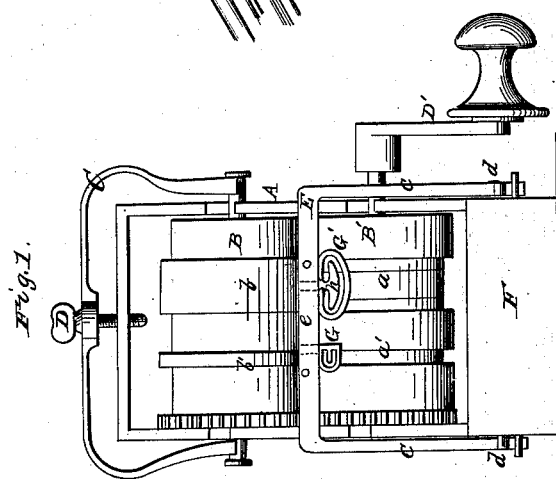
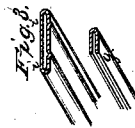
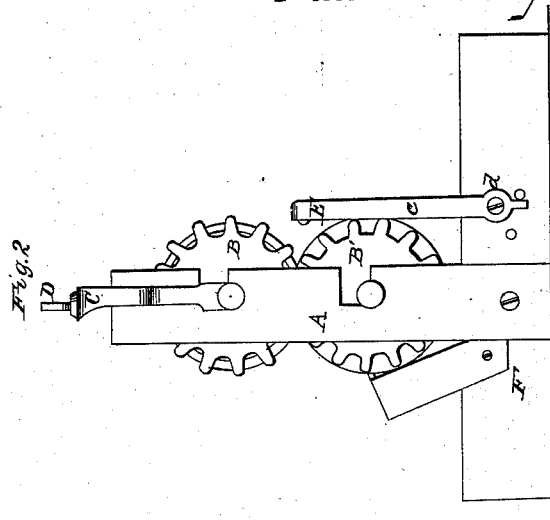


B. U. Lyon,
Shoe-Sole Machine,
No 49,349, Patented Aug. 8, 1865



Witnesses
Thos. Lusk
J. M. Corning

Inventor
B. U. Lyon
By Munn & Co.
Attys

UNITED STATES PATENT OFFICE.

BENJN. U. LYON, OF STAMFORD, CONN., ASSIGNOR TO HIMSELF, GRANT JUDD, EDWD. P. WHITNEY, AND JOHN P. REED, OF SAME PLACE.

IMPROVED WELT-MACHINE.

Specification forming part of Letters Patent No. 49,349, dated August 8, 1865.

To all whom it may concern:

Be it known that I, BENJAMIN U. LYON, of Stamford, in the county of Fairfield and State of Connecticut, have invented a new and Improved Machine for Forming Welts; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front view of my invention; Fig. 2, a side view of the same; Fig. 3, a perspective view of a portion of the welts formed by my machine.

Similar letters of reference indicate like parts.

This invention relates to a new and improved machine for forming welts used in carriage-trimming, for cushions, and for similar purposes; and it consists in the employment or use of two pressure-rollers and adjustable guides, all constructed and arranged as hereinafter set forth, whereby the work may be done very expeditiously and in a perfect manner.

A represents a frame in which two pressure-rollers, B B', are placed, one over the other, in the same axial plane. The journals of the upper roller, B, have the ends of a bow-spring, C, bearing upon them, the pressure of which may be regulated as desired by a screw, D. The power is applied to the lower roller, B', one journal of which is provided with a crank, D', for that purpose. This lower roller, B', has grooves *a a'* made in its periphery circumferentially, and the upper roller, B, has its periphery provided with circumferential projections *b b'* corresponding in width to the grooves *a a'* in B', so that the projections may work in the grooves.

E represents a guide-bar, which is bent so as to form three sides of a quadrangle, the lower ends of the parts or sides *cc* of said bar being secured by pivots *d* to each side of the base F, on which the frame A is secured. To the under side of the other part, *e*, of this bar E the guides G G' are attached. These guides are constructed so as to fold the strips of leather according to the kind of welt to be

formed. The guide G, for instance, may be described as a semicircular eye having a central horizontal tongue, *f*, extending from one side, (see Fig. 1,) so as to double the leather strip as the same is being drawn between the rollers. This form of welt is shown at *g* in Fig. 3. As it is doubled it is compressed in the groove *a'* of roller B by the projection *b'* of roller B, said groove and projection corresponding in width to the welt. The guide G' is an eye provided with a central tongue, *h*, of T form to give two folds to the leather strip, as shown at *i i* in Fig. 3. This last strip is compressed as folded in the groove *a* by the projection *b*.

The leather strips are cut out of the proper width and moistened before being operated upon or formed into welts. The strips are first passed through the guides, and then adjusted between the rollers so as to catch in the bite of the same, and the welts are prevented from wrapping around the lower roller by means of a clearer, H, which bears against its rear side.

In order to facilitate the passing of the leather strips through the guides G G', the upper part of bar E is drawn out from the rollers, and when the strips have been passed through the guides the bar is adjusted or moved toward the rollers until the ends of the strips catch between them.

The invention, although simple, effects a great saving in time and labor, and it performs its work in a perfect manner.

I am aware that it is not new to employ pressure-rollers for determining the shape of straps which are compressed between them in their manufacture, and hence I do not wish to be understood as claiming such rollers.

I claim as new and desire to secure by Letters Patent—

The combination of the guides G G' with the two pressure-rollers B B', all arranged to operate in the manner and for the purpose herein described.

BENJAMIN U. LYON.

Witnesses:

HENRY JOHN HOWELL,
JESSE B. NICHOLS.