2 Sheets—Sheet 1.

J. R. MOFFITT.

Machinery for Forming Heel-Stiffeners for Boots and Shoes.

No. 209,826. Patented Nov. 12, 1878.

Fig. 1.

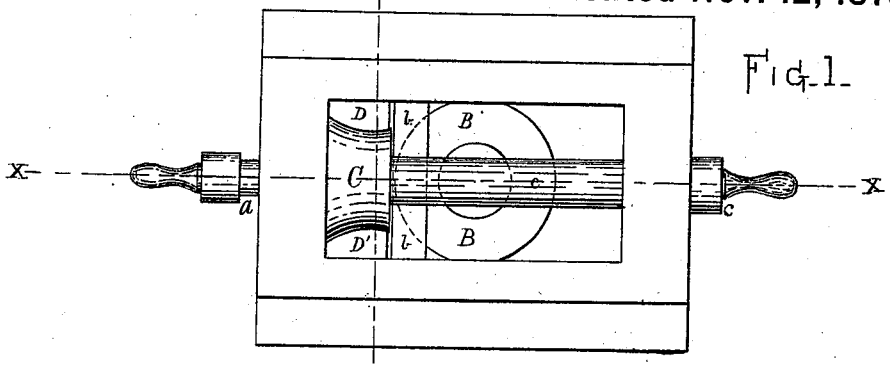


Fig. 2.

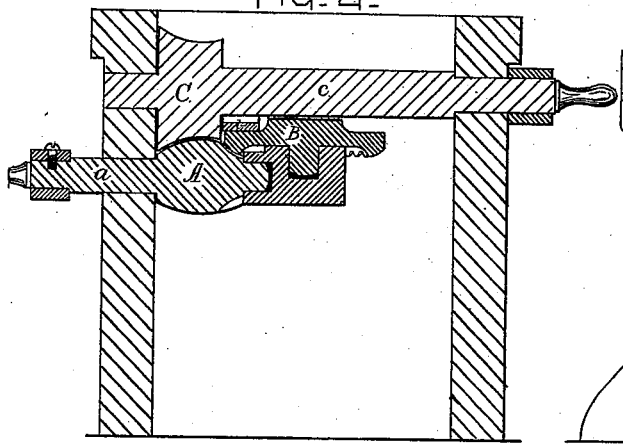
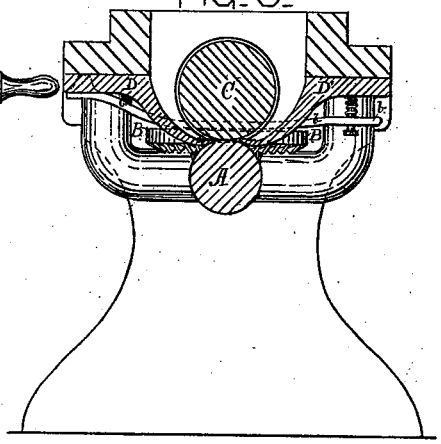


Fig. 3.



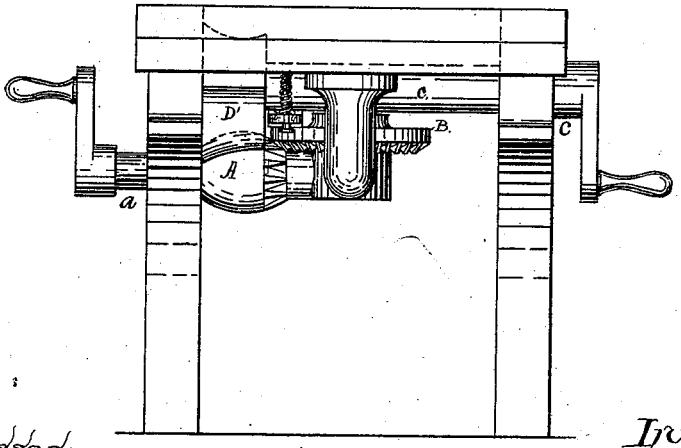


Fig. 4.

Witnesses:
George O. G. Coale
A. H. Spencer

Inventor
John R. Moffitt
by J. E. Maynadier
his attorney

2 Sheets—Sheet 2.

J. R. MOFFITT.

Machinery for Forming Heel-Stiffeners for Boots and Shoes.

No. 209,826. **Patented Nov. 12, 1878.**

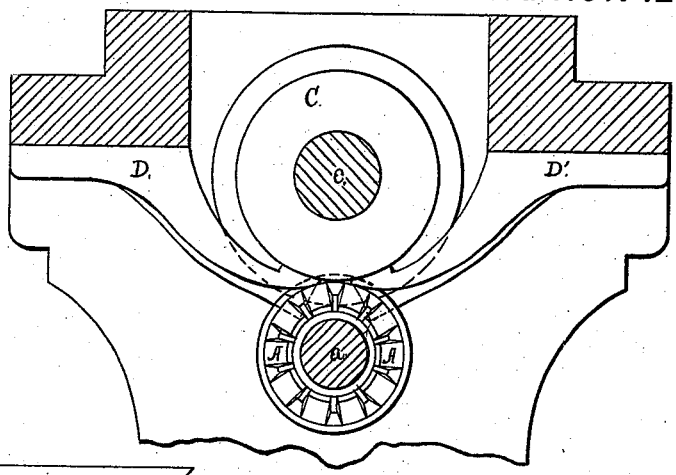


FIG. 5.

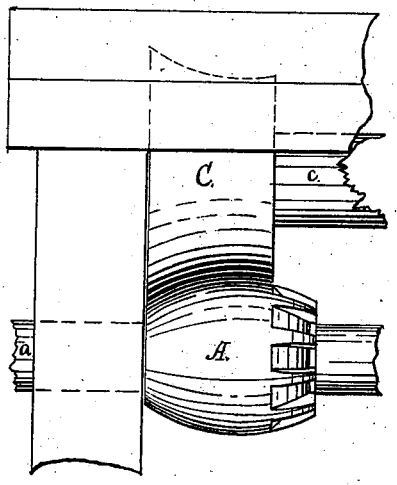


FIG. 6.

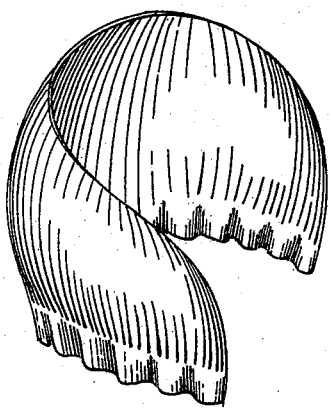


FIG. 7.

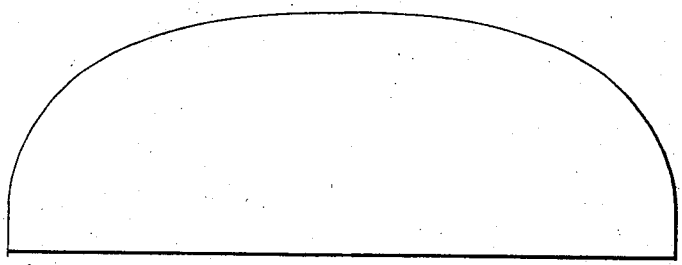


FIG. 8.

Witnesses:
George O. G. Coale
A. H. Spencer 2d

Inventor:
John R. Moffitt
by J. E. Maynadier
his atty

UNITED STATES PATENT OFFICE.

JOHN R. MOFFITT, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINERY FOR FORMING HEEL-STIFFENERS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **209,826**, dated November 12, 1878; application filed April 19, 1878.

To all whom it may concern:

Be it known that I, JOHN R. MOFFITT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in the Manufacture of Counters or Heel-Stiffeners for Boots and Shoes, of which the following is a full, clear concise, and exact description, reference being had to the accompanying drawings, making a part hereof.

My present invention relates to the improvement of the apparatus described in my Patent No. 127,090, dated May 21, 1872; and consists, first, in a new counter-former, the same in substance as that described in my former patent, except that I have adapted it to flute that part of the blank which is to form the flange of the finished counter; and, secondly, in the combination, with the counter-former, (whether adapted to flute the flange part of the blank or not,) of a presser and a pair of auxiliary supports, the presser pressing the blank close against, and compelling it to conform lineally to, the counter-former, and the supports or guides insuring the better curving of the counter-blank in lines across the axis of the counter-former, the supports and presser thus acting together to compel the blank to assume both the lengthwise and crosswise curves of the counter-former, and yet acting upon only a small portion of the counter-blank at a time, instead of acting upon about half, more or less, of the entire counter-blank, as in my Patent No. 127,090, the distinguishing characteristic of this part of my invention consisting in the arrangement of the presser and the supports, so that their working-surfaces shall be brought near to each other.

The other features of my invention consist in certain combinations of my improved counter-former with other elements.

In the drawings, Figure 1 is a plan, Fig. 2 a vertical section on line X X, Fig. 1, Fig. 3 a vertical section on line *y y*, Fig. 1, and Fig. 4 a side elevation, of a machine embodying the main features of my invention. Fig. 7 is a perspective view of the article manufactured. Fig. 8 is a blank before forming. The other figures show details in the construction of my machine.

My new former is marked A. It is mounted upon a shaft, *a*, in order that it may be revolved, and is of a shape adapted to give the desired curve to the counter-blank from top to bottom—that is, across the counter-blank shown flat in Fig. 8. That part of this former nearest the part of the counter-blank, which is to form the flange of the finished counter, is shaped as shown, in order that the part of the counter-blank which is to form the flange of the finished counter may be fluted while the blank is passing through the machine by being pressed into the grooves, as will be clear from the drawings.

To insure this fluting action, I use the gear B, with teeth upon it, or near its periphery, which mesh into the teeth upon the counter-former, thereby giving the part of the counter-blank which is to form the flange of the finished counter the shape shown in Fig. 7, at the same time that the body of the blank is properly curved. The function of the gear B is to crowd portions of the flange part of the blank into the grooves of the former, and any other device may be substituted which will perform this function.

The presser C is preferably a roll, as shown, having a speed considerably greater than the speed of the counter-blank, for the purpose explained in my patent dated June 20, 1876, No. 178,869, but may, of course, be stationary, or be moved by the passage of the blank, as in my Patent No. 127,090.

In practice the shaft *c* is driven by a pulley, as is also the shaft *a*. The two auxiliary supports D D′ have at their inner ends working-surfaces corresponding to the working-surface of C, but need not fit the counter-former so accurately, the function of the guide-bars being to insure the better curving of the counter-blank around the axis of the counter-former, and the function of C being to compel the blank to assume the lengthwise curves of the counter-former. The blanks, after being passed through the machine, are curved in two directions, lengthwise and across the blank, and have the part which is to form the flange of the finished counter fluted, and in this condition are readily used in lasting the shoe, some manufacturers of shoes preferring them to the finished counters.

If it is desired to turn the flange and give them the shape of the heel part of the last,

they are molded in any suitable way, preferably as described in my Patent No. 178,869. The gear B is kept to its work by means of the spring presser-bar *b*, or in any other suitable way.

What I claim as my invention is—

1. The improved counter-former A, grooved or fluted around its flange end, substantially as described.

2. In combination, the revolving counter-former A, presser C, and auxiliary supports D D′, arranged together, as described, the parts C D D′ being so formed that each will act upon only a small portion of the blank in lines crosswise of the blank and close together, in order that only a small portion of the blank may be acted upon at any given time.

3. In combination, the fluted counter-former A, gear B, and presser C, all substantially as described.

4. In combination, the fluted counter-former A, gear B, presser C, and supports D D′, all substantially as described.

JOHN R. MOFFITT.

Witnesses:
GEORGE O. G. COALE,
J. E. MAYNADIER.