

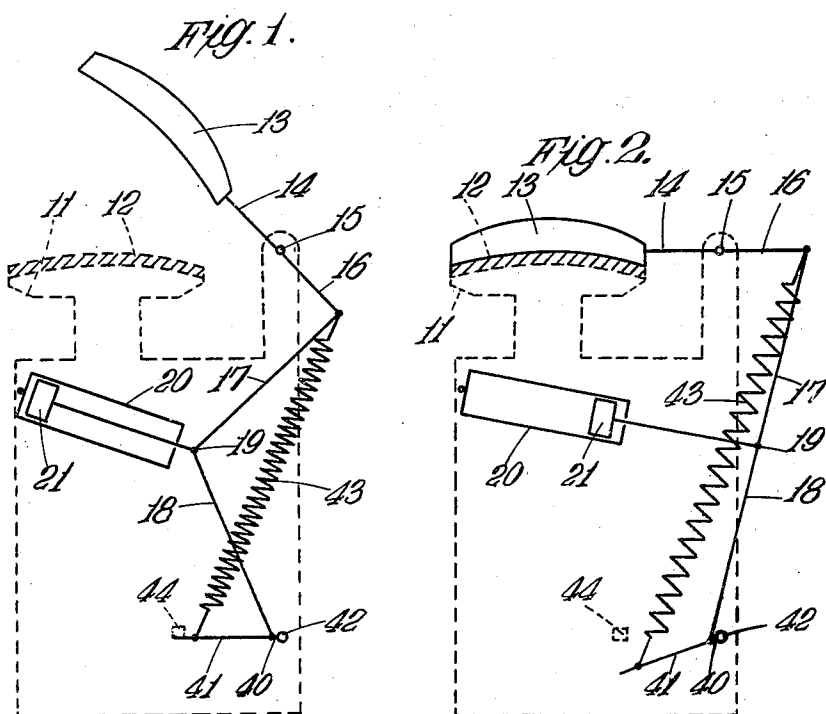
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TOGGLE OPERATED PRESS

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TOGGLE OPERATED PRESS

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2 Claims. (Cl. 38—40)

This invention relates to presses of the kind in which pressure is obtained through the medium of a toggle mechanism.

As is well known, a toggle mechanism operates most efficiently when the two arms of the toggle are coming into the position where they are in alignment. Consequently, when articles differing in thickness have to be pressed in succession, it is always necessary to adjust the press, e. g. by moving up or down the normally fixed part of the press for each article in turn, in order that the toggle mechanism may be worked under proper conditions. Quite a small variation in thickness of the articles being pressed will be sufficient to upset the proper working of the toggle mechanism and without adjustment it will be impossible to obtain constant pressure on different articles.

This adjustment of the press for each article is very inconvenient and difficult to carry out with any great degree of accuracy and is particularly objectionable in the case of the presses of this kind which are used in laundries, dry cleaning and clothes manufacturing establishments. For not only do the different articles of clothing differ widely in thickness, but the padding, with which one part of the press is covered, also changes in thickness very quickly and has frequently to be replaced. Thus with new padding and thick clothing, it may be impossible to obtain the necessary pressure, whereas with old padding and thin clothing, the faces of the press may never meet at all.

It is an object of the present invention to provide a simple equalizing arrangement for a toggle operated press which will ensure that the press always works under optimum conditions and gives constant pressure, despite variations in thickness in the articles being pressed.

A further object of the invention is to provide a floating pivot for that end of the toggle which normally is pivotally mounted on a fixed part of the press, which yields against a constant restoring force so that whatever be the thickness of the material to be pressed, the toggle arms may be brought into alignment and will exert a constant pressure on said material. If desired, the constant restoring force may be independent of the force employed to actuate the toggle. Moreover, the magnitude of the pressure exerted on the material may be made adjustable by altering the value of the constant restoring force. The restoring force may, for example, be provided by means of a spring of such length or construction that it exerts a constant reaction

over a suitable range of movement, or by a pivoted lever and counterweight. The invention is illustrated by way of example in the accompanying drawing in which Figures 1 and 2 show diagrammatically a press.

Referring now to the drawing, Figures 1 and 2 thereof show a press in its open and pressing positions respectively. The press consists of a horizontal fixed bed 11 with a padded upper surface 12 upon which the articles to be pressed are laid and a pressing head 13 mounted on the end of an arm 14 pivoted at 15 and movable in a vertical direction towards and away from the fixed bed 11 under the control of the operating mechanism. At the end of a rearward extension 16 of the pivoted arm 14 is pivotally connected the upper end of a link 17, the lower end of this link 17 is pivotally connected with the upper end of a further link 18 the lower end of which, in the normal type of press, is pivotally connected with a fixed part of the structure of the press. These two links 17, 18 together form the toggle and the press is operated by moving the junction 19 of the two links 17, 18 forward (to the left Figure 1) to open the press and then moving the junction 19 rearwardly (to the right Figure 1) until the links 17, 18 lie substantially in alignment to close the press, the operation being effected, for example, by means of a cylinder 20 and piston 21 connected with the junction 19 and worked by means of compressed air.

The lower end of lower toggle link 18 is pivotally connected at 40 with a lever 41 which is itself pivotally mounted at 42 on the framework of the press. The free end of lever 41 is connected with one end of a spring 43, the other end of which is connected with the rearward extension 16 of the arm 14 on which the pressing head 13 is secured. Movement of the lever 41 in an upward direction above the horizontal is prevented by means of a stop 44. In operation, the press is closed by the action of the piston 21 in forcing the junction 19 of the toggle links 17, 18 rearwardly, the spring 43 becomes extended, and in the pressing position (shown in Figure 2) serves to provide a restoring force on the pivot 40, of the lower toggle link 18, which is forced downwards as the links 17, 18 come into alignment. The restoring force on the pivot 40 is made constant by a suitable design of the system, such that although the tension in the spring 43 increases due to the downward movement of the lever 41, such movement of said lever 41 about the fixed pivot 42 reduces proportionately the effective distance from said fixed pivot 42 at

which the spring 43 acts. The spring 43 also operates to lift the pressing head 13 when the press is opened.

I claim:

1. In an ironing press, a pressing head pivotally mounted on the frame of said press and having a rearward extension, an upper toggle link connected with said rearward extension of said pressing head, a lever, one end of which is pivotally mounted on the frame of said press, the other end of said lever being free, the lower link of said toggle being pivotally attached to said lever adjacent to the pivot of said lever, said links being pivotally connected to each other to

form the toggle, and a spring connected between a point adjacent the free end of said lever and the upper link of said toggle, whereby, after said toggle links have been aligned, the extended spring exerts a constant pressure against the downward movement of said lever under the influence of the toggle.

2. Structure as claimed in claim 1, wherein fluid pressure means are operatively connected to said toggle links at the pivot formed by the connection between said links, whereby pressure may be exerted by the fluid pressure power means to align said toggle.

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