I. Manning,

Harness Machine.

No. 60,531. Patented Dec. 18, 1866.

Fig. 1.

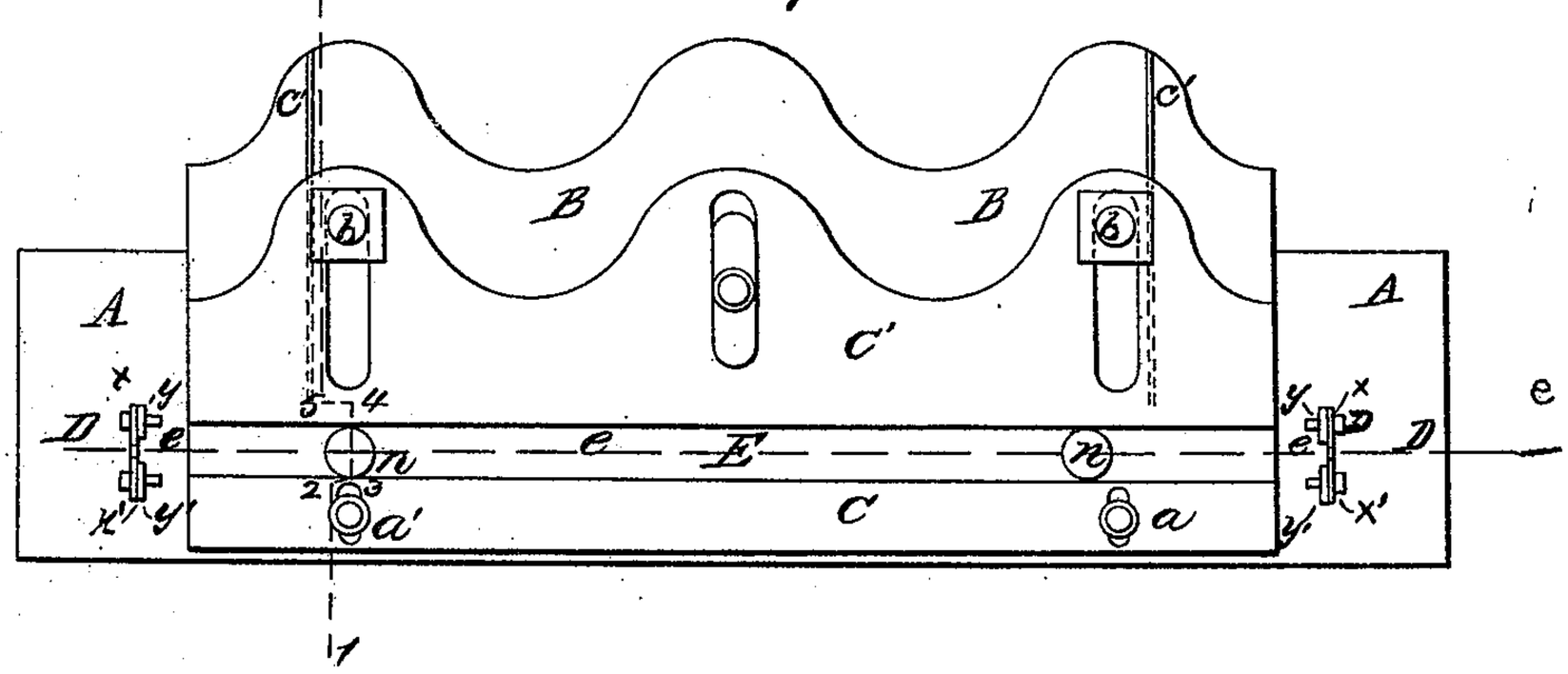
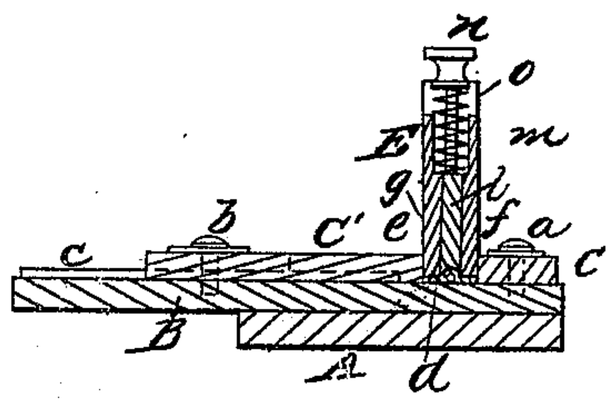


Fig 2.



Witnesses:
Francis D. Pastorius
Thos Tinsl

Inventor:
Ira Manning

United States Patent Office.

MACHINE FOR FORMING BRIDLE FRONTS.

IRA MANNING, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 60,531, *dated December* 18, 1866.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, IRA MANNING, of Philadelphia, in the county of Philadelphia, and State of Pennsylvania, have invented a new and improved Machine for making Bridle Fronts; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of my invention consists of such novel combination and arrangement, as is hereafter shown, for forming a rib on bridle fronts, and for bringing the sole and upper together. To enable others to make and my invention, I will proceed to describe it.

On reference to the accompanying drawing, which forms part of this specification—

Figure 1 is a plan view and

Figure 2 is a sectional view, through the broken line 1, 2, 3, 4, 5, 6.

Similar letters refer to similar parts in the two views.

A is a table, to which a pressing-plate, B, is fixed or formed, C C′ are graduating guides, sliding laterally on the plate B, which motion is confined by the screws *a a′*, *b b′*, and the ribs *c c′*, fixed to the plate; D D′ are centres, secured to each end of the table A, and so arranged that a line drawn from one to the other, passing over the plate B, will lie equidistant between the edges of the graduating guides, C C′. E is a presser-board, squeezer, or plunger, fixed to the spindle of a press to operate my machine. The table, A, is bolted in the press; the guides, C C′, are graduated to the width of the proposed bridle front; the sole, *d*, of the front is placed on the plate, B, in the opening formed by the guides C C′; the cord or filler, *e*, is next stretched between the centres, D D′, on the sole *d*. The upper, *f*, after having sufficient adhesive matter applied to its under side, is next applied on the cord and sole. The press being set in motion, the presser or plunger, E, descends on the upper *f*, and squeezes it tight upon the sole, the cord, *e*, causing the upper to form a rib, *g*, which takes into a corresponding recess in the bottom edge of the presser-board. I found on trial that the adhesive matter applied to the upper *f*, dampened and caused it to stick to the bottom of the presser, or that the rib, *g*, became jammed in the recess in the bottom of it. To obviate this sticking of the front, or rather to free it, I construct the presser-board as follows: E, (fig. 2,) is a presser-board or plunger, *l* is a movable centre-piece, fixed to the ends of the spindles *m m*, of the knobs *n n*; the opening in the presser-board through which the spindles *m m* pass, are enlarged to accommodate the spiral springs, *o o*, one encircling each spindle, and contained between the bottoms of the openings and the bottoms of the knobs, *n n*, so that the least pressure on the knobs causes the springs to contract and the centre-board to descend. The pressure being removed, the springs spread and carry the centre-board to its place. Tappets are fixed to the framing of the press to strike the knobs *n n* as the presser-board lifts, and force the centre-board down, freeing the bridle front as it descends; the knobs receding from the tappets, the pressure is relieved. A groove is formed in the bottom edge of the centre-board to correspond with the rib of the bridle front. The centres, D D′, consist of flat pieces, *x x′*, secured to uprights, *y y′*, fixed to the table; they are so set that their edges may form an angle or V, in which the cord is fastened. The guides can either or both be graduating to fit fronts of all sizes, or they can both be fixed, having a separate machine for each size.

Fronts are now made by hand labor, the cord is centred by the workman, and the upper pressed around it with the fingers to form the rib, which operation either moves the cord out of centre or gives a zigzag appearance to the rib.

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

1. The guides B B′, either fixed or graduating, for the purpose herein specified and described.
2. The guides B B′, in combination with the centres D D′, substantially as specified and described.
3. The guides B B′, in combination with the centres D D′, and the presser E, substantially as specified and described.
4. The sliding centre-board or piece *l*, substantially as specified and described.

In testimony whereof I hereunto sign my name to this specification in presence of two subscribing witnesses.

IRA MANNING.

Witnesses:

W. W. DOUGHERTY,

F. D. PASTORIUS.