R. FITTS.

Chair-Seat Press.

No. 217,359. Patented July 8, 1879.

Fig: 1.

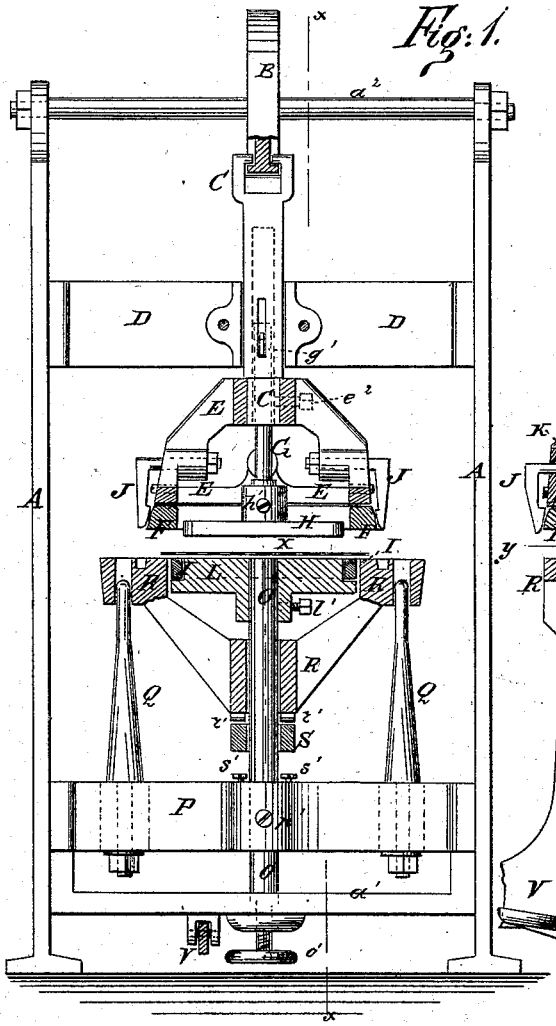


Fig: 2.

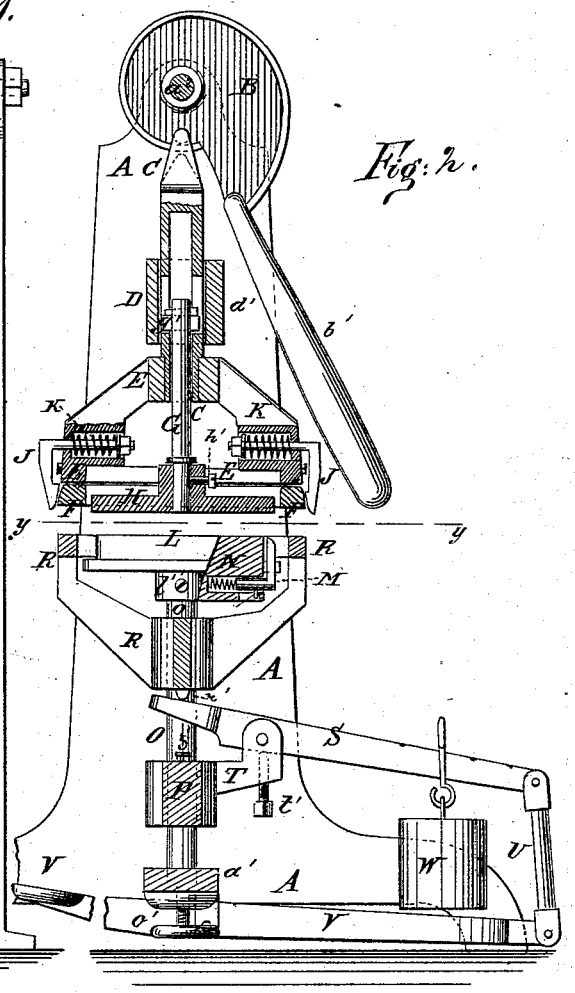
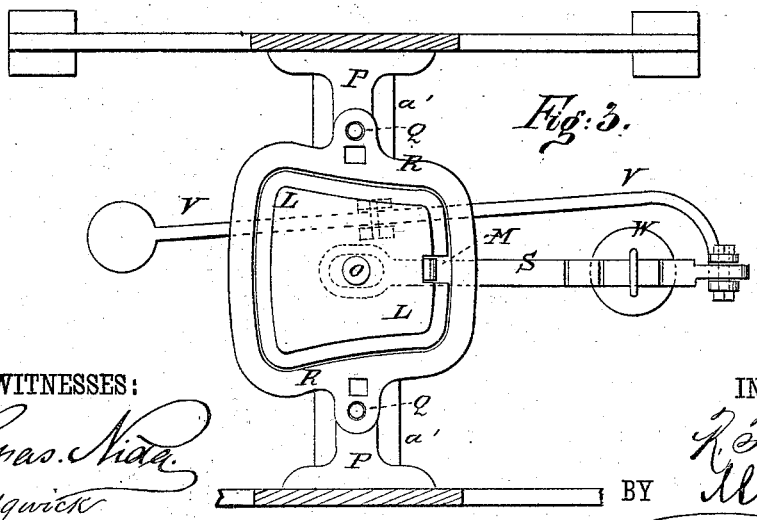


Fig: 3.



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ROBERT FITTS, OF LUNENBURG, ASSIGNOR TO WALTER HEYWOOD CHAIR COMPANY, OF FITCHBURG, MASSACHUSETTS.

IMPROVEMENT IN CHAIR-SEAT PRESSES.

Specification forming part of Letters Patent No. **217,359**, dated July 8, 1879; application filed March 22, 1879.

To all whom it may concern:

Be it known that I, ROBERT FITTS, of Lunenburg, in the county of Worcester and State of Massachusetts, have invented a new and Improved Chair-Seat Press, of which the following is a specification.

Figure 1 is a front view of my improved press, partly in section, to show the construction. Fig. 2 is a vertical section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a horizontal section of the same, taken through the line *y y*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for applying cane and other flexible seats to the seat-frames of chairs, which shall be so constructed that the said seat will be drawn taut as it is being applied, and which shall be simple in construction, convenient in use, and reliable and rapid in operation.

The invention consists in the combination of the two plates and the two frames with each other, and with a supporting frame-work, for applying flexible seats to the seat-frames of chairs; in the combination of the spring-catches with the upper frame, for holding the outer part of the seat-frame; in the combination of the spring-catch with the lower plate, for holding the inner part of the seat-frame; in the combination of the sliding rod with the hollow bar of the upper frame and with the upper plate, to give the said upper plate an independent movement; and in the combination of the two levers, the connecting-rod, and the adjustable weight with the lower frame, for holding it up and raising it independent of the lower plate, as hereinafter fully described.

A A are the frames of the machine, which are connected near their lower ends by a cross-bar, a^1, and at their upper ends by a rod or shaft, a^2. To the center of the rod a^2 is attached a cam, B, which is provided with a lever-handle, b', for convenience in operating it. Upon the edges of the cam B are formed flanges, so that the flanged edge of the said cam may fit into the T-groove in the upper end of the bar C, and thus raise or lower the said bar C, as may be desired. The bar C slides up and down in a socket or keeper, d', attached to the middle part of the bar D, the ends of which are attached to the side frames, A. The lower end of the sliding bar C fits into a hole in the arched upper part of the frame E, where it is secured in place adjustably by a set-screw, e'. The rim of the frame E is made of exactly the shape of the outer part, F, of the seat-frame. The sliding bar C is perforated longitudinally from its lower end to receive the rod G, which is secured in place, kept from turning, and allowed to have an up-and-down play by a key, g', passed through it and through a longitudinal slot in the sliding bar C. The lower end of the rod G is inserted in a socket formed upon the center of the plate or flatter H, where it is secured in place adjustably by a set-screw, h'. The plate H is of exactly the shape and size of the inner part, I, of the seat-frame.

J are catch-hooks, the shanks of which are inserted in sockets in the frame E, a little above its rim, and have spiral springs K placed upon them to draw them inward. The hooks J project downward and have the inner sides of their ends beveled, to adapt them to take hold of and hold the outer part, F, of the seat-frame, as shown in Figs. 1 and 2.

Directly below the plate H is a plate, L, of the shape of a chair-seat, and of such a size that a rabbet formed around the upper edge may receive the inner part, I, of the seat-frame. In the rear lower part of the plate L is formed a socket to receive the stem of a catch, M, which is held out by a spiral spring, N, and is kept from being pushed out too far by a keeper, so as to hold the said inner frame, I, in place. In the lower side of the center of the plate L is formed a socket, in which the upper end of the rod O is secured by a set-screw, l'. The rod O passes down through a hole in the cross-bar P, where it is secured in place by a set-screw, p', and its lower end rests in a socket in the cross-bar a^1 of the frame-work A. o' is a set-screw, which passes up through the bar a^1, and rests against the lower end of the rod O, so that the position of the plate L may be adjusted by loosening the set-screw p' and turning the screw o' up or down. The end

parts of the bar P are slotted longitudinally to receive the lower ends of the guide-rods Q, which are secured in place by nuts screwed upon their lower ends. The upper ends of the guide-rods Q pass through guide-holes in projections upon the sides of the rim of the frame R. The rim of the frame R is made of such a shape and size as to receive and fit around the plate L. The middle part of the frame R is depressed, and has a socket or hole through its center to receive the rod O.

Upon the lower side of the depressed middle part of the frame R are formed two ribs, r', which rest upon the upper side of the inner end of the lever S, which inner end is slotted to receive the rod O. The lever S is pivoted to an arm, T, formed upon the bar P, and which is provided with a set-screw, t', to limit its play. To the outer end of the lever S is pivoted the upper end of a connecting-bar, U, the lower end of which is pivoted to the rear end of the lever V. The lever V is pivoted to the cross- bar a^1, and its forward end projects into such a position that it may be conveniently operated by the operator with his foot. The upper edge of the lever S is notched to receive the bail of the weight W. The downward movement of the forward end of the lever S is limited by set-screws s', screwed into the upper side of the bar P.

In using the machine the two parts of the seat-frame are laid upon the plate L and the frame R, and the frame F and plate H are pressed down upon them, forcing the inner part, I, of the seat-frame into the rabbet of the plate L, where it is held by the spring-catch M, and forcing the spring-catches J down upon the outer part, F, of the seat-frame, so that the said part F will be carried up by and with the frame E when it is again raised. The woven cane or other flexible seat X is then laid upon the plate L, the part I of the seat-frame, and the frame R, and the frame E and the plate H are again lowered. As the frame E and the plate H are lowered, the plate H first comes in contact with the seat X, and flattens and smooths it upon the plate L. The outer part, F, of the seat-frame next comes in contact with the seat X and presses its outer part against the frame R. The three frames E F R then move down together, forcing the outer part, F, of the seat-frame down into the same plane with the inner part, I, over the seat X, the said seat being all the time under tension, so that it will be smooth and taut. The plate H and the frame E are then raised and the seat is taken from the machine. The adjacent edges of the parts F I of the seat-frame and the part of the seat X that goes between them are coated with glue, so that they will be firmly connected together. The parts of the seat are further secured in place by nails or screws passed through the part I, the seat X, and into the part F. The projecting edge of the seat X is then cut off smooth and the formation of the seat is completed.

The frame E and the plate H are raised and lowered by operating the cam B, and the frame R is lowered to allow the seat F I X to be removed by operating the foot-lever V. The frame R may be held up with more or less force, as may be required, by adjusting the weight W so as to give any desired tension to the seat X while being applied to the seat-frames I F. The plates H L and frames E R may be adjusted for different thicknesses of seat-frames F I; but a new set must be used for each different size and shape.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improvement in chair-seat presses, the vertically-moving plate or plunger H, adapted to be depressed upon the flexible seat X and hold the same on plate L, in combination with the stationary plate L, having a rabbet to receive the inner part, I, of the chair-seat frame, and the elevating and depressing frame R, for guiding and steadying the movement of part F of the seat-frame, substantially as described.

2. The spring-catches J on frame E, for holding the outer part, F, of the seat-frame, in combination with the plate L, having rabbet for part I, the plate H, for holding the plate X, and the elevating and depressing frame R, substantially as described.

3. The spring-catch M, for holding the inner part, c, of the frame-seat, in combination with the rabbeted plate L and elevating and depressing frame R, substantially as described.

4. The sliding rod G, carrying plate H, socketed in bar C, connected with the latter by slot and pin, and provided with suitable operative mechanism, in combination with the sliding frame R and vertically-adjustable plate L, as and for the purpose specified.

5. The combination of the levers V S, the connecting-bar U, and the adjustable weight W with the lower frame, R, for holding it up and raising it independent of the plate L to apply tension to the seat X, substantially as herein shown and described.

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