

J. F. SARGENT.

MACHINERY FOR ROLLING METAL FOR SHOE TACKS.

No. 34,334.

Patented Feb. 4, 1862.

Fig: 1.

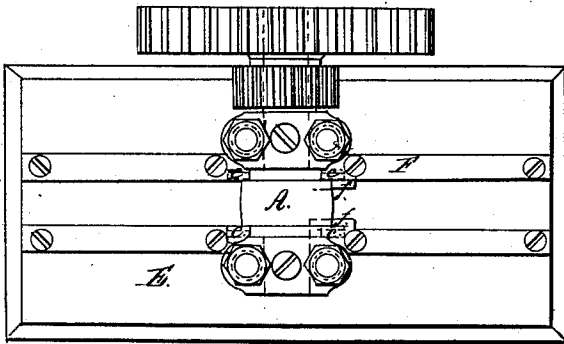


Fig: 3.

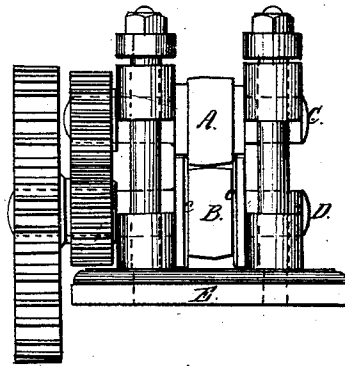


Fig: 2.

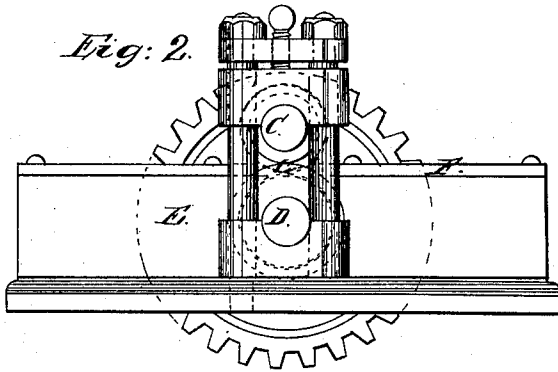


Fig: 4.

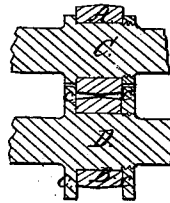


Fig: 5.

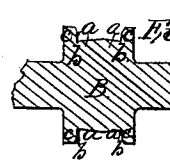
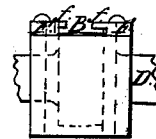


Fig: 12.

Fig: 6.

Fig: 7.

Fig: 8. Fig: 9.



Fig: 10.

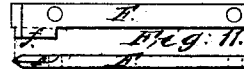


Fig: 11.

Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH F. SARGENT, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO ELMER TOWNSEND, OF SAME PLACE.

IMPROVEMENT IN MACHINERY FOR ROLLING METAL FOR SHOE-TACKS.

Specification forming part of Letters Patent No. 34,334, dated February 4, 1862.

To all whom it may concern:

Be it known that I, JOSEPH F. SARGENT, a citizen of the United States of America, and a resident of the city of Boston, and State of Massachusetts, have invented a new and useful Machine for Preparing or Shaping Strips of Metal for Conversion into Shoe-Tacks; and I do hereby declare the same to be fully described in the following specification, and illustrated in the accompanying drawings, of which—

Figure 1 denotes a top view and Fig. 2 a side elevation of it; Fig. 3, a front view of its reducing-rollers and flanges as they appear when the guides are removed from the machine; Fig. 4, a transverse section of them; Fig. 5, a view exhibiting the relative position of the lower reducing-roller, its guide, and lips. Figs. 6 and 7 are transverse sections of the nail-strip formed by the machine; Figs. 8 and 9, the nail-strips in section and side view. Fig. 10 is a top view, and Fig. 11 an inner side view, of one of the guides and its lip, to be hereinafter described. Fig. 12 is a section of a grooved roller used in preparing the metallic strip for being converted into nails with heads.

The object of the machine is to produce a nail plate or strip having not only a wedge-shape transverse section, but being straight in the direction of its length, it having been found extremely difficult, if not impossible, to accomplish this by means of two reducing-rollers having a single triangular bite corresponding in section with the cross-section of the nail-strip, as such strip, owing to being reduced on one edge more than on the opposite, would be bent in a curved form lengthwise. I have made the rolls or reducing-rollers with a bite having the shape of two triangles or very sharp wedges placed point to point, as shown in Fig. 6 or in Fig. 7, where the nails or tacks cut from the nail-plate are to have heads. Either or both of the rollers should be beveled on their peripheries in opposite directions, as shown in Figs. 3 and 4, in which case the reduction of a nail-plate will be caused to take place in opposite directions at one and the same time and laterally to its middle line. In this way the plate or strip when it leaves the rollers will be

quite or sufficiently straight and will, when divided along its middle, constitute two nail or tack plates. In further carrying out my invention I combine with such reducing-rollers two upsetting-flanges and also certain guides and lips, to be hereinafter described, and, furthermore, when the nail-plate is to be formed for making cut nails or shoe-tacks provided with heads either or both of the reducing-rollers should be made as shown in Fig. 12, wherein it is exhibited as not only provided with beveled faces, but with grooves on its periphery, *a a* being the said faces, and *b b* the grooves.

In the drawings, A and B are the reducing-rollers, one being placed over the other and, respectively, on shafts CD. These shafts rest in suitable bearings upheld by a frame E, which is provided with two parallel ways or guides F F, arranged with respect to the reducing-rollers, as shown in Figs. 1 and 2. The lowermost roller B is constructed with upsetting-flanges *c c*, projecting beyond its periphery and with respect to the rollers as seen in Figs. 1, 2, 3, and 4, the upper roller being formed so as to enter between and close to such flanges, as represented in such figures. Each guide F extends very nearly into the bite of the two rollers, and at its inner end is furnished with a projection or lip *f*, under which the strip of metal passes, and by which it is prevented from curling up against the upper roller under the draft and reduction of the rollers. The said lips are valuable auxiliaries to my invention and become necessary to the guides in order to cause the strip to perfectly keep its place between them and their reducing-flanges.

The flanges *c c*, used either with or without the grooves, serve to upset and properly form the flat edges of the strip or prevent them from cracking or having a rough and serrated or rugged appearance. When employed with the grooves *b b*, the flanges greatly facilitate the action of them in the formation of the nail-head edges of the strip. In order to prevent the flanges from so acting as to shear or cut off the strip of metal at or near either edge of it, I bevel or round off such flange essentially as shown in the drawings, and, furthermore, to facilitate the introduction of the nail-strip into the spaces immediately under the lips

each of the said lips may be beveled or rounded up at its rear end.

I do not claim rolls or rollers beveled in opposite directions; but

I claim—

The combination of the guides F F and the lips *f f* or mechanical equivalents therefor,

with the upsetting-flanges and the reducing-rollers beveled in opposite directions, substantially as explained.

JOS. F. SARGENT.

Witnesses:

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