing the brake shoe 227 to be lifted from wheel 212 and allows the shaft 211 to rotate freely.

Thus, it will be seen that a power-actuated garment pressing machine has been provided which enables the operator, by his finger tips, to readily vary the closing pressure of the head on the buck within limits of the machine, depending upon the type and texture of the garment fabric which is to be pressed. Also a foolproof safety device has been incorporated in the machine, which eliminates the operational hazard to the operator by requiring both hands of the operator to be removed from the pressing surfaces of the head and buck, in order to manipulate the control and safety levers to actuate the head into and out of pressing engagement by pneumatic power. Furthermore, a machine has been provided which will automatically steam and vacuum the garment during the pressing operation.

And, lastly, a machine has been provided which will expeditiously and efficiently perform the pressing operation without impairing the quality of the work and will reduce the fatigue of the operator as well.

While several embodiments of this invention are shown above, it will be understood, of course, that the invention is not to be limited thereto, since many modifications may be made, and it is contemplated, therefore, by the appended claims, to cover any such modifications as fall within the true spirit and scope of this invention.

I claim:

1. In a garment pressing machine the combination of a frame, a stationary pressing element mounted on said frame and over which a garment may be laid, a second pressing element rockably mounted on said frame for initial movement from a normally fully open position to a temporary rest position adjacent to but not in contact with said stationary pressing element, power means mounted on said frame and operable for actuating said second pressing element into pressing engagement with said stationary pressing element from said rest position and returning said second pressing element to said rest position subsequent to said pressing engagement, manually operated control means mounted on one of said pressing elements for operating said power means, automatic garment steaming means mounted on said frame and being operative when said second pressing element is in said rest position prior to said pressing engagement, automatic garment vacuuming means mounted on said frame and being operative when said second pressing element is in said rest position subsequent to said pressing engagement, and means mounted on said frame for releasing said second pressing element from said rest position to said normally open position; said automatic garment steaming means comprising a steam valve mounted on said frame and an adjustable bell crank lever pivotally mounted on said frame and having one leg thereof operatively connected to said steam valve and the other leg thereof provided with a trip lever, said trip lever being actuated only by the initial movement of said second pressing element to said rest position; said automatic garment vacuuming means comprising a vacuum valve mounted on said frame and a second adjustable bell crank lever pivotally mounted on said frame and having one leg thereof operatively connected to said vacuum valve and the other leg thereof provided with a trip lever, said second trip lever being actuated only upon movement of said second pressing element from said pressing engagement to said rest position.

2. A garment pressing machine comprising a frame, a relatively stationary pressing element mounted on said frame, a second pressing element rockably mounted on said frame for initial movement from a normally fully open position to a temporary rest position adjacent to but not in contact with said stationary pressing element, power means mounted on said frame for actuating said second pressing element into pressing engagement with said stationary pressing element from said rest position and return said second stationary element from said pressing engagement to said rest position, and control means mounted on one said pressing element for regulating said power means; said power means comprising a reversible-type electric motor mounted on said frame, a cam rotatably mounted on said frame and operatively connected to said motor, motor direction regulating means mounted on said frame and cooperating with said control means, and a follower and linkage arrangement mounted on said frame and operatively connected to said second pressing element for effecting movement of said second pressing element by said cam.

3. A garment pressing machine comprising a frame, a pair of cooperating pressing elements, one of said elements on which a garment is laid being mounted in a relatively fixed position on said frame and the other element being rockably mounted on said frame for initial movement from a fully opened position to a temporary predetermined rest position adjacent to but not in contact with said fixed element, power means mounted on said frame and operatively connected to said movable element for actuating said movable element from said rest position into pressing engagement with said fixed element and return said movable element to said rest position subsequent to said pressing engagement, automatic garment steaming means mounted on said frame and being operatively engaged by said movable element when the latter is in said rest position prior to pressing engagement with said relatively fixed element, automatic garment vacuuming means mounted on said frame and being operatively engaged by said movable element when the latter is in said returned rest position, and means mounted on said frame and operatively connected to said movable element for effecting return thereof from said rest position to said fully opened position.

4. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head rockably mounted on said frame for initial movement from a fully opened position to a temporary rest position adjacent to but not

in contact with said buck, power means mounted on said frame for actuating said head into pressing engagement with said buck from said rest position, a control lever pivotally mounted on said head and operatively connected to said power means to operate said power means and regulate the pressure exerted by said head on said buck, a safety lever pivotally mounted on said head and spaced from said control lever for movement about an axis common to said control lever, a housing mounted on said head intermediate said levers, an apertured plate rockably mounted within said housing, a pin mounted on said control lever and having one end thereof disposed within said plate aperture, a cam operatively connected to said safety lever for rocking said plate upon depressing of said safety lever, and a pair of trip elements pivotally mounted on said plate and having a portion of said elements projecting into said aperture; said trip elements allowing said pin upon depressing of said control lever to move in only one direction about the perimeter of said aperture when said plate is rocked by said safety lever.

5. A garment pressing machine comprising a frame, a buck mounted in a relatively fixed position on said frame, a head rockably mounted on said frame for initial movement from a fully opened position to a temporary rest position adjacent to but not in contact with said buck, power means mounted on said frame and operatively connected to said head for effecting movement thereof from said rest position into pressing engagement with said buck and return of said head to said rest position subsequent to said pressing engagement, dual hand controls mounted on said head and operatively connected to said power means, said hand controls requiring simultaneous manipulation thereof to effect operation of said power means, and means mounted on said frame and operatively connected to said head for effecting return thereof from said rest position to said fully opened position; said power means comprising a valve unit mounted on said frame and operatively connected to said hand controls, and a cylinder assembly rockably mounted on said frame and operatively connected to said valve unit, said assembly provided with a reciprocating piston having one end thereof operatively connected to said head to effect movement thereof into and out of pressing engagement with said buck.

6. A garment pressing machine comprising a frame, a stationary buck mounted on said frame over which a garment is laid, a head cooperating with said buck mounted on said frame for initial movement from a normal fully opened position into pressing engagement with said buck, means mounted on said frame and cooperating with said head for holding said head in a temporary rest position adjacent to but not in contact with said head subsequent to said pressing engagement, automatic garment vacuuming means mounted on said frame and operatively engaged by said head while the latter is in said rest position, and means mounted on said frame and operatively connected to said head for effecting return thereof from said rest position to said fully opened position.

7. A garment pressing machine comprising a frame, a pair of cooperating garment pressing elements, one of said elements being mounted in a relatively fixed position on said frame and the other element being rockably mounted on said frame for initial movement from a normal fully open position to a temporary predetermined rest position adjacent to but not in contact with said fixed element, means mounted on said frame and operatively connected to said movable element for holding the latter in said rest position, power means mounted on said frame and operatively connected to said movable element for effecting movement thereof from said temporary rest position into pressing engagement with said relatively fixed element and return of said movable element to said temporary rest position subsequent to said pressing engagement to said rest position, automatic garment steaming means mounted on said frame and operatively engaged by said movable element upon initial movement thereof, automatic garment vacuuming means mounted on said frame and operatively engaged by said movable element upon movement thereof from said pressing engagement to said temporary rest position, and means mounted on said frame for returning said movable element from said temporary rest position to said full open position.

8. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head cooperating with said buck rockably mounted on said frame for initial movement from a fully open position to a temporary rest position adjacent to but not in contact with said buck, means mounted on said frame and operatively connected to said head for holding the latter in said rest position, power means mounted on said frame and operatively connected to said head for effecting movement of said head from said rest position into pressing engagement with said buck and return of said head to said rest position subsequent to said pressing engagement, automatic garment steaming means mounted on said frame and operatively engaged by said head upon initial movement thereof to said rest position, said steaming means being operative only when said head is in said rest position prior to pressing engagement thereof with said buck, automatic garment vacuuming means mounted on said frame and operatively engaged by said head upon return movement thereof from said pressing engagement to said rest position, said vacuuming means being operative only when said head is in said rest position subsequent to pressing engagement with said buck, means mounted on said frame and operatively connected to said head for effecting return thereof from said rest position to said fully open position, and adjustable means mounted on said frame and operatively connected to said steaming and vacuuming means for varying the effective operation of either or both of said steaming and vacuuming means.

9. A garment pressing machine comprising a frame, a stationary pressing element mounted on said frame, a second pressing element mounted on said frame for initial movement from a normal fully open position to a temporary rest position adjacent to but not in contact with said stationary pressing element, means mounted on said frame and operatively connected to said second pressing element for holding the latter in said rest position, power means mounted on said frame, and operatively connected to said second pressing element for effecting movement thereof from said rest position into pressing engagement with said stationary element, a control lever adjustably mounted on one of said pressing elements and operatively connected to said power means for movement from a normal

position of adjustment to effect operation of the latter, and a safety lever adjustably mounted on one of said pressing elements for movement from a normal position of adjustment and means operatively connected to both of said control and safety levers whereby said levers must be manipulated simultaneously to effect operation of said power means.

10. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head cooperating with said buck rockably mounted on said frame for initial movement from a normal fully open position to a temporary predetermined rest position adjacent to but not in contact with said buck, means mounted on said frame and operatively connected to said head for holding the latter in said temporary rest position, and power control means mounted on said frame and operatively connected to said head for effecting movement thereof from said rest position into pressing engagement with said buck and return of said head to said fully open position subsequent to said pressing engagement.

11. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head cooperating with said buck rockably mounted on said frame for initial movement from a normal fully open position into pressing engagement with said buck, power control means mounted on said frame and operatively connected to said head for varying the pressure exerted on said buck by said head and effecting movement of said head to a temporary rest position adjacent to but not in contact with said buck subsequent to said pressing engagement, means mounted on said frame and operatively connected to said head for holding the latter in said rest position, and means mounted on said frame and operatively connected to said head for effecting return of the latter from said rest position to said fully open position.

12. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head cooperating with said buck rockably mounted on said frame for initial movement from a normal fully open position to a temporary predetermined rest position adjacent to but not in contact with said buck, means mounted on said frame and operatively connected to said head for holding the latter in said rest position, power means mounted on said frame and operatively connected to said head for effecting movement thereof from said rest position into pressing engagement with said buck and return of said head to said rest position subsequent to said pressing engagement, and means mounted on said frame and operatively connected to said head for releasing said head from said rest position to said fully open position.

13. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head rockably mounted on said frame for initial movement from a normal fully open position to a temporary rest position adjacent to but not in contact with said buck, power means mounted on said frame and operatively connected to said head for effecting movement thereof from said rest position into pressing engagement with said buck and return of said head to said rest position subsequent to said pressing engagement, a control member pivotally mounted on said head and operatively connected to said power means to effect operation of the latter, a safety member pivotally mounted on said head for movement about an axis coincident to the pivotal axis of said control member, and means operatively connected to said control and safety members whereby said control member can be manipulated to effect operation of said power means upon simultaneous manipulation of said safety member.

14. A garment pressing machine comprising a frame, a stationary buck mounted on said frame on which a garment is laid, a head cooperating with said buck mounted on said frame for initial movement from a normal fully open position to a temporary rest position adjacent to but not in contact with said buck, means mounted on said frame and operatively connected to said head for holding the latter in said rest position, automatic garment steaming means mounted on said frame and operatively engaged by said head while the latter is in said rest position, power means mounted on said frame and operatively connected to said head for actuating said head from said rest position into pressing engagement with said buck and effecting return of said head from said pressing engagement to said normal fully open position.

15. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head cooperating with said buck mounted on said frame for initial movement from a fully open position relative to said buck to a temporary predetermined rest position adjacent to but not in contact with said buck, means mounted on said frame and operatively connected to said head for holding the latter in said rest position, and power means mounted on said frame and operatively connected to said head for effecting movement thereof from said rest position into pressing engagement with said buck.

16. A garment pressing machine comprising a frame, a stationary buck mounted on said frame over which a garment may be laid, a head cooperating with said buck mounted on said frame for initial movement from a fully open position relative to said buck to a temporary predetermined rest position adjacent to but not in contact with said buck, means mounted on said frame and operatively connected to said head for holding the latter in said rest position, automatic garment steaming means mounted on said frame and being operative when said head is in said rest position, and power means mounted on said frame and operatively connected to said head for effecting movement thereof from said rest position into pressing engagement with said buck.

17. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head mounted on said frame for movement into and out of pressing engagement with said buck, means mounted on said frame and operatively connected to said head for holding the latter, prior to pressing engagement with said buck, in a temporary predetermined rest position adjacent to but not in contact with said buck, means for thereafter moving said head into pressing engagement with said buck, and control means for said last means.

18. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head mounted on said frame for movement into and out of pressing engagement with said buck, adjustable means mounted on said frame and operatively connected to said head for holding the latter, when said means is in one position of adjustment, in a temporary predetermined rest position adjacent to but not in contact with said buck prior to said head moving into pressing en-

gagement with said buck, means for thereafter moving said head into pressing engagement with said buck, and control means for said last means.

19. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head mounted on said frame for movement into and out of pressing engagement with said buck, adjustable means mounted on said frame and operatively connected to said head for holding the latter, when said means is in one position of adjustment, in a temporary predetermined rest position adjacent to but not in contact with said buck subsequent to said head moving into pressing engagement with said buck, means for thereafter moving said head into pressing engagement with said buck, and control means for said last means.

20. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head mounted on said frame for movement into and out of pressing engagement with said buck and to a position of rest but not in engagement with said stationary buck prior and subsequent to pressing engagement of said head and buck, control means for effecting the aforesaid movements of said head, automatic garment steaming means mounted on said frame, and means for operating said steaming means when said head is in said rest position prior to pressing engagement.

21. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head mounted on said frame for movement into and out of pressing engagement with said buck and to a position of rest but not in engagement with said stationary buck prior and subsequent to pressing engagement of said head and buck, control means for effecting the aforesaid movements of said head, automatic garment vacuuming means mounted on said frame, and means for operating said vacuuming means when said head is in said rest position subsequent to pressing engagement.

22. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head mounted on said frame for movement into and out of pressing engagement with said buck and to a position of rest but not in engagement with said stationary buck prior and subsequent to pressing engagement of said head and buck, control means for effecting the aforesaid movements of said head, automatic garment steaming means mounted on said frame, and means for operating said steaming means when said head is in said rest position prior to pressing engagement, automatic garment vacuuming means mounted on said frame, and means for operating said vacuuming means when said head is in said rest position subsequent to pressing engagement.

23. A garment pressing machine comprising a frame, a buck mounted thereon, a head rockably mounted on said frame, means to manually move said head from a normally fully opened position to a preliminary-closed position adjacent to but not in contact with said buck and temporarily held thereat, control means for power-actuating said head into pressing engagement with said buck from said preliminary-closed position, and pivotally mounted means operatively connected to said control means and when in one position of pivotal adjustment renders said control means inoperative and enables said head to be manually moved into and out of pressing engagement.

24. A garment pressing machine comprising a frame, a pair of cooperating pressing elements, power means for actuating one of said elements into pressing engagement with the other of said elements, control means operatively connected to said power means for varying the pressure of said engagement, second means operatively connected to one of said elements for manually effecting pressing engagement of said elements, and pivotally mounted third means operatively connected to said power and second means for making said second means effective and simultaneously rendering said power means ineffective, when said third means is in one position of pivotal adjustment, and making said power means effective while simultaneously rendering said second means ineffective, when said third means is in another position of pivotal adjustment.

25. A garment pressing machine comprising a frame, a stationary buck mounted on said frame, a head rockably mounted on said frame for initial movement from a normal fully open position to a temporary rest position adjacent to but not in contact with said buck, power means mounted on said frame and operatively connected to said head for effecting movement thereof from said rest position into pressing engagement with said buck and return of said head to said rest position subsequent to said pressing engagement, a control member pivotally mounted on said head and operatively connected to said power means to effect operation of the latter, a safety member, and means operatively connected to said control and safety members whereby said control member can be manipulated to effect operation of said power means upon simultaneous manipulation of said safety member.

ROY M. SCHULTZ.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,368,684	Andree	Feb. 15, 1921
1,426,120	Spencer et al.	Aug. 15, 1922
1,489,227	Benjamin et al.	Apr. 1, 1924
1,635,616	Haacke	July 12, 1927
1,686,266	Cohen	Oct. 2, 1928
1,851,467	Tanner	Mar. 29, 1932
1,887,953	Davis	Nov. 15, 1932
1,947,191	Davis et al.	Feb. 13, 1934
1,957,250	Davis	May 1, 1934
2,351,956	Graham	June 20, 1944