D. Dennis.
Ironing Hats.

No. 11214. Patented. July 4. 1854.

Fig. 1.

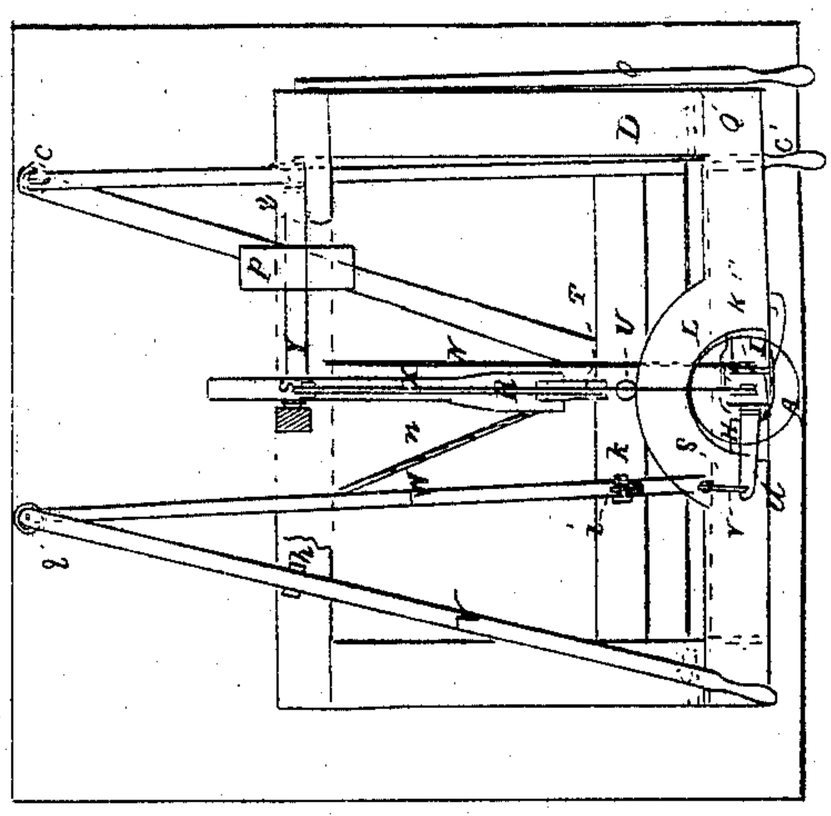


Fig. 3.

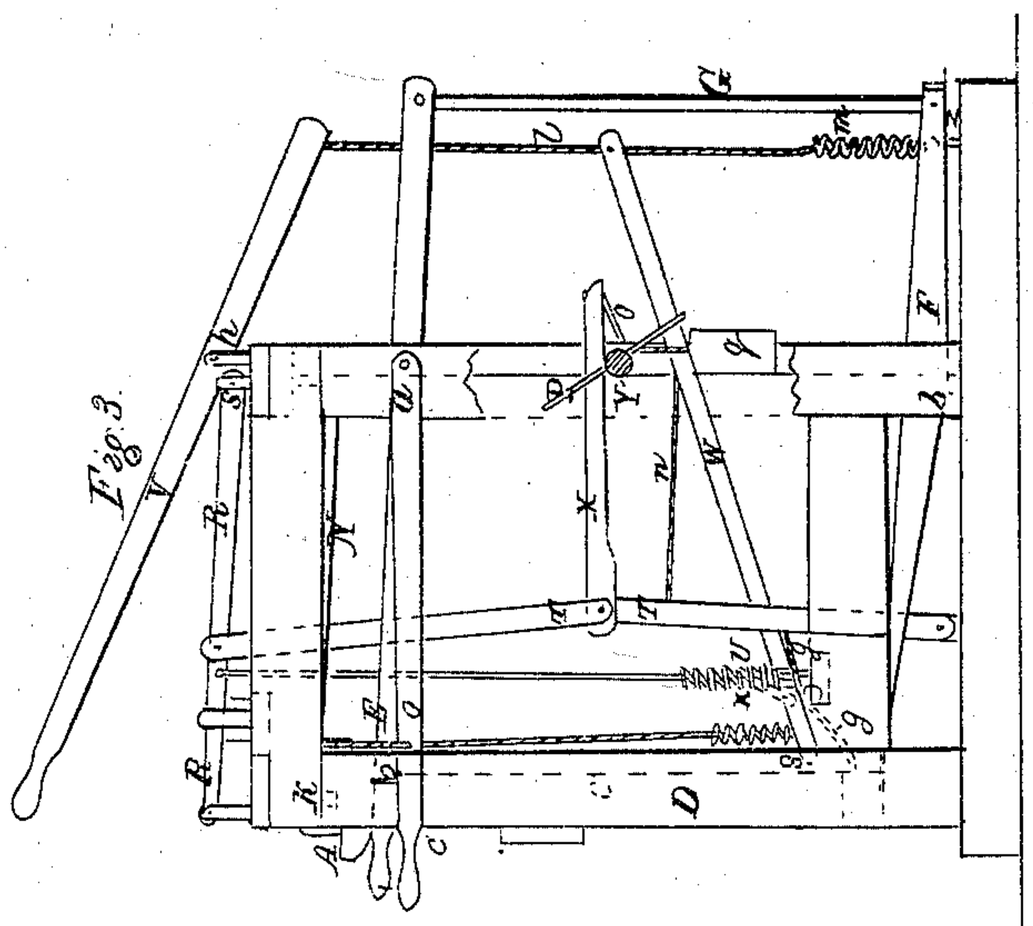
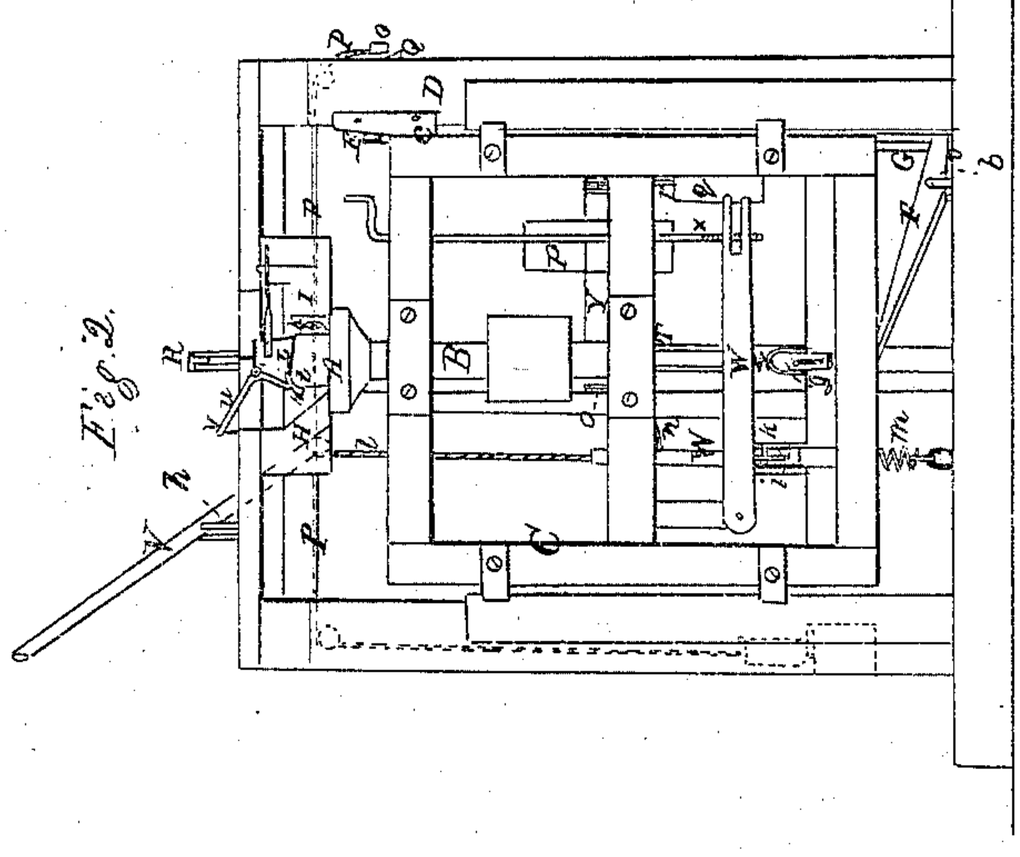


Fig. 2.



UNITED STATES PATENT OFFICE.

DEXTER DENNIS, OF BARRE, MASSACHUSETTS.

FINISHING PALM-LEAF HATS.

Specification of Letters Patent No. 11,214, dated July 4, 1854; Antedated January 4, 1854.

To all whom it may concern:

Be it known that I, DEXTER DENNIS, of Barre, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Pressing or Finishing Palm-Leaf Hats or others of Like Character; and I do hereby declare that the same are fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a top view; Fig. 2, a front elevation, and Fig. 3 a side elevation of my improved machine for pressing and finishing palm leaf hats.

In the said drawings, A represents the hat holder or block, which I do not make circular in horizontal section, like other holders of other hat pressing machines, but make it elliptical or oval or approximately so, in such section, to correspond with the shape of the head of a person. This holder is mounted on, and revolved by a vertical shaft, B, that is sustained in a movable frame, C, which is supported on the main frame, D, of the machine so as to be capable of being elevated and depressed, in order to carry the hat holder up to or away from the smoothing blocks as occasion may require. The apparatus by which the frame C, is moved, consists of two levers, E, F, arranged as seen in the drawings, and united by a connecting rod G. These levers turn on fulcra at *a*, *b*, and the rear end of the lower lever is made to rest on a spring *c*, while its front end projects under and against the underside of the frame, C. By laying hold of the front end of the upper lever and pulling it downward, we depress the frame, until the lever is brought and moved under the stop *c'*. The removal of the lever from underneath the stop and allowing it to rise will enable the spring *c*, to so actuate the lower lever as to raise the frame C, so as to carry the hat holder up toward the smoothing irons. These smoothing irons, or flats, are seen at H, I, K, L, M. The first two of them, viz., H. I, serve to smooth the rim or brim of the hat. The next one K, is used to smooth or finish the sides of the hat. For this purpose, it is fixed on the end of a long spring or spring rod N, by which it is borne against the hat body, and kept against it during the rotation thereof. It may turn freely on the spring rod if desirable, in order to enable it to adapt itself in vertical directions to the hat body. By means of the spring it is not only pressed against the body, but allowed to adjust itself to the varying form thereof in horizontal section.

The iron or flat K, is drawn away from the body, by means of a lever, O, which is connected with the spring rod by a cord, P. By depressing the lever down underneath a stop, Q, the spring flat, K, is kept against the vertical edge of the flat, I. The crown flat, L is suspended to the front end of a lever R, whose fulcrum is at its opposite end, S. This lever is connected with a set of toggle bars, T, which are drawn straight or into line (so as to lift the lever R), when the frame, C, descends, and this by means of the draft of the frame, on a cord, *g*, that connects it with the lower bar of the toggles. The crown flat, L, is depressed by the reacting power of a spring U, connected with the frame of the machine and the lever R. There are two other levers, V, W, arranged as seen in the drawings. The upper one, V, moves on a stationary fulcrum *h*. The other has a swinging fulcrum, that is to say, its fulcrum is on the lower end of a pendulous bar, *i*, that swings on a stationary pin, *k*, back and forth toward and away from the frame, C. The upper lever serves to elevate the rear arm of the lower lever, it being connected to it by a cord, *l*. A spring, *m*, is applied to draw downward the said arm of the said lower lever. The lever, W, is connected with the toggles by a cord, *n*, so that when the said lever is elevated and drawn backward it will pull back the toggles, so as to allow the descent of the crown flat, L, upon the hat. This descent is prevented from taking place too quickly, or with too much force. The mechanism, which does this is as follows: A pitman, X, is extended back from the toggles and over a windlass, Y. A cord, *o*, from the outer end of the pitman is extended to and wound around the windlass. On this windlass is a fan or broad arms, *p*. A weight, *q*, is suspended from the windlass by means of a cord, *r*, which is wound around the windlass in opposite direction to that of the cord, *o*. When the toggles are drawn backward, their back movement is counteracted by the action of the fans against the air, the fans and windlass being put in rotation by such movement. At the same time the frame, C, is raised up, the attendant applies his hand to the front arm of the lever, V, and pulls

it down, so as to elevate the rear arm of the lever, W, and move back the said lever. As soon as the frame, C, has been elevated, the attendant lets go of the lever, V, which will next be drawn downward and its front end be forced under a projection, S, from the frame, C, whereby the frame, C, will be forced upward with the degree of pressure required to keep the hat up against the smoothing flats, during the process of ironing it.

The smoothing flat, M, is for the purpose of smoothing a rounded corner or part of the body intervening between the crown and sides of the hat. This part is seen at *t*, and the flat to do this, is an additional one to the number generally used in a machine for ironing hats, as it has not been customary to iron hats with dishing crowns on such machines. These hats are termed the "Kossuth palm-leaf hats." The said flat, M, is jointed to a lever, *u*, that is hinged at its fulcrum, *v*, to the crown flat, and has a spring *v'*, bearing against its upper arm, so as to press the flat up to the hat. The lower end of the shaft, B, is stepped on a lever, *w*, that is elevated by means of an adjusting screw, *x*, the whole being applied to the frame, C, as seen in Fig. 2, of the drawings.

In finishing a hat, my process for applying the stiffening differs essentially from that generally adopted, which is to: First, dip the whole hat into the glue or stiffening composition, and next, block it, and suffer it to dry on the block, and subsequently removing it from the block, by taking the block to pieces and forcibly tearing it from the hat. Before ironing the hat, its exterior has to be covered with a wet cloth, which is suffered to remain on it until the glue on the exterior surface of the hat becomes softened and adheres to the cloth, which it will do with greater tenacity, than to the hat. On removal of the cloth, the glue will come off with it.

My improved process of applying the stiffening glue or composition, is to put it directly on the hat holder, when the latter is in revolution. This may be done by an attendant holding against the hat holder a brush dipped in the glue. When the surface of the hat holder has been thoroughly covered, which will be in a few moments, the hat is to be put upon it and immediately moved up against the smoothing irons or flats, and the hat holder put in rapid rotation. The heat and smooth surfaces of the flats will not only smooth the hat, but will dry the glue, and such glue instead of sticking to the hat holder, will adhere to the hat, so that the latter can readily be removed from the former. This is an entirely new mode of applying the stiffening, and enables the same to be done with an immense saving of time and labor, and with great perfection.

What I claim is as follows:

1. I claim the above described improved mode of stiffening and finishing a hat, viz, the covering the outer surface of the hat holder with the stiffening composition and applying the hat thereon, and subjecting it to the action of the heating flats substantially as above specified.

2. I also claim the combination of the round corner flat, M, with the crown and side flats, so as to operate in connection with them as specified.

3. I also claim the improvement of using a hat holder, elliptical or oval in its horizontal section, in combination with applying to the side flat a spring bar or contrivances, that will allow it to spring or move, while the hat holder is revolved, and adapt itself to such hat holder as specified.

4. I claim in combination with the top or crown flat, and the elevating and depressing machinery thereof, a fan apparatus to regulate its downward descent on the hat as specified.

5. And in combination with the frame, C, and the crown flat, I claim the toggles, T, and levers, R, V, W, and the projection, *s*, the springs and connecting cords as described, the whole being to enable the frame, C, and the top or crown flat to be operated substantially as specified.

In testimony whereof, I have hereto set my signature, this eleventh day of February, A. D. 1853.

DEXTER DENNIS.

Witnesses:
F. R. Hale, Jr.,
R. H. Eddy.