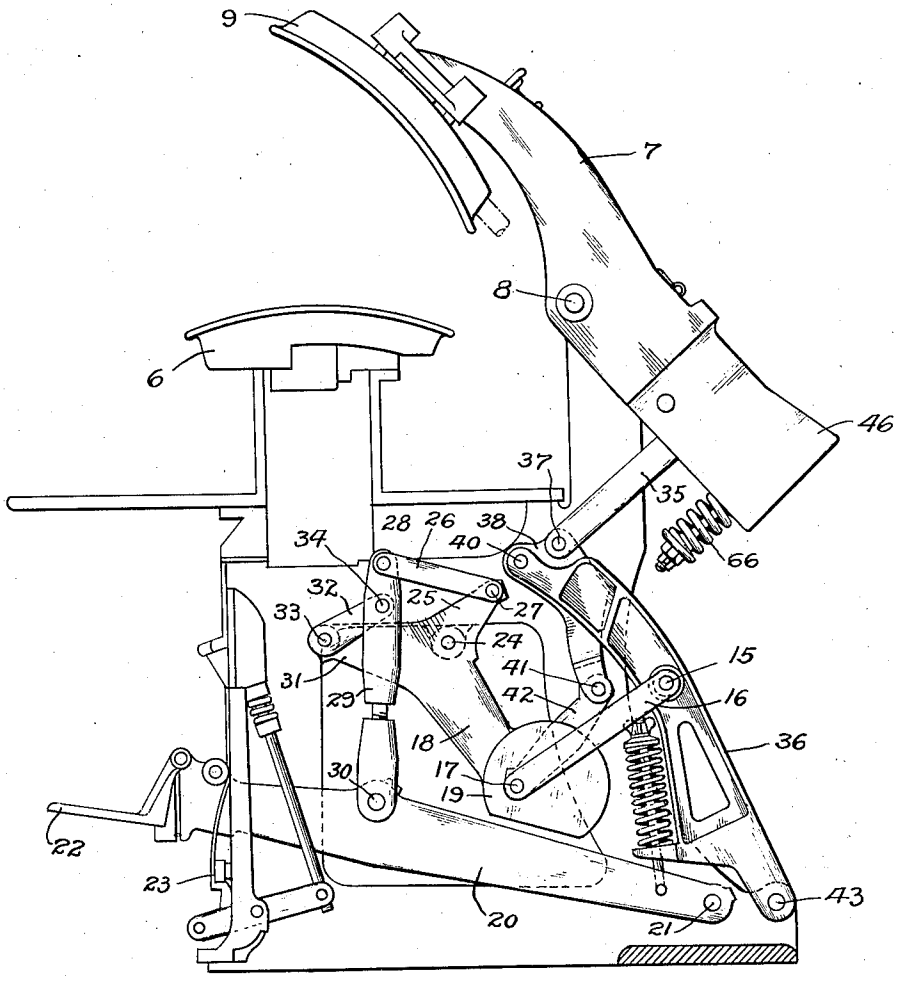
Dec. 31, 1935. H. G. BEEDE 2,026,264

GARMENT PRESSING MACHINE

Filed Jan. 30, 1934 3 Sheets-Sheet 1

FIG. 1.



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GARMENT PRESSING MACHINE

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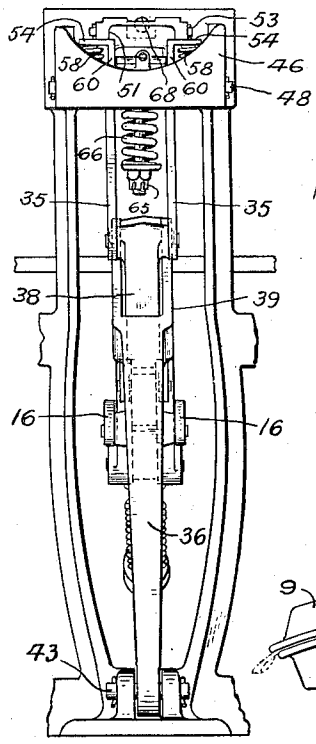
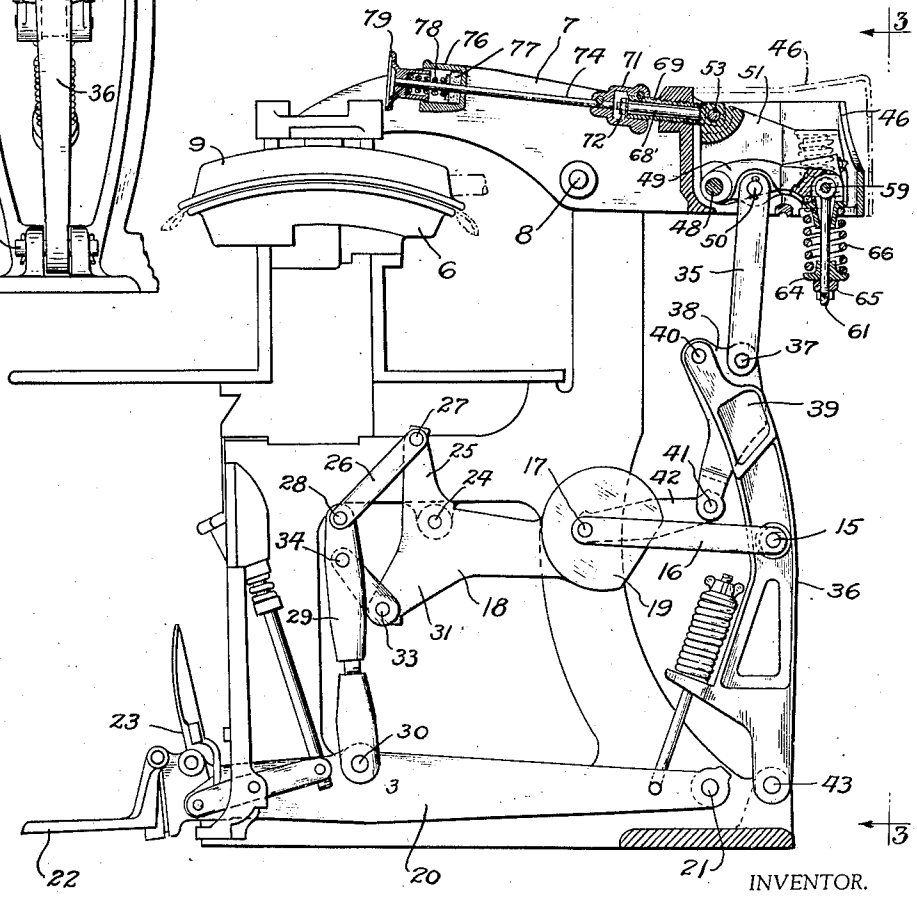


FIG. 3.

FIG. 2.



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FIG. 4.

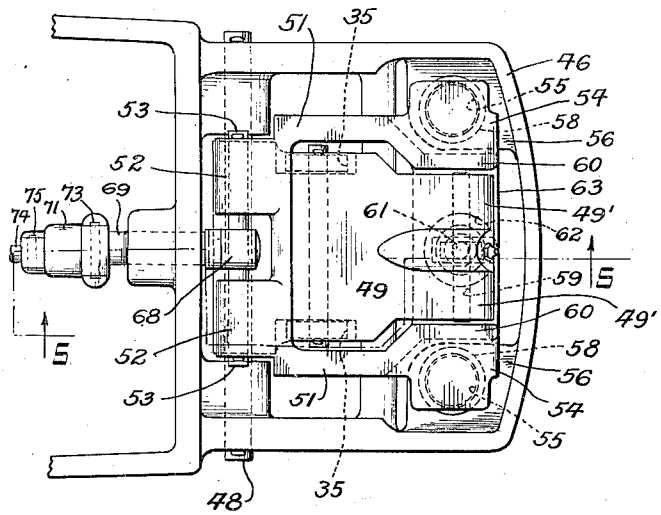


FIG. 5.

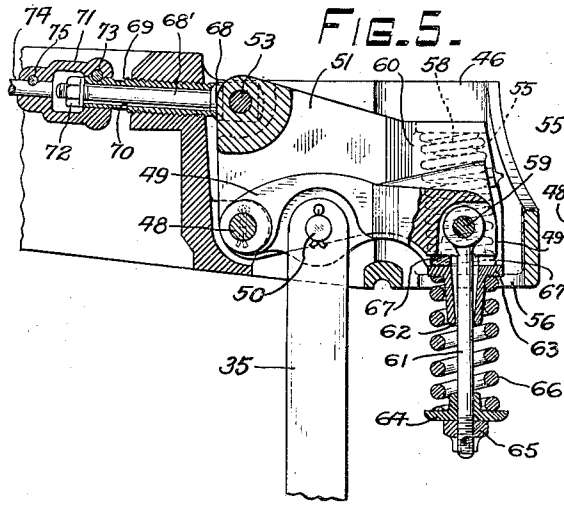
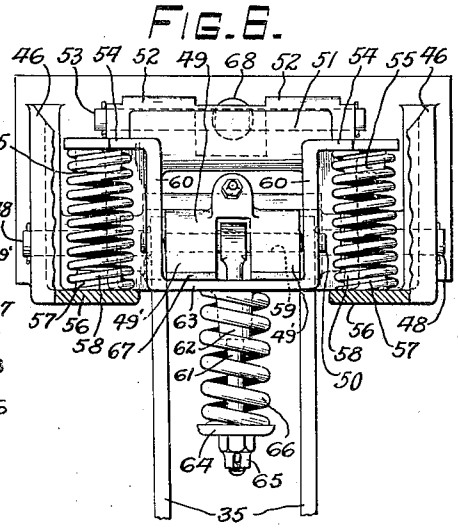


FIG. 6.



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2,026,264

GARMENT PRESSING MACHINE

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Application January 30, 1934, Serial No. 709,026

10 Claims. (Cl. 68—9)

My present invention relates generally to garment pressing machines, wherein a movable pressing element or head is moved to and from a fixed element or buck by toggle mechanism.

The accompanying drawings, in several aspects, resemble generally the apparatus shown in my Patent No. 1,897,689 in which is disclosed a system of toggles for operating the head supporting lever with provision of means for devoting a substantial portion of the motion of the operating lever to applying pressure. In the said patent the main toggle which is connected to the head lever has both of its links directly connected. However, in accordance with the present invention, each of the said links is preferably connected at separate points to a bell crank lever instead of being directly connected together. A new toggle gives a multiple leverage through the said bell crank at final pressing position and without extra effort on the part of the operator.

Another feature of the present invention is the provision of a new connection between the main toggle and the head lever providing for adjustability of the head lever and head.

The foregoing and other objects and advantages of the invention will be more specifically pointed out during the course of the following detailed description of the accompanying drawings, in which

Fig. 1 is a side elevation of a garment pressing machine embodying features of my present invention;

Fig. 2 is a view similar to Fig. 1 with the pressing elements in pressing relation and with parts of the head lever in section;

Fig. 3 is a rear elevation looking in the direction of the arrows 3 of Fig. 2;

Fig. 4 is a top plan view of the parts connecting the head lever and main toggle;

Fig. 5 is a sectional view on the line 5—5 of Fig. 4; and

Fig. 6 is a rear elevation of the parts shown in Fig. 5 with the rear plate broken away.

In Figs. 1–3, the numerals 6–9 inclusive and 15–34 inclusive designate the same parts as in my said Patent 1,897,689, and said parts operate in the same manner as described in said patent, so that I do not deem a detailed description of all of these parts necessary in the present application.

The numeral 35 in the present application designates links corresponding to the link 11 of my said patent and which is connected to the head lever in the manner hereinafter described. Instead of being connected directly with the link 36 of the main toggle which corresponds to the link 13 of my said patent, the links 35 are pivotally connected at 37 to a bell crank lever 38 which is disposed in the forked end 39 (Fig. 3) of the link 36 and which is also pivotally connected at 40 to the upper end of the link 36. The lower end of the bell crank lever 38 is pivotally connected at 41 to another link 42 which is pivotally connected to the main bell crank 18 the same as the link 16. The relative position of the parts thus far described when the press is in open position is shown in Fig. 1, and when the press is in closed position in Fig. 2.

In operation, the main link 36 is swung back on its pivot 43, corresponding to the pivot 14 of my said patent, initially by the movement of the link 16 in the same manner as described in my said patent. However, under the present invention, the link 16 is no longer used for conveying pressure to and through the lower link of the main rear toggle, but is used as a distance or position control for the said back link 36. When the toggle 35—36 is substantially straight, the link 42 becomes a toggle member and gives a multiple leverage through the bell crank 38 applying the pressure through the connection 37 to the links 35 and consequently to the head lever. Of course, during the closing movement of the press or downward movement of the pedal lever, the same results and relative movement of parts is obtained as in my said patent, but as the rear toggle is being straightened, the bell crank 38 moves back with the lower member of the rear toggle due to the connection 40 therewith. The link 42 is also moving up with its point of connection with the lever 18 but is not applying any pressure to the bell crank 38 until the toggle 35—36 has been substantially straightened by the link 16.

As in the construction shown in my said Patent No. 1,897,689, the motion of the pedal lever 20 and lever 18 in the present embodiment of the invention is also substantially constant or even, whereas the motion of the head lever is not constant or even, because the head lever is substantially in closed position when the levers 18 and 20 have moved only about half way through their arcs of possible travel. In the present case, the movement of the fulcrum point 37 also corresponds substantially to the movement of the head lever, so that when the head lever is substantially closed and the pedal lever has traveled about one half its distance, the main rear toggle is substantially straight. Consequently the remaining relatively large movements of the pedal

lever 20 and lever 18 applies the final pressure through the bell crank 38 via fulcrum 37 and link 35.

The means for connecting the main rear toggle links 35 to the head lever, and for affording the adjustability of the head lever to compensate for different thicknesses of fabrics or garments, is best shown in Figs. 2, 4, 5, and 6. However, I would first point out that the cap 46 in Fig. 1 is shown applied to the rear end of the head lever and the same cap is shown in dotted lines in Fig 2, but in the other figures it is removed. The rear end of the head lever is designated generally in Figs. 4–6 by the numeral 47 and is shown as being of frame-like formation. Mounted between the side walls of the end 47 and at the lower portion thereof is a shaft or pin 48. A lever 49 is fulcrumed at one end on the shaft 48 and has its other end disposed at the rear of the frame-like end 47. Intermediate the said ends of the lever, the links 35 are connected thereto by means of a pin or shaft 50. A member 51, which I prefer to term a spring compound adjuster, is also pivoted on the shaft 48 and at its upper front end is provided with bosses 52 which receive a pin or shaft 53 which acts as a swivel bolt pin for effecting the adjustment as hereinafter described. As seen best in Fig. 6, the rear end of the member 51 is of substantially U-shape and provided at its top with lateral projections 54, each having a depending lug 55. The frame 47 has beneath the lateral projections 54, seats 56 which are also provided with lugs 57 alined with the lugs 55, so that coil springs 58 may be compressed between the projections 54 and 56 to be held in place by the lugs 55 and 57. The springs 58 serve merely as cushion springs and tend to force the rear end of the member 51 upwardly. Free upward movement of the said rear end of the member 51 is limited or prevented by the following arrangement. A pin 59 passes through bosses 49' on the rear end of the lever 49 and is surrounded by the eye of a bolt 61 which extends down through a boss 62 on the bottom plate 63 of the rear end of the member 51. A plunger head 64 is held on the lower end of the bolt 61 by lock nut 65 which engages with the screw threads on the bolt, and a coil spring 66 is compressed between the boss 62 and the plunger head 64. The rear end of the lever 49 also is disposed above the bottom 63 of the member 51 and a packing of resilient or cushioning material 67 is disposed between the said parts. The spring 66 holds the rear ends of parts 49 and 51 together.

Obviously, if the rear end of the member 51 is raised or lowered, the rear end of the lever 49 is also raised or lowered, both of the parts fulcruming on the shaft or pin 48, so that the pivot 50, that is, the point of connection between the links 35 and the head lever will be shifted by the raising or lowering movement to adjust the angular position of the head lever and head.

To effect such movements, I connect to the pin 53 a pressure adjuster screw swivel 68 mounted on one end of a swivel bolt 68' which is disposed through the bore in a screw 69 threaded through an opening 70 in the front wall of the frame-like portion 47 of the head lever. The forward end of the bolt 68' is disposed within the adjuster coupling 71 and held therein by means of a nut 72. The coupling 71 is keyed to the screw 69 at 73 and to a shaft 74 at 75. The shaft 74 (see Fig. 2) extends forwardly along the head lever and through a cup-shaped formation 76 on the head lever. Within the parts 76 is an adjuster bearing rod washer 77 held in place by a spring 78 which surrounds the rod and disposed within the hollow end of a handle or wheel 79 which is keyed to the shaft 74.

It should be apparent from the foregoing that rotation of the wheel or handle 79 in a clockwise direction will, through rotation of the shaft 74, coupling 71 and screw 69, move the shaft 53 to the right of the position shown in Fig. 1, consequently lowering its rear end against the action of spring 66 and also moving the rear end of the lever 49 down. Consequently the pivot 50 connecting the links 35 to the head lever is also shifted or moved down. It should also be apparent that rotation of the wheel or handle 79 in a counter-clockwise direction will result in the reverse movement of the said parts and consequently in raising the pivot 50. Furthermore, the lowering of the pivot 50 will tend to raise the head while raising of the pivot 50 will tend to lower the head with respect to the buck. However, regardless of the position of the head with respect to the buck, that is, its angular adjustment, the operation of the bell crank 38 in imparting the pressure is just the same.

I claim:

1. In a garment pressing machine including a head and buck, a lever supporting the head for movement toward and away from the buck, a toggle comprising upper and lower links the former having a pivotal connection at one end to said lever and the latter being fulcrumed at one end, a member pivotally connected to the other ends of said links at adjacent independent points, a main operating lever, a connection between said main operating lever and said lower toggle link to substantially straighten said toggle upon movement of said operating lever, and another connection between said main operating lever and said member to complete straightening of the toggle and to close the press under great pressure.

2. In a garment pressing machine including a pair of cooperating pressing elements, a lever supporting one of said elements for movement toward and away from the other, a link fulcrumed at one end and operatively connected at its other end to said lever, a second lever pivotally connected to the other end of said link, a second link pivotally connected to said second lever at a point spaced from the connection between said first link and second lever, a main operating lever, a third link pivotally connected to said second link and to said main operating lever and operable upon movement of said operating lever to move said first links into substantially straightened position and to substantially close the press without pressure, and a fourth link pivotally connected to said operating lever and to said second lever and operable upon further movement of said main operating lever to exert a thrust through said second lever and first link on the first lever to close the press under great pressure.

3. In a garment pressing machine comprising a pair of cooperating pressing elements, a lever supporting one of said elements for movement toward and away from the other, a toggle operatively connected to said lever, a main operating lever, and means independently connecting the links of said toggle and said main operating lever, said means including elements one of which substantially straightens the toggle without closing the press under pressure by force exerted on one link of the toggle and the other of which com-

pletes closing of the press under great pressure by force or thrust on the other link of the toggle.

4. In a garment pressing machine including a pair of cooperating pressing elements, a head lever pivotally mounted intermediate its ends and carrying one of said elements at one end for movement to and from the other element, means for actuating said lever, a second lever connected intermediate its ends to said actuating means and also pivotally supported at one end by said head lever adjacent the other end of said head lever, an adjusting member also pivotally connected to said other end of the head lever and supporting the other end of said second lever, and means to shift said member on its pivot to adjust the position of the said other end of the second lever and the position of the point of connection between said actuating means and second lever, thereby adjusting the said one pressing element relative to the other.

5. In a garment pressing machine including a pair of cooperating pressing elements, a head lever pivotally mounted intermediate its ends and carrying one of said elements at one end for movement to and from the other element, a second lever connected adjacent one of its ends to the other end of said head lever, an adjusting member also pivotally connected to said other end of the head lever and supporting the other end of said second lever, means yieldingly drawing said other end of said second lever against said member, means to shift said adjusting member on its pivot to adjust the position of the said other end of the second lever and the angularity of the said one element relative to the other, and means connected to said second lever intermediate its end for actuating said head lever.

6. The structure of claim 5 wherein the said adjusting member supports at its rear end the rear end of the said second lever, and the said means for shifting the said member on its pivot is connected to said member at its forward end.

7. The structure of claim 5 wherein the said adjusting member supports at its rear end the rear end of the said second lever, and the said means for shifting the said member on its pivot is connected to said member at its forward end, said last means comprising a screw operated swivel connected to said forward end of the member and having an operating handle adjacent the forward end of the head lever.

8. In a garment pressing machine including a pair of cooperating pressing elements, a head lever carrying one of said elements at one of its ends and having its other end of frame-like construction, an adjusting member in said frame-like end of the head lever and pivotally mounted therein at its forward end, the rear end of said member being of substantially U-shape, cushioning springs between the rear end of the said member and the frame-like end of the head lever, a second lever having its rear end disposed between the walls of the U-shaped end of said member, means yieldably urging said end of the second lever against the bottom of said U-shaped portion, a pivotal connection between the forward end of the second lever and the frame-like end of the head lever, means for selectively raising and lowering the U-shaped end of the member relative to the head lever to shift the position of said second lever on its said pivot, and means for moving the rear end of the head lever upward, said means being connected to said second lever intermediate its ends.

9. In a garment pressing machine including a pair of cooperating pressing elements, a head lever pivotally mounted intermediate its ends and carrying one of said elements at its other end for movement toward and away from the other element, means at the other end of said head lever for adjusting its angularity and the angularity of the said one element relative to the other, said means comprising a second lever pivotally carried by said head lever, an adjusting member pivotally carried by said head lever, means yieldably drawing said second lever and member together at one end thereof, means for imparting movements to said head lever pivotally connected to said second lever intermediate its ends, and means for shifting the position of said member to shift the position of said second lever.

10. In a garment pressing machine comprising a pair of cooperating pressing elements, a lever supporting one of said elements for movement toward and away from the other, a toggle operatively connected to said lever, a main operating lever, and means indirectly connecting the links of said toggle and said main operating lever, said means including elements, one of which is connected to the one link of the toggle and operable by the main operating lever to substantially straighten the toggle without closing the press under pressure, and another of the elements being connected to said one link to guide movement thereof and also connected to the other link of the toggle to exert a thrust on said other link to close the press under great pressure upon further movement of the operating lever.

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