

(No Model.)

H. HARRIS.
ROLLS FOR UTILIZING OLD RAILS.

No. 451,002.

Patented Apr. 21, 1891.

FIG. 1.

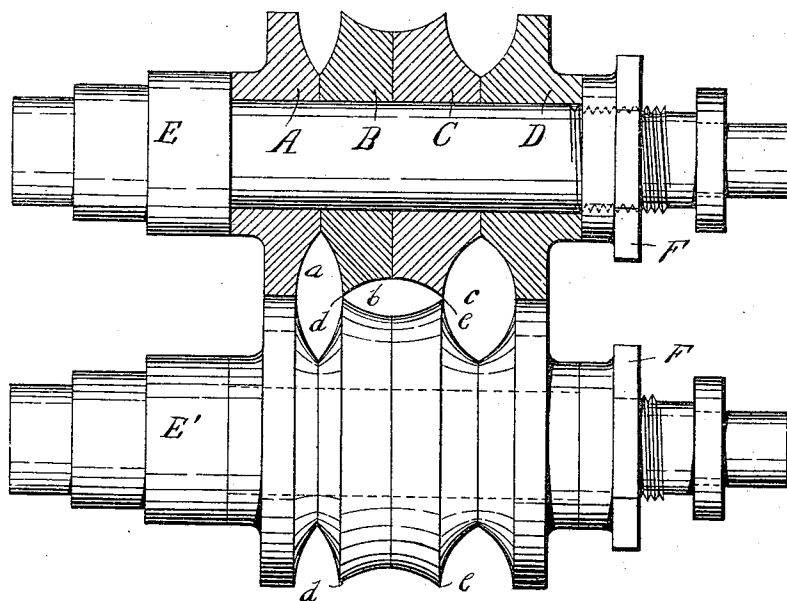
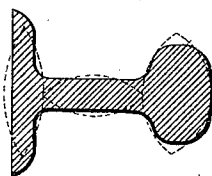


FIG. 2.



Witnesses

Ed. A. Kelly
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By his Attorney *[Signature]*

UNITED STATES PATENT OFFICE.

HENRY HARRIS, OF READING, PENNSYLVANIA.

ROLL FOR UTILIZING OLD RAILS.

SPECIFICATION forming part of Letters Patent No. 451,002, dated April 21, 1891.

Application filed September 1, 1890. Serial No. 363,620. (No model.)

To all whom it may concern:

Be it known that I, HENRY HARRIS, a citizen of the United States, residing at Reading, in the county of Berks, State of Pennsylvania, have invented certain Improvements in Rolls for Utilizing Rails, of which the following is a specification.

This invention relates to improvements in rolls for converting railroad-rails into merchantable bars.

Heretofore rails have been divided longitudinally into three portions, the head and base or flange being severed from the web by passing the same through rolls. In so doing, however, it has been found necessary, in order to overcome the tendency of the head and flange portions to curve outward from the central web portion, to make use of guide-bars to bear against the head and flange, and even then the several portions, when they pass out of the rolls, are not in suitable shape to be quickly reduced to merchantable bars.

It is well known to expert rollers that billets of substantially oval section can be more rapidly drawn out and reduced by passing through the finishing-rolls than can billets of rectangular section.

The object of my invention is to convert a rail at one heat and at one pass into billets of suitable section and in favorable condition for undergoing subsequent finishing passes; and it consists in providing the splitting-rolls with grooves so shaped as to bear upon other parts of the several portions of the rail than the points of severance, so as to simultaneously roll each portion into an oval section and overcome the tendency already mentioned to curve outward.

The invention is further described in connection with the accompanying drawings, and is specifically pointed out in the claim.

Figure 1 shows a pair of rolls embodying my invention. Fig. 2 is a section of a railroad-rail, showing in dotted lines the several billets into which it is to be converted by a pass through said rolls.

In the drawings, the pair of rolls E E' are shown without indicating the housing or bed required to support them, which may be of any suitable construction. Though the several grooves or passes required might be turned directly upon the rolls, I prefer to form them by the several sections A, B, C, and D, which are secured in position by the threaded collar F in a well-known manner. This arrangement permits the ready regulation of the grooves to suit different sections of rails, which is important to the proper working of the rolls. The grooves *a*, *b*, and *c* for the base or flange, the web, and the head, respectively, are all of oval form, and, as will be seen in Fig. 2, are so arranged and proportioned that while the cutting-edges *d* and *e* are severing the head and flange from the web the outer portions of both are being so pressed by the rolls as to correspondingly extend them and prevent the outward curving that would otherwise result from the cutting operation at *d* and *e* and at the same time rolling the several portions into the oval billets shown, which are passed out of the rolls in substantially straight condition and can be quickly converted in the finishing-rolls into bars of rectangular or other suitable sections.

What I claim is—

The rolls herein described for splitting and forming billets from railroad-rails, having the three grooves *a*, *b*, and *c*, as shown, whereby the head and base are severed from the web and the three portions simultaneously rolled into billets of oval section at one pass, substantially as set forth.

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

HENRY HARRIS.

Witnesses:

HOWARD P. WANNER,
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