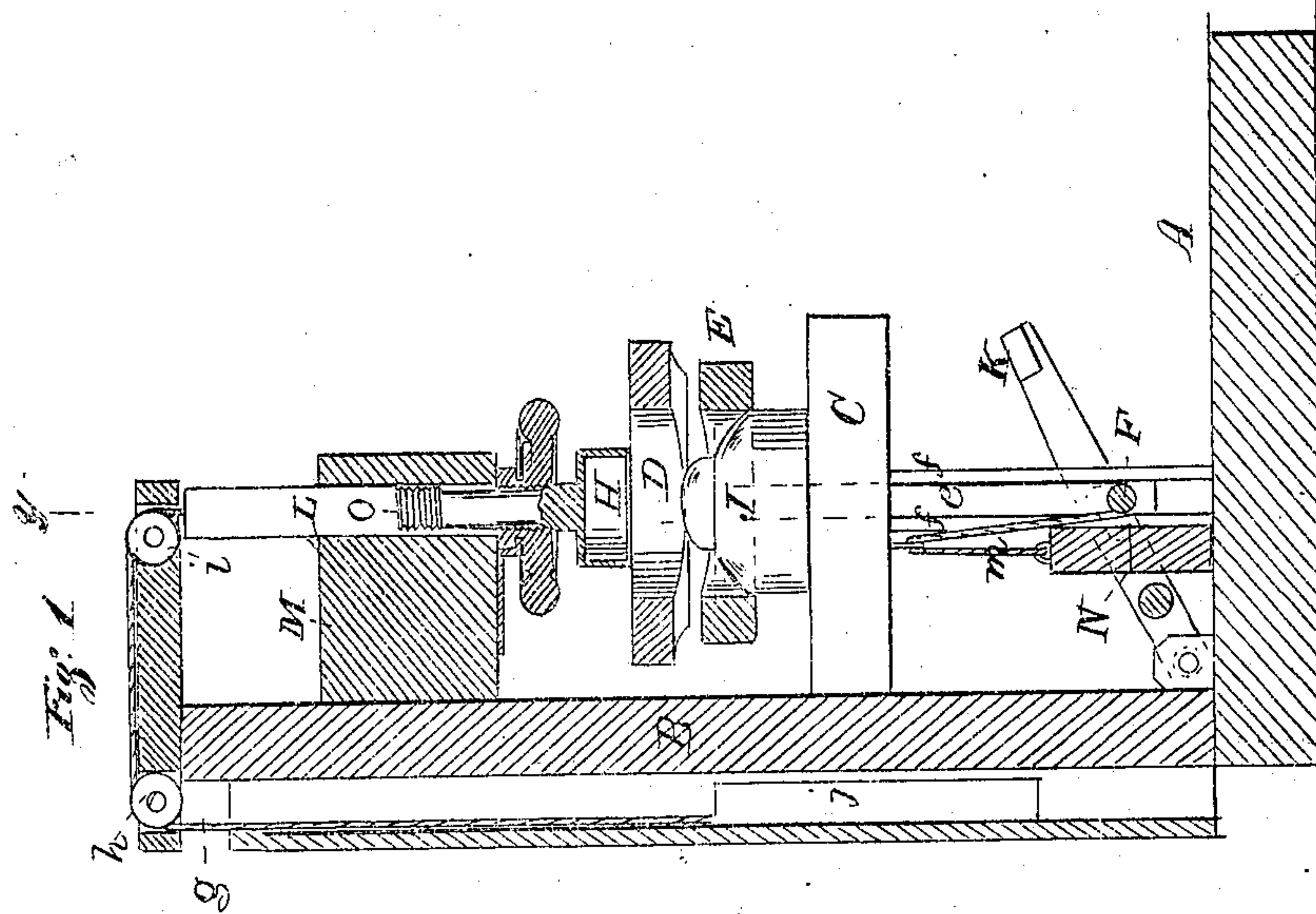
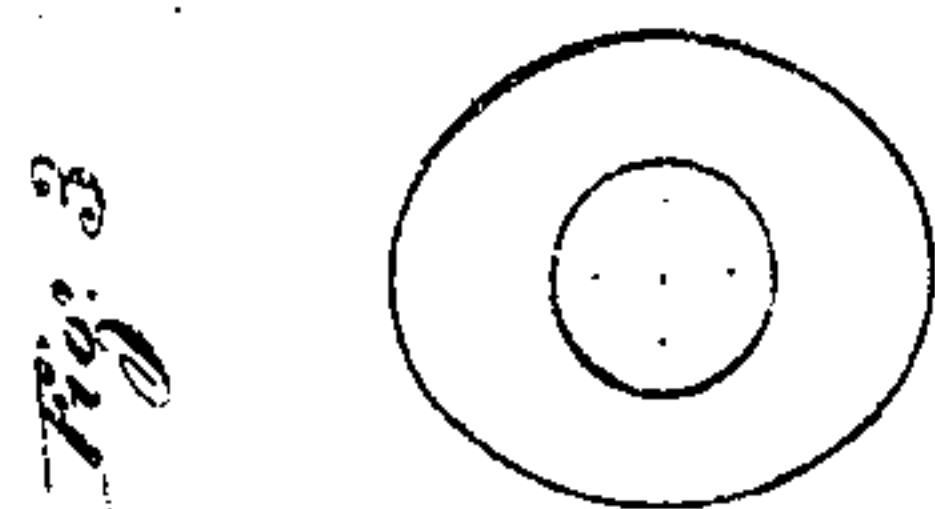
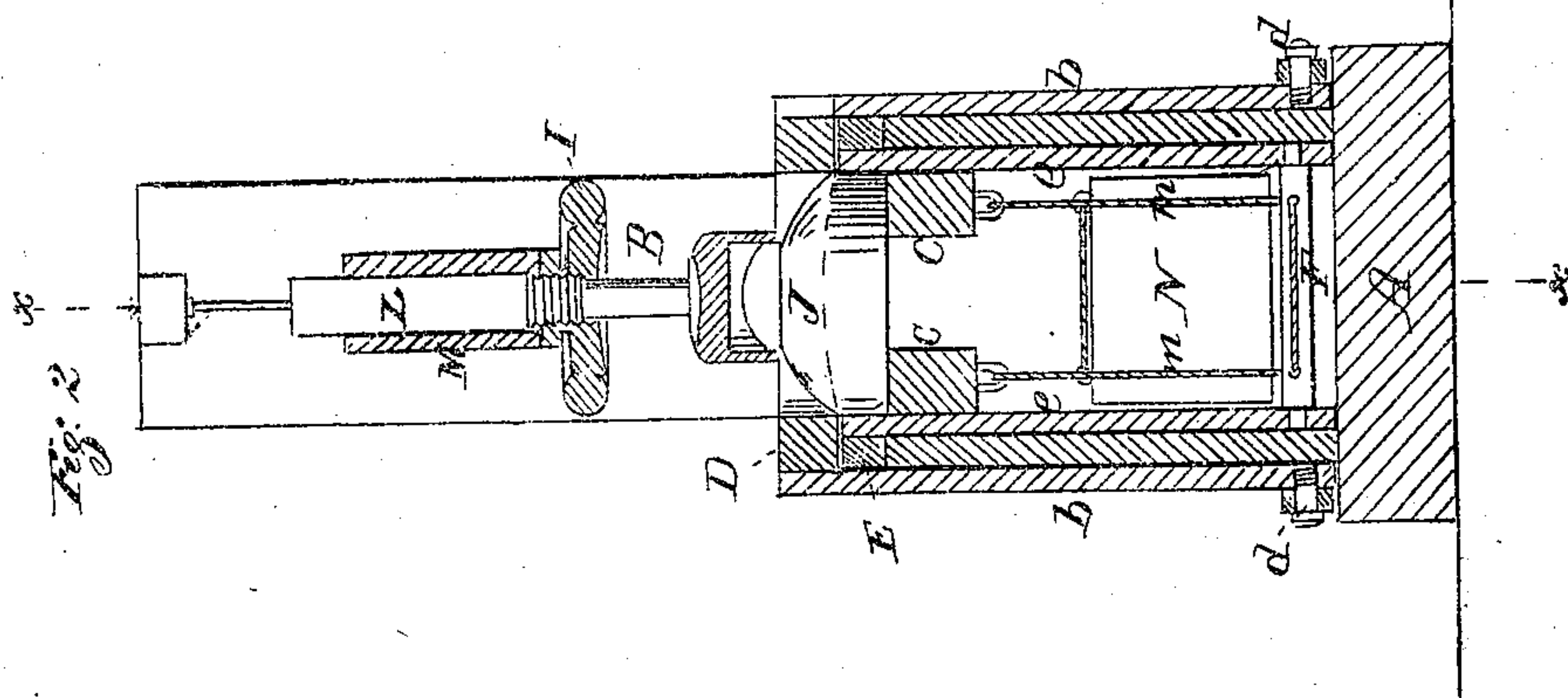


*C. O. Fairmenter,
Pressing.*

No. 34,771.

Patented Mar. 25. 1862.



*Witnesses.
J. W. Coombs
James Clark*

*Inventor.
C. O. Fairmenter
per Munn & Co
Attorneys*

UNITED STATES PATENT OFFICE.

C. O. PARMENTER, OF AMHERST, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR FORMING BONNETS.

Specification forming part of Letters Patent No. 34,771, dated March 25, 1862.

To all whom it may concern:

Be it known that I, C. O. PARMENTER, of Amherst, in the county of Hampshire and State of Massachusetts, have invented a new and Improved Machine for Forming Hats and Bonnets from Palm-Leaf or other Fabrics; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical central section of my invention, taken in the line *xx* of Fig. 2. Fig. 2 is a transverse section of the same taken in the line *yy* of Fig. 1. Fig. 3 is a top view of a hat.

Similar letters of reference indicate corresponding parts in the several figures.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the foundation or bed of the machine, which has secured in its back end an upright B, from the front side of which, at a convenient height from the bed to form a table for a person to work at, project horizontally two arms C C, which are supported about midway of their length by uprights *a a*, secured at bottom in the bed A.

The hat-block or former J is of metal and of oval form in its horizontal section, and rests near each extremity of its major axis upon the arms C C. The upper surface of the hat-block or former J is made to correspond with the shape of the hat or bonnet desired to be produced.

D and E represent, respectively, the upper and lower halves of the clamps, which have an opening in the center to correspond with the size and shape of the hat-block in its horizontal section, and the lower one of which, when in its lowest position, fits over the hat-block and rests upon the arms C C. The upper surface of the lower half of the clamp on either side of the opening is of convex form, to correspond with the curvature of the brim of the hat, and the under surface of the upper half of the clamp is hollowed out to fit the convexity of the lower half, so that the two can be brought close together to clamp the fabric between them equally on all sides of the open-

ing. The upper half of the clamp is attached at opposite ends of its major axis to the extremities of the sliding bars *b b*, which are fitted to move up and down between vertical guides (not shown in the drawings) attached on opposite sides of the uprights. The lower ends of these sliding bars are each provided with a laterally-projecting pin *d*, which pins connect the sliding bars *b b* with the treadle K, by means of which motion is imparted through the sliding bars to operate the clamps D E. The lower half E of the clamp in its outer diameter is made somewhat smaller than the upper half and concentric therewith, and is attached to the extremities of the sliding bars *e e*, which move up and down between vertical guides *f f*, attached on opposite sides of the uprights and projecting inwardly. These bars are connected together at their lower ends by a cross-bar F, which is suspended by cords *m*, passing over grooved pulleys depending from the arms C and having a weight N attached to the opposite ends for the purpose of causing the lower half E of the clamp to return to its normal position after the process of forming a hat is performed, and also for causing it to exert a pressure upon the upper half D to clamp the fabric between them while the hat is being formed.

H is the annular-flanged stretcher secured upon the end of the spindle L, which is of rectangular form for about one-half of its length from the top down, which square portion is nicely fitted in a hole in the projection M, which allows the spindle and stretcher to move up and down and prevents any rotary movement of the same. The part of the spindle adjacent to the square shoulder has a screw-thread *o* formed on it, which fits a corresponding screw-thread in the hand-wheel I. This hand-wheel is kept in contact with the under side of the projection by a forked bracket, the forked portion of which partly surrounds the hub of the hand-wheel and supports it in position by a collar secured on the end of the hub above the prongs of the fork. The spindle with the annular stretcher H is suspended from the ceiling or from a cross-tree by a cord *g*, which passes over loose pulleys *h i*, and has a weight *j* attached at its

opposite end for the purpose of elevating the stretcher out of the way when not in use to form the crown of the hat.

The operation is as follows: The machine being in the position shown in Fig. 1, the sheet or sheets of palm-leaf or other fabric from which the hat or bonnet is to be formed are placed between the clamps and the upper half D brought down upon the lower half E by pressure of the foot on the treadle, clamping the fabric between them, when by a still greater pressure the clamps descend together, allowing the fabric as they descend to gradually draw through them, and when in their lowest position to be tightly stretched over the hat-block, in which position it is retained, while the annular stretcher is brought down by hand until the screw-thread on the spindle enters the screw-thread of the hand-wheel, when by turning the hand-wheel in a direction to cause the thread to enter it the stretcher is brought down upon the fabric, causing it to fit closely around the block at the base of the crown, thus forming the crown of the hat, and with the clamps causing the brim to conform to the shape of the hat-block, forming the brim of the hat, in which position it is allowed to remain for about a minute, when the stretcher is run up by the hand-wheel until the screw runs out of the nut, when it is carried up out of the way by its weighted cord. The pressure on the treadle is now taken off, when the weight N immediately elevates the clamps and liberates the fabric, when the hat or bonnet is

taken out properly shaped and another sheet placed between the clamps for a succeeding operation.

The forming of the hat or bonnet can be performed with the hat-block cold; but it is preferred to heat it a little, and for that purpose I use a spirit-lamp placed under the center of the hat-block.

I would remark that the clamps D E may be operated in various other ways than by treadle, and in some cases it may be preferable to give motion to the former J, instead of to the clamps, after the fabric has been placed between the clamps. The stretcher H may also be operated in other ways than that herein described, or it may remain stationary while the clamps and former are moved upward toward it.

I do not claim, broadly, the pressing or forming of bonnets by means of dies; but,

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

1. The combination of the stretcher H with the clamps D E and former J, the said parts being constructed and operating together, as herein shown and described.

2. The combination of the movable suspension-spindle L and adjusting-wheel I with the stretcher H, substantially as herein shown and described.

C. O. PARMENTER.

Witnesses:

HENRY F. HILLS,

LAURA HILLS DICKEY.