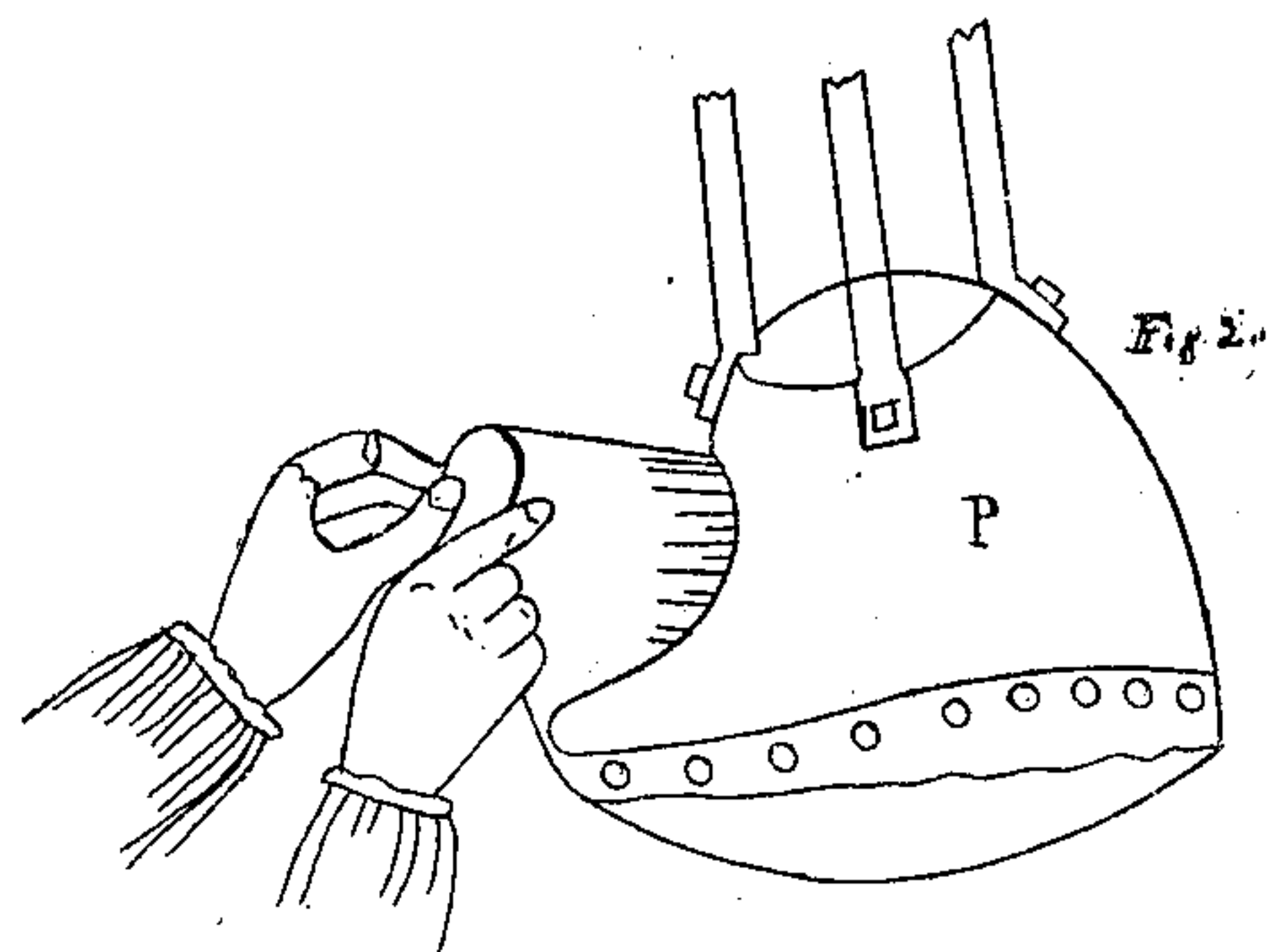
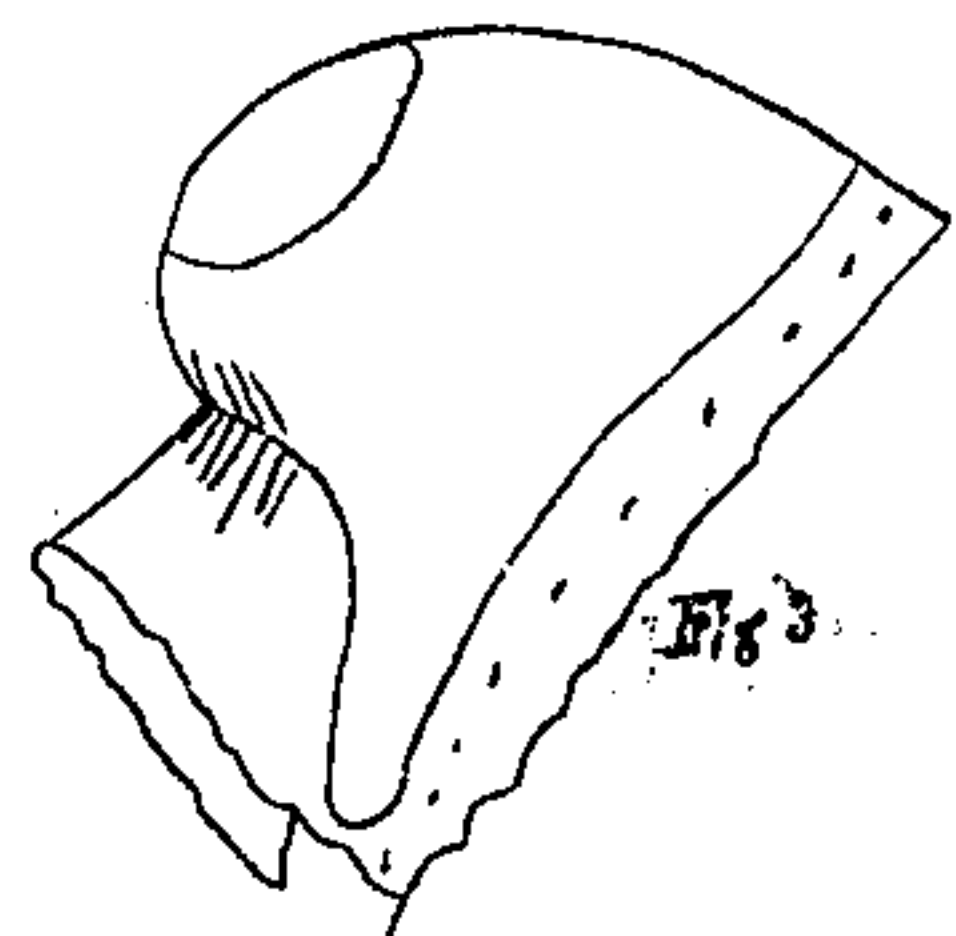
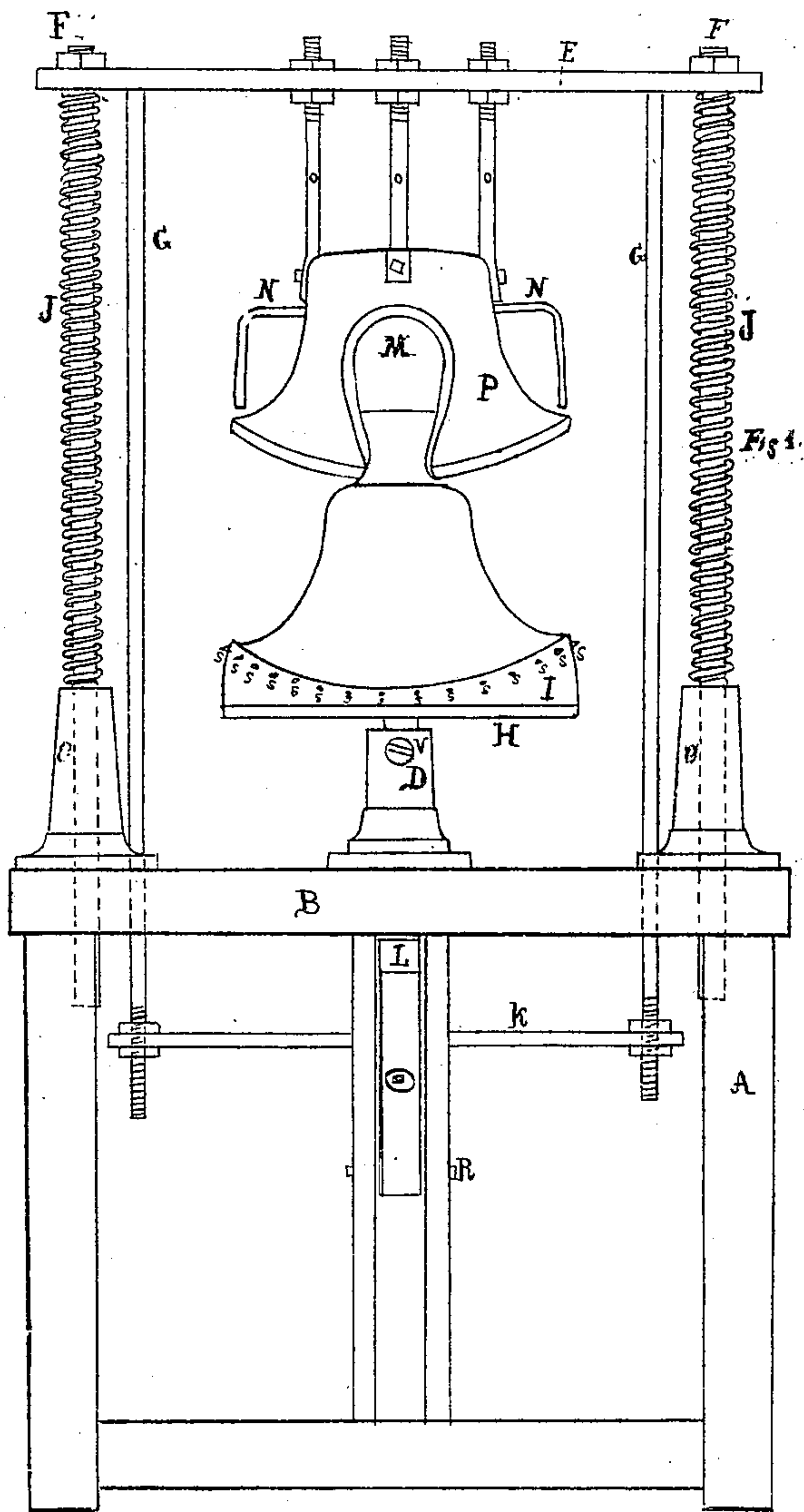


*S.H. Bowker.*  
*Pressing Hats.*

*No. 19,231.*

*Patented Feb. 2, 1858.*





# UNITED STATES PATENT OFFICE.

SEWALL H. BOWKER, OF WORCESTER, MASSACHUSETTS.

## MACHINE FOR FORMING BONNET-FRAMES.

Specification of Letters Patent No. 19,231, dated February 2, 1858.

*To all whom it may concern:*

Be it known that I, SEWALL H. BOWKER, of Worcester, in the county of Worcester, in the State of Massachusetts, have invented certain new and useful Improvements in Machines for Forming Bonnet-Frames; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to letters of reference marked thereon, in which drawings—

Figure 1 is a front view of the machine. Fig. 2 represents the dies together with the material for the frame of a bonnet between them. Fig. 3 shows the frame as it comes from the dies.

My invention is an improvement upon the so called French dies, used for forming the crown frames of bonnets and in the apparatus for working them; by these improvements I am able to form the frame for the whole bonnet of one piece of material and at one operation.

To construct my improvements, make a strong frame A with a level top piece B, on which, near the two sides fasten the two standards C C and between them on the center of the table secure the standard D which is made hollow to receive a rod fastened to the center of the plate H; a set screw V is inserted in the side of this standard to tighten upon the rod and hold the plate at any desired height; on this plate is fastened the lower die I the upper die being secured by the four bolts o o o o to the cross bar E which has two upright rods F F fastened to its ends by nuts screwing on the ends of the rods. These two rods slide in the standards C which serve to guide the rods and crossbar in rising and falling; around the rods are placed strong spiral springs J J capable of raising the upper die P with its working attachments after they have been pressed down.

G G are two smaller rods fastened to the crossbar E at the top and after passing down through the table are secured by their lower ends to the crossbar K by nuts on the rods above and below the crossbar.

A foot lever L is extended from the front to the back of the table where it is fastened by a pin R in a slotted stud; the lower crossbar is secured at its middle to this foot lever by a movable connection.

The dies are made in the shape in which it is intended to have the bonnet frame, and

at the neck a large oval opening M is made corresponding to the neck-place in the bonnet frame; this opening is made to receive the surplus of the material used in forming the frame and by this means all the rest of the frame is kept smooth and free from creases or wrinkles while being formed by the dies; around the lower die is placed a row of sharp pins or hooks s s on which the edge of the material is hooked before undergoing the operation of forming by the upper die.

To operate these improvements, heat the dies by having them hollow and introducing steam into them or by placing hot blocks of iron on the sides of the upper die under the arms N N; the piece of material being dampened is taken by the two workmen one in front and one at the back of the table, and quickly hooked down at the edge on the pins around the lower die, in such a manner as to bring the surplus of the piece in the hollow M at the neck place, then the one in front takes hold as in Fig. 2, and drawing the material tight around the die I brings down the upper die by means of the foot lever; now as the material used is quite moist and the upper die nearly hot enough to scorch it there will be of course a considerable quantity of steam generated which makes it necessary to employ means for raising and lowering the upper die very quick to allow the steam to escape, this is done by the workman pressing down the lever with his foot and almost instantly raising it again, the springs throwing up the die as soon as it is free, and by lowering and raising his foot several times in quick succession the steam is allowed to escape and the material is dried in proper shape, this arrangement enables me to use the dies much hotter than I otherwise could which results in doing the work much faster and better. Without the pins S S or their equivalents the bonnet frames cannot be formed on the dies without creases or wrinkles; the saving in time, labor, and material in using these improvements over other methods is very great. I would not be understood as claiming the dies as they have been in common use for several years, nor as claiming that I can press bonnets in my machine as that requires a rubbing pressure that will polish the straw without mashing it; it being intended for forming the frame (usually made of a sort of loosely

woven cloth heavily sized), on which the braid or silk or other material of which the outside of the bonnet is made, is placed.

What I claim as my invention and desire to secure by Letters Patent is—

The row of pins or hooks S S S or their equivalent substantially as herein described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

SEWALL H. BOWKER.

Witnesses:

ISAAC DAVIS,  
J. T. HULL.