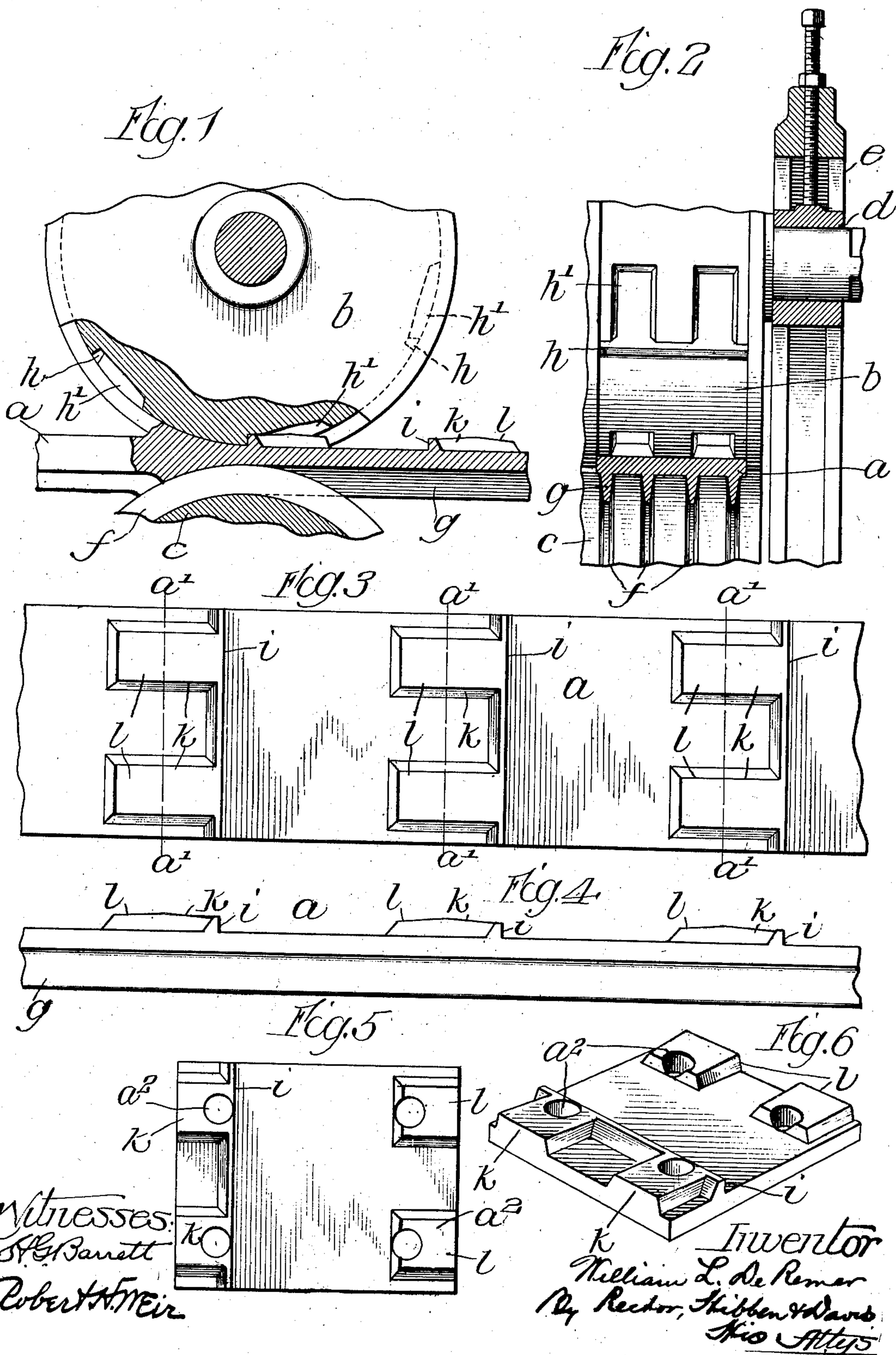


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METHOD OF FORMING TIE PLATES.  
APPLICATION FILED AUG. 23, 1909.

980,500.

Patented Jan. 3, 1911.





# UNITED STATES PATENT OFFICE.

WILLIAM L. DE REMER, OF CHICAGO, ILLINOIS.

## METHOD OF FORMING TIE-PLATES.

980,500.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Original application filed June 18, 1908, Serial No. 439,159. Divided and this application filed August 23, 1909. Serial No. 514,082.

*To all whom it may concern:*

Be it known that I, WILLIAM L. DE REMER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Method of Forming Tie-Plates, of which the following is a specification.

My invention relates to the forming of tie-plates and the object thereof is to provide a simple and efficient method of producing plates of this character.

Speaking in general terms, my method as practiced by me consists in first forming a long blank or bar containing a considerable number of tie-plates in succession and of peculiar formation and then severing said blank transversely at proper points in order to produce accurate tie-plates.

I do not herein claim the tie-plates or the general method or process of forming the blank or bar as the same constitute the subject matter of an original application filed on June 18, 1908, Serial No. 439,159, of which the within application is a division, and of a second divisional application filed simultaneously herewith on August 23, 1909, Serial No. 514,083.

In the drawing Figure 1 is an elevation of a pair of rolls with a blank or strip of metal in process of being formed into tie-plates therebetween, the rolls and strip being partly shown in section; Fig. 2 a side elevation of the rolls shown in Fig. 1; Fig. 3 a plan view of a portion of the blank or strip of metal showing a plurality of tie-plates before being cut apart and perforated; Fig. 4 a side elevation of the blank shown in Fig. 3; Fig. 5 a plan view of one of the separate tie-plates; and Fig. 6 a perspective thereof.

In practice the blank or bar is formed by the rolling process into a plurality of tie-plates which is subsequently severed into tie-plate lengths and I will therefore hereinafter refer, without intention of limitation, to the formation of said blank or strip of such rolling process in order that my invention may be readily understood.

In practice a billet or piece of metal is reduced by suitable rolls to plate form as shown at *a* and is passed through a pair of finishing rolls such as shown in Figs. 1 and

2. The upper roll *b* and lower roll *c* are rotatably mounted in suitable bearings *d* in a supporting frame *e*, and the lower roll is provided with annular peripheral grooves *f* for forming or rather finishing the bottom flanges *g* of the tie-plates when such flanges are to be used. The upper roll is provided with longitudinal slots or grooves *h* for forming the transverse shoulders or ribs which engage one side of the rail flange and which by preference, though not of necessity, extend all the way across the plate. In addition the upper roll is provided with recesses *h'* preferably two in number and adjacent the slots *h* and in communication therewith, with the result that in the rolling of the blank in this particular instance projections which are here in the form of bosses or reinforcements *k* and *l* are formed integral with such shoulders and at an angle thereto. The blank or strip after being thus rolled into the form above described and thereby consisting of a plurality of tie-plates joined together, is now severed in suitable manner transversely at points intermediate the ends of the bosses so formed and as determined by the position of the shoulders, as indicated by the dotted transverse lines *a'* in Fig. 3. By preference and according to practice, the blank or bar is properly perforated or punched in order to provide the spike holes *a''* before said severing into tie-plate lengths. One of the resulting tie-plates is indicated in Figs. 5 and 6 from which it will be seen that the act of severing the blank or strip in the manner described results in dividing the bosses of such blank in two, the portions *k* constituting the bosses for the shouldered end of one plate and the portions *l* constituting the bosses for the non-shouldered end of the next adjacent plate.

My method or process of forming tie-plates results in a superior and efficient product, the tie-plates being particularly accurate and undistorted so as to perfectly fit the rail and moreover, being uniform in size.

I claim:

1. The process of making tie-plates having a body portion provided on one face with projections at opposite ends thereof, which consists in forming said projections on a

blank and severing the blank through the projections intermediate their ends; substantially as described.

2. The process of making tie-plates having a body portion provided on one face with a transverse shoulder and bosses at the opposite ends of said body portion which consists in forming said shoulders and bosses adja-

cent thereto on a blank and severing the blank through the bosses intermediate their ends; substantially as described. 10

WILLIAM L. DE REMER.

Witnesses:

S. E. HIBBEN,  
LOUIS B. ERWIN.