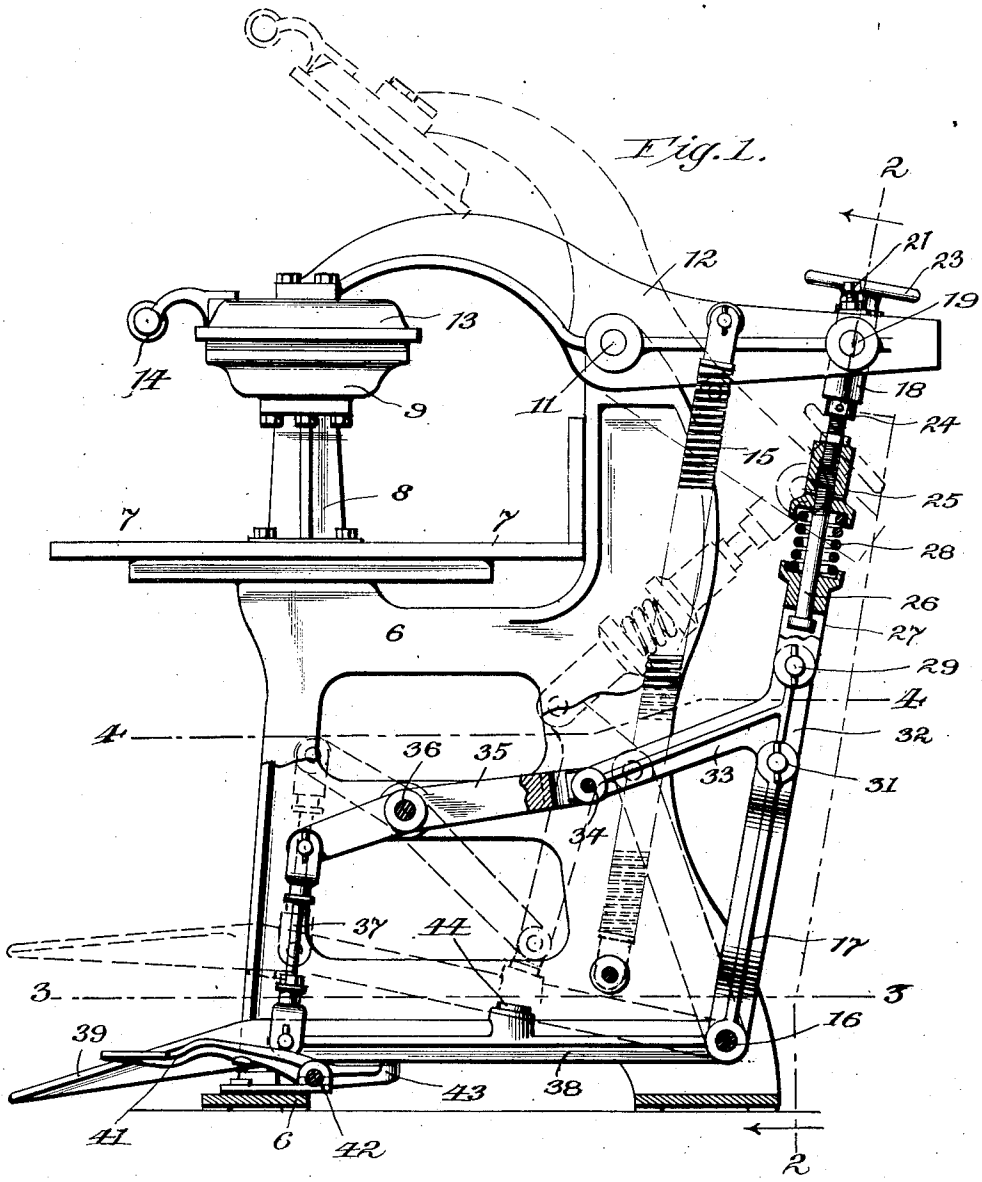
Sept. 8, 1931. C. M. CLARKE 1,822,613

GARMENT PRESS

Filed March 26, 1929 2 Sheets-Sheet 1



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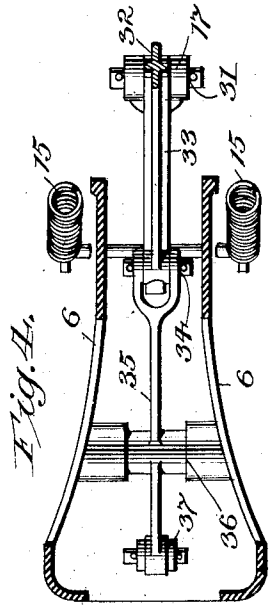


Fig. 4.

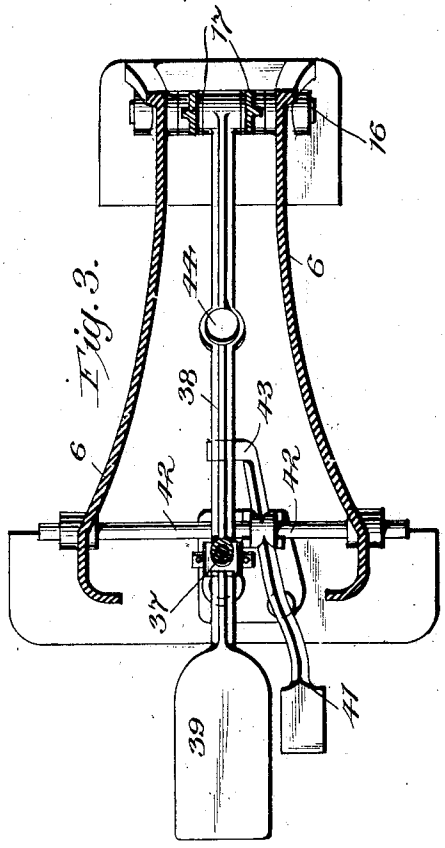


Fig. 3.

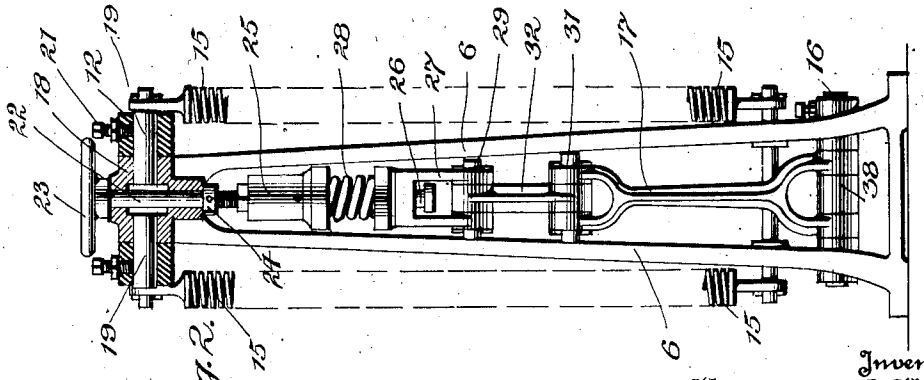


Fig. 2.

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UNITED STATES PATENT OFFICE

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GARMENT PRESS

Application filed March 26, 1929. Serial No. 350,089.

This invention relates to garment presses and particularly to toggle mechanisms for actuating the same.

The prime purpose of the invention is to provide a commercially practicable linkage, capable of exerting great force and offering a wide opening movement of the press and compact arrangement.

The linkage comprises two thrust links combined with a floating member to which the links are pivoted at spaced points, so that the floating member may be brought into thrust alignment with the links by a compound swinging and rotating movement of the floating member. This ensures a wide range of movement without reduction in the force multiplying action of the toggle.

To secure the desired action a point in the floating member, spaced from the line connecting the two pivots, is guided in a fixed path. A convenient way is to guide this point by pivoting the member at such point to a swinging link, which by suitably arranging the parts may be made to form a secondary toggle with the movable member, and thus enhance the force multiplying function of the first toggle.

Various structures for supporting the buck, and guiding the movable head relatively thereto are known, and the linkage herein disclosed is generally applicable, but will be described as applied to a conventional type of press in which the head is carried by a vertically swinging lever.

In the drawings,

Figure 1 is a side elevation of a press with parts broken away to show the construction.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a section on the line 3—3 of Figure 1.

Figure 4 is a section on the line 4—4 of Figure 1.

The main frame of the press is of known form and is indicated generally by the numeral 6. The work table appears at 7, the buck support at 8, and the buck at 9.

Pivoted at 11 is the usual bifurcated head lever or yoke 12, carrying the usual press head 13 with hand grip 14. The yoke 12 is urged in a press opening direction by the tension spring 15.

Journaled on the bar 16, which is supported in frame 6 is the lower toggle link 17. The upper main toggle link is longitudinally compressible and is adjustable as to length, this being a known construction. It includes a head 18 journaled in the trunnions 19 fixed in yoke 12 by the set screws 21; a thrust rod 22 swiveled in the head 18 and rotatable by a hand wheel 23; a thrust collar 24 pinned to rod 22; a spring seat 25 into which rod 22 is threaded; a guide stem 26 fixed in spring seat 25; a combined spring seat and forked fulcrum block 27 guided on said stem and a compression spring 28 surrounding said stem and reaching between said spring seats.

The lower end of the upper main toggle link (part 27) is hinged by journal pin 29 and the upper end of the lower main toggle link 17 is hinged by journal pin 31, to a floating thrust member 32 having an arm 33. The pins 29 and 31 are spaced apart in this member a substantial distance and the arm 33 extends in a direction generally transverse to the line connecting the centers of the journal pins. Near its end the arm 33 carries a journal pin 34.

A lever 35 is pivoted between its ends at 36 to the frame 6. One end is pivoted to the pin 34, the other end is connected by a tension link 37 (shown as adjustable in length) to a foot lever 38 which is journaled on pin 16 at the rear of the machine and terminates at the front of the machine in a foot pedal 39.

The fulcrum points on the frame are so located and the moving parts are so formed and dimensioned, that at the limit of downward motion of lever 38, the journal pins 16, 31 and 29 and the trunnions 19 lie in a straight line or substantially so (full line position, Figure 1) and lever 35 aligns with arm 33. Thus the press locks closed in a familiar manner.

The foot lever 38 may be raised sufficiently to break the toggle strut action by means of a kick-off pedal 41 pivoted in the frame 6 at 42 and having a rearward extension 43 which

underlies lever 38. The press opening movement of the linkage is arrested by collision of arm 33 with buffer 44 on lever 38 (see dotted line position, Figure 1).

Various changes may be made in the specific details of the linkage, and as stated it is generally applicable to garment and like presses of various known types.

What is claimed is:

1. In a press, the combination of a fixed frame; a fixed pressing element supported thereby; a second pressing element cooperative therewith; a pivoted supporting member for said second pressing element; a link pivotally connected at one end to the pivoted supporting member; a link pivotally supported on the fixed frame; a thrust member having spaced pivotal connections with the links and having a third pivot displaced from the line connecting its pivot connections with the two links, the four pivotal connections of the two links being substantially aligned when the press is closed; and means for moving the third pivot of the thrust member in a definite path to cause said four pivotal connections of the links to move toward and away from alignment.

2. In a press, the combination of a fixed frame; a fixed pressing element mounted thereon; a second pressing element cooperative therewith; a pivoted support for said second pressing element; a link pivotally supported on the fixed frame; a link pivotally connected to the pivotal support for the second pressing element; a thrust member having spaced pivotal connections with the links, and having a third pivot displaced from the line connecting its pivot connections with the two links, the four pivotal connections of the two links being substantially aligned when the press is closed; a lever having a fixed pivotal support and also connected to the third pivot of the thrust member; and means for moving said lever to cause said four pivotal connections, through the movement of the thrust member, to move toward and away from alignment.

3. In a press, the combination of a fixed frame; a buck carried thereby; a member pivoted on said frame to move in a definite path; a head carried by said pivoted member into and out of pressing relation with the buck; a pair of links, one pivoted at one end to the fixed frame and the other pivoted at one end to said pivoted head-carrying member; a thrust member pivoted at spaced points to the other ends of said links; a movable member pivoted to said thrust member at a point spaced from the line connecting said spaced points a distance greater than the interval between said spaced points; and means for moving said last named movable member.

4. In a press, the combination of a fixed frame; a buck carried thereby; a movable member guided on said frame to move in a definite path; a head carried by said member into and out of pressing relation with said buck; a pair of links, one pivoted at one end to said fixed frame and the other pivoted at one end to said movable member; a thrust member pivoted at spaced points to the other ends of said links and having an arm extending laterally relatively to a line connecting said spaced points, and having a third pivot; a lever pivoted to the fixed frame and to said pivot; and means for swinging said lever, the parts being so dimensioned and the pivot connections being so located that the lever and said arm swing into substantial alignment as the four pivot points of the first two links approach substantial alignment.

In testimony whereof I have signed my name to this specification.

CLARENCE M. CLARKE.