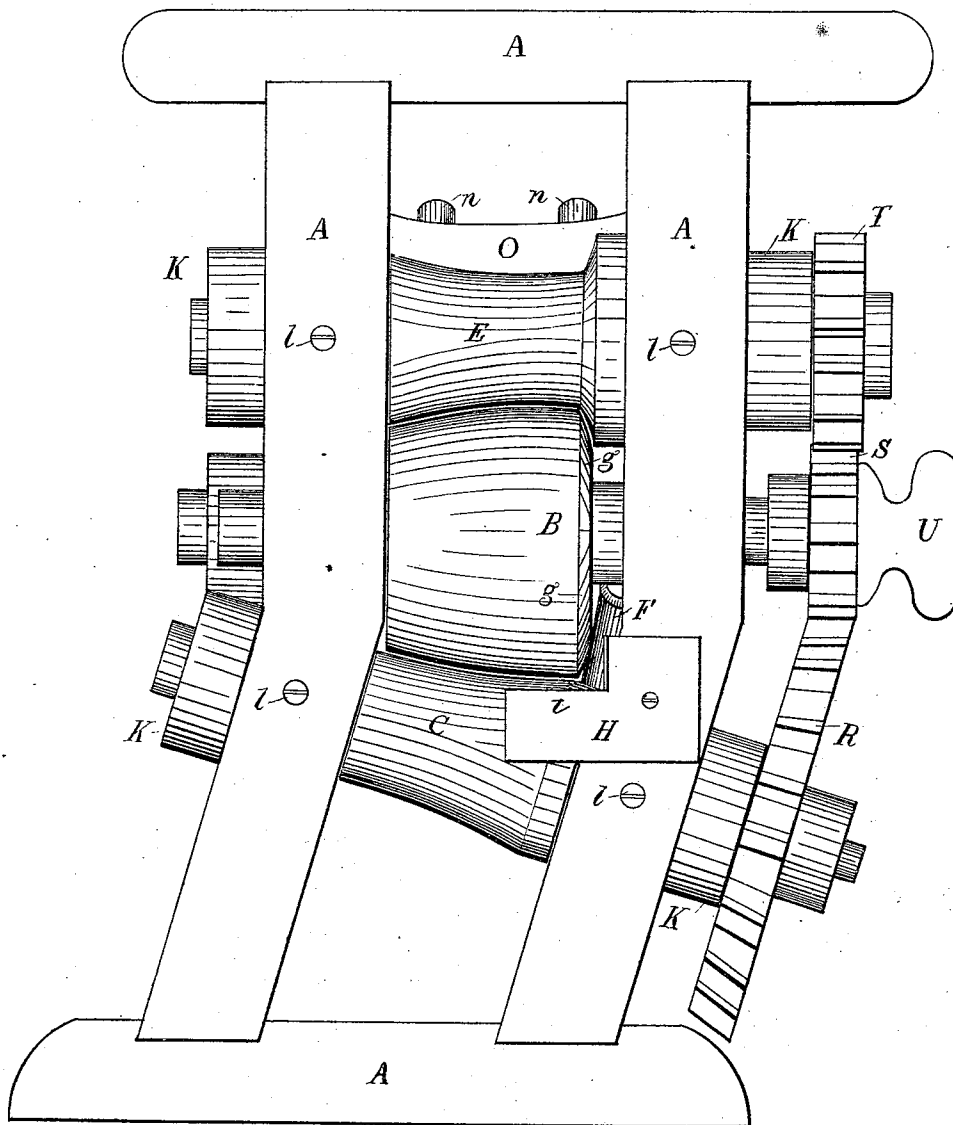


J. R. MOFFITT.
Machine for Making Counters for Boots and Shoes.
 No. 159,702. Patented Feb. 9, 1875.

FIG. 1



WITNESSES

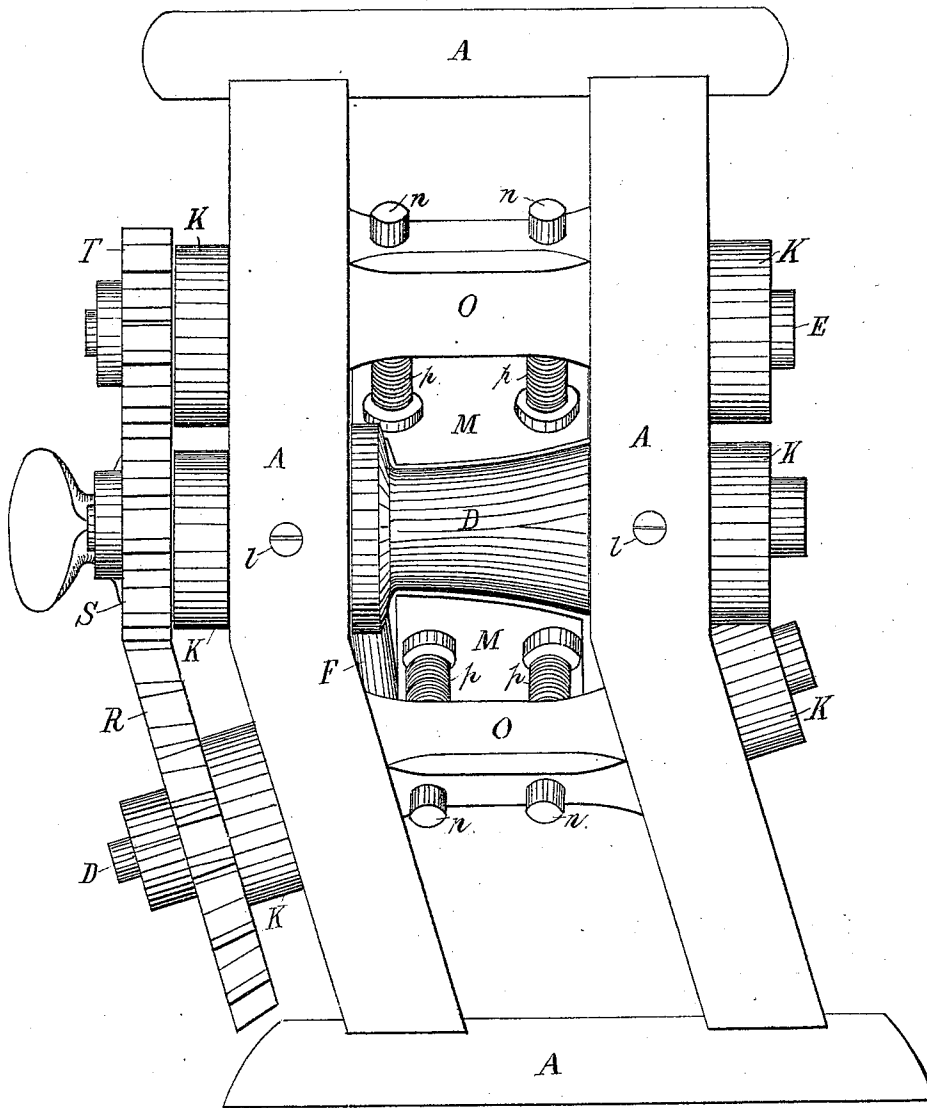
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FIG. 2.



WITNESSES

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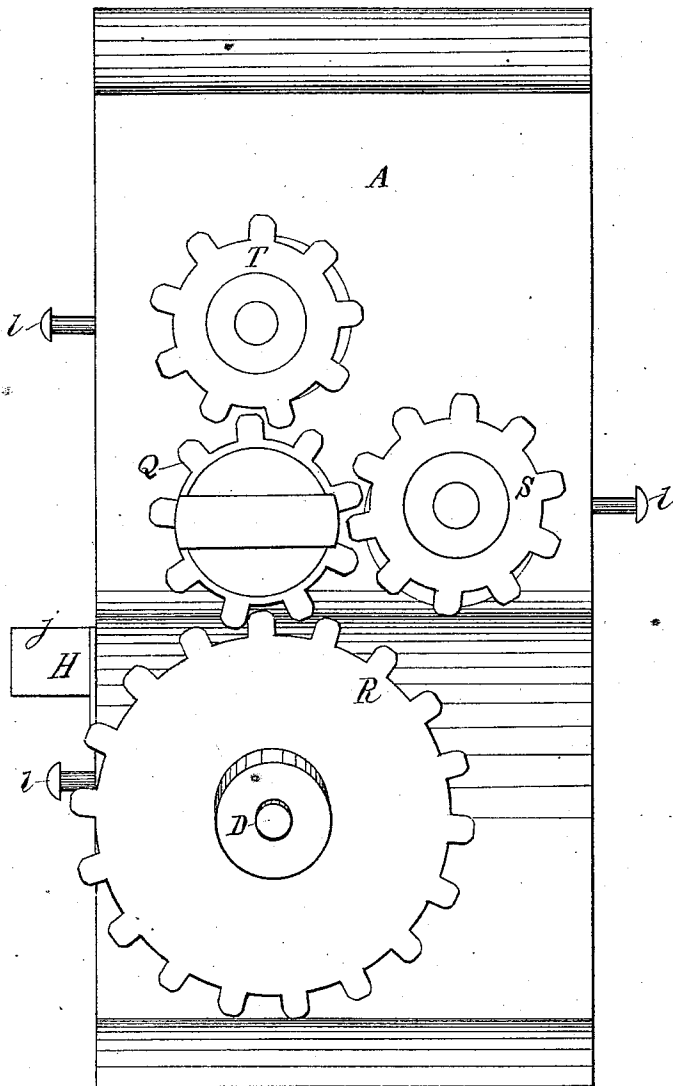
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Patented Feb. 9, 1875.

FIG. 3.



WITNESSES

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FIG. 4

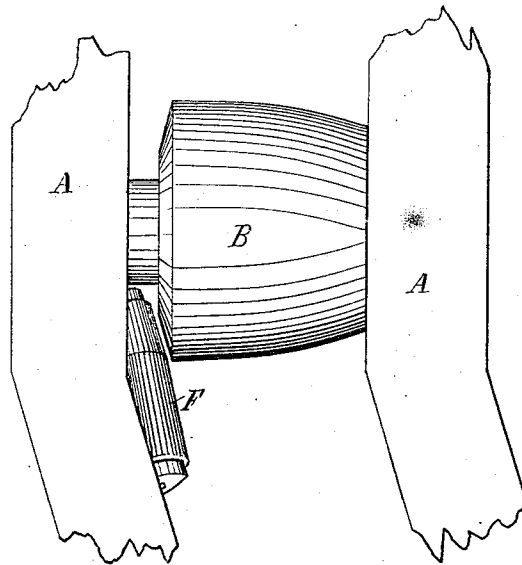
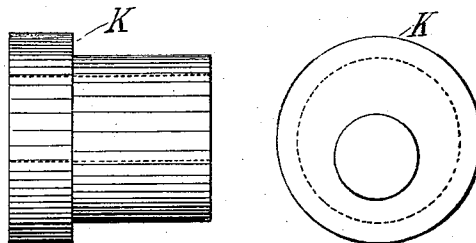


FIG. 5



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN R. MOFFITT, OF CHELSEA, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR MAKING COUNTERS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **159,702**, dated February 9, 1875; application filed January 28, 1875.

To all whom it may concern:

Be it known that I, JOHN R. MOFFITT, of Chelsea, State of Massachusetts, have invented new and useful Improvements in Machines for Making Counters for Boots and Shoes; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My present invention relates to machines for shaping heel-counters and stiffeners from blanks made of leather or other rigid material by means of a rolling, or rolling and rubbing, action, I having already obtained a patent, No. 127,090, reissued on December 8, 1874, and numbered 6,162, for rolling counters to shape, and upon which my present invention is a further advance or improvement.

My present invention consists in the employment of a flanging-roller so located as to bear upon that portion of the counter which is to form the flange or heel seat, and to press and guide it upon the larger end of the "former;" in the employment of concave guides, severally located between the other rollers, and serving to guide and to press the counter against the outside of the former while it is being rolled and filling up the space which would otherwise present a gap between to adjacent rollers; in a guide-post serving to properly direct and guide the blank as it is fed into the machine and between the feeding-in roller and the former; and in other details hereinafter named.

In the drawings, Figure 1 is a front elevation of a machine embodying my improvements; Fig. 2, a rear elevation; Fig. 3, an end view; Fig. 4, a detail view, showing the relation of the flanging-roller to the former-roller; and Fig. 5, a detail, showing a plan view and end view of one of the adjustable bearings for the shafts of the rollers.

Like letters refer to like parts in the different figures.

A represents any suitable frame adapted to support the mechanism; B, the former-roller, around which the counter is to be shaped; C, an unflanged receiving or feeding-in roller; and D and E, flanged rollers, which, in conjunction with roller C, serve to feed the blank, and which also aid in forming and setting the

flange, and perform the duty of shaping, squeezing, rolling, compacting, and smoothing the material to form a perfectly shaped and finished counter. F is a guide-roller having the axis of its bearing in a plane nearly at right angles to that of the axis of the former, and so located in the frame as to be in close proximity to the larger end *g* of the former, and, as the blank is first fed in, to deflect and bend over that part of it which is to form the heel-seat, thus starting it rightly prior to its reaching the flanges of the rollers D and E. H is a guide plate, bar, or post, against which the blank is placed to position it when it is being introduced into the machine. This plate is preferably made with a rest, *i*, to uphold the blank and a guide, *j*, for its edge, the rest *i* being about opposite the line where the roller C and former B are nearest in contact, and the guide *j* insuring that the edge of the blank shall come into proper position to insure that the heel-seats may all be turned over sufficiently and alike. Any convenient device or post which will serve for such guiding may be substituted for the plate H shown in the drawing; but this plate is efficient and simple, being formed of a single piece of metal slit partially across, and the part *j* bent to a plane at right angles to the rest of the plate, and it may be secured to the frame by a screw, as shown, or otherwise, so as, if desirable, it may be adjusted in position. All of the shafts, except that of the former B, are supported eccentrically in adjustable sleeves K mounted in the frame, so that the shafts may have a small range of adjustability nearer to or farther from the former, as the thickness of the material, the degree of pressure required, or other contingencies may demand. This adjustment is readily made by simply loosening the screws *ll*, which hold the sleeve-bearings of any given roller, and then turning the sleeve to the degree required to shift its shaft, and then retighten the screws to hold the sleeves in place. M M are guides, having their inner faces concave, corresponding in contour to the curve of the former; and they severally occupy the spaces between the rollers C D and D E. These guides are supported upon rods *nn*, which are secured in fixed beams O O, and have a yielding capacity through the agency of springs *p*

p; and they are not so much designed to give pressure against the outside of the counter while it is being rolled and squeezed by the rollers as to serve to fill up the space between the peripheries of the rollers, and thus leave little or no gap between them.

By filling up, in a great measure, this gap, they receive and bear onward or upward the counter-blank as it is fed in, and direct it and serve to help convey it forward to the next adjacent roller, the series of exterior rollers, in connection with these guides, arranged, as they are, in somewhat of a continuous curve about the former, acting and serving as a trough or curved guide for the blank under treatment.

The flanged rollers are not shown as yielding, but for some kinds of stock they may be provided with springs to allow any degree of yield required.

Each shaft is provided with a gear-wheel, the gear *Q* on the shaft of the former *B* being preferably used as the driver and gearing with the gears *R*, *S*, and *T*, respectively, on the other shafts, gear *R* having twice the number of teeth of gear *Q* and also of gear *T*, and gear *S* having preferably a greater number of teeth than either *T* or *Q*. The difference in the velocity of revolution of the rollers resulting from this difference in the gears causes a positive frictional and rubbing action of the rollers on the material introduced between them, and the non-revolving concave surfaces of the guides *M* also compels a rubbing action as the material passes over those surfaces.

The machine may be driven by hand or by power in any convenient manner, the thumb-piece *U* on the former-shaft merely indicating that shaft which it is preferred should be the driver. It is best to so apply the power that in working the machine the former (and consequently the other rollers) may be revolved either continuously in one direction or back and forth in opposite directions, and, in either case, to give the counter all the pressure and rolling required, either by repeated actions or by sufficient pressure in one action.

I claim—

1. In combination with the former-roller, a flanging-roller, *F*, located, substantially as shown and described, relatively to the former, and serving to guide and turn the edge of the blank against the end of the former.

2. In combination, the former-roller, the rollers *D*, *E*, and concave guides *M*, substantially as and for the purpose described.

3. In combination with the forming-roller and with a receiving-roller, a guide plate, bar, or post, *H*, substantially as and for the purpose described.

4. In combination with the shafts of the rollers *C*, *D*, or *E*, the adjustable sleeves *K*, supported in the frame and having eccentric bearings for the shafts, substantially as and for the purpose described.

JOHN R. MOFFITT.

Witnesses:

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R. KENNEY.