

(No Model.)

J. GUEST.
ROLLING METAL.

No. 421,272.

Patented Feb. 11, 1890.

Fig- 1.

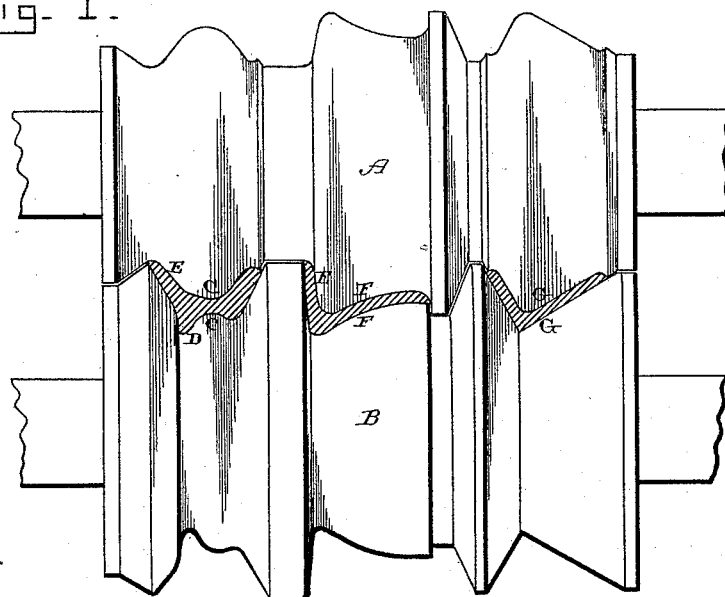
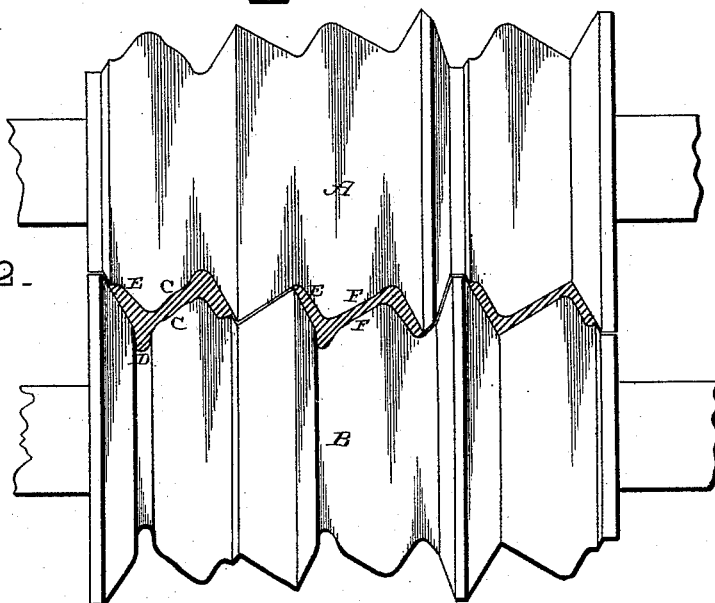


Fig- 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH GUEST, OF PITTSBURG, PENNSYLVANIA.

ROLLING METAL.

SPECIFICATION forming part of Letters Patent No. 421,272, dated February 11, 1890.

Application filed May 18, 1889. Serial No. 311,253. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH GUEST, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rolling Metals; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in rolling metals; and it consists in the combination of two rolls having suitable grooves, whereby the head and web portions are changed in shape and one of the flanges is reduced in the first pass, so as to adapt the iron by two subsequent passes to be converted into an L or Z iron, as will be more fully described hereinafter.

The object of my invention is to provide rolls which will change the entire shape of the rail at the first pass and by compressing the different parts so change their shape that they will run evenly through the rolls at subsequent passes.

Figure 1 represents a pair of rolls showing one form of my invention. Fig. 2 represents a slight modification of the same.

A B represent two rolls, which are provided with a groove C, shaped, as shown, so that at the first pass of the rail the flange D is reduced and shortened at the same time that the head and web are changed into the shape shown. The other flange E remains substantially unchanged, but the web portion is thickened and the head portion turned over and forced out laterally, as shown. The distance that the web may be forced downward on the flange, or that the side of the flange D may be

forced into the web, or the degree to which the head may be flattened and turned outward, may be varied without departing from the spirit of my invention. The exact shape of the first pass will depend upon the shape of the rail which is to be reworked, but will be substantially as here shown. In the second pass F the flange is further reduced into the web portion and the web lengthened laterally, while the head is still further reduced and spread out laterally at any suitable angle to the web. In the third pass G the iron is converted into an L-iron, as shown.

In case it should be desired to form Z instead of L irons at the first pass the flange D is shortened in the same manner as above described, while the head is flattened and turned in an opposite direction from what is shown in Fig. 1. At the next pass the flange D is still more reduced and web and head portions are reduced laterally. At the last pass a Z-shaped iron is produced ready for use. By an additional pass or two the Z-shaped iron can be rolled into a flat or other desired shape. Having thus described my invention, I claim—

The combination of the two rolls A B, provided with the leading-grooves C F G, so shaped that the rail in the first pass has the flange on one side reduced or rolled off and the web forced to one side of the head while the head is molded or flattened out, and in the other two passes the rail is converted into an angle or Z bar, substantially as shown.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH GUEST.

Witnesses:

H. H. SALLADE,
F. E. YOUNGS.