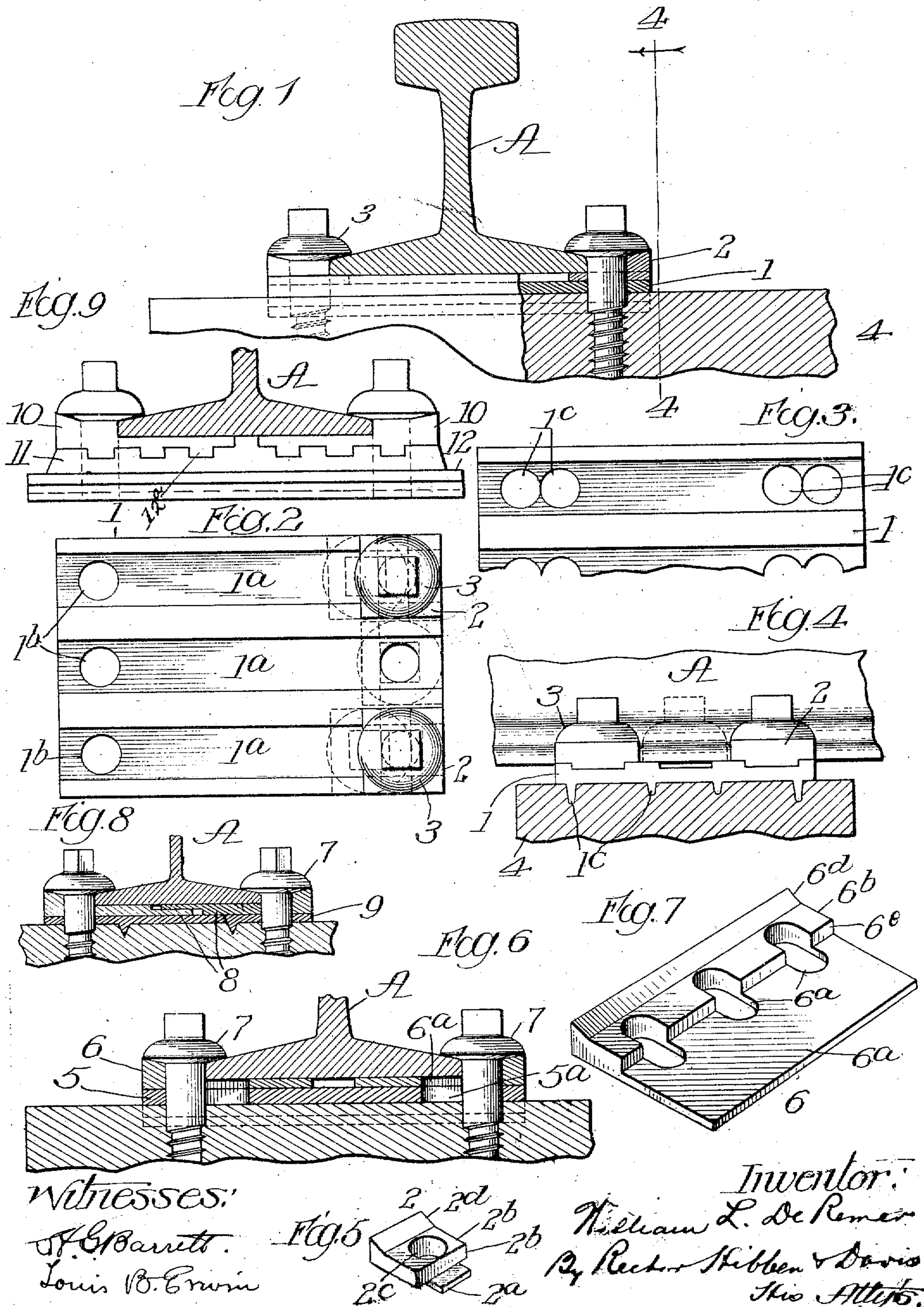


W. L. DE REMER.
TIE PLATE.
APPLICATION FILED AUG. 26, 1909.

962,750.

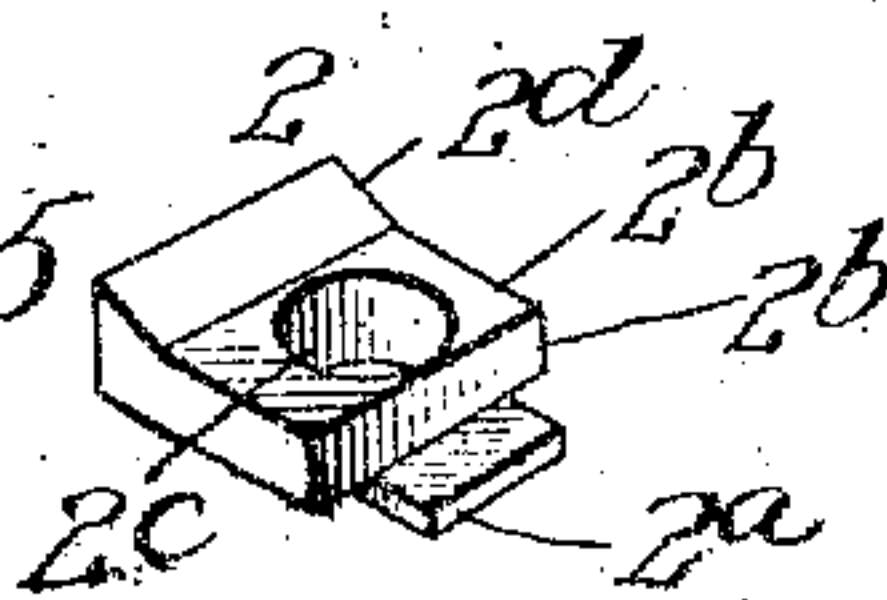
Patented June 28, 1910.



Witnesses:

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Fig. 5



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UNITED STATES PATENT OFFICE.

WILLIAM L. DE REMER, OF CHICAGO, ILLINOIS.

TIE-PLATE.

962,750.

Specification of Letters Patent. Patented June 28, 1910.

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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 certain new and useful Improvements in Tie-Plates, of which the following is a specification.

My invention relates to tie-plates and the object thereof is to provide a tie-plate having many advantages not only in the matter of manufacture but also in the matter of efficiency and reliability in actual use.

Speaking in general terms, my tie-plate comprises a body portion or plate proper on which the rail rests and a plurality of removable and adjustable portions or blocks which bear against the opposite sides of the rail flange and are secured to the plate proper by the spikes which hold the rail and tie-plate to the tie. This construction of tie-plate is simple and economical of manufacture and has the advantage of being adapted for use in connection with rails of different size as to flange, the only change necessary for the proper adaptation being the location of the spike holes in the plate proper and in the adjustable portions or blocks.

In the drawing Figure 1 is a part section and part elevation of my new form of tie-plate with the rail in section, said tie-plate and rail being shown secured to a tie; Fig. 2 a plan view of the tie-plate proper showing at one end a series of the removable and adjustable blocks, the blocks at the opposite end being removed to show the position of the spike holes; Fig. 3 a plan view of a portion of such tie-plate proper showing spike holes therein adapting the plate for different sizes of rail; Fig. 4 a sectional elevation on the line 4—4 of Fig. 1; Fig. 5 a perspective of one of the adjustable blocks; Fig. 6 a view somewhat similar to Fig. 1 but wholly in section and illustrating a modified form of tie-plate; Fig. 7 a perspective of one of the removable portions or blocks shown in Fig. 6; and Figs. 8 and 9 sections showing other modifications.

Referring to the embodiment of my invention as shown in Figs. 1 to 5, my tie-plate comprises a body portion or tie-plate proper marked 1 and a plurality of removable and adjustable blocks 2 which here have interlocking engagement both with the rail and with the body portion of the tie-plate. To this end said body portion is provided with

one or more longitudinal grooves 1^a which by preference as herein shown are three in number. Within these grooves fit the depending portions 2^a of the blocks 2 with the result that said blocks are movable within said grooves longitudinally of the plate and transversely of the line of rail A.

It will be understood that any desired number of grooves and blocks may be employed and that, even while I have shown three grooves only two of the same need be utilized for the blocks. I have accordingly illustrated in full lines in Fig. 2 two of the adjustable blocks at one end of the plate occupying the two outermost grooves, and a third block in dotted lines occupying the middle groove. I have illustrated by dotted lines with respect to the outermost blocks the feature of the adjustability of the blocks longitudinally of the grooves in order to accommodate rails of different flange widths.

On the other end of the plate 1 there may be employed a single block in any one of the grooves, or two blocks in any two thereof, or a block in each one of such grooves. Each of the blocks 2 is provided on its upper side with a flat portion 2^b through which the spike hole 2^c passes and with an inclined portion 2^d against which the inclined underside of the head of the spike 3 which is here a screw spike, bears. It will be understood that the plate is provided with spike holes 1^b which are located according to the particular width of rail flange with which it is to cooperate, the spike holes in the blocks being of course always the same inasmuch as these blocks are adjustable along the grooves in order that their spike holes may register with the corresponding spike holes in the plate proper. By preference though not of necessity, the tie plate proper may be provided on its underside with a series of flanges 1^c which engage the top surface of the tie 4 and which here are longitudinal of the plate.

As a convenient way for adapting the same plate to different sizes of rail, such plate may be provided with a series of pairs of spike holes 1^e as shown in Fig. 3 to accommodate two different standard sizes of rail, and it is obvious that slots may be substituted for such pairs of holes.

When the parts of the tie-plate and the rail are in place as shown in Fig. 1 the spikes as well as the rail itself hold the blocks in position, the flanged portion 2^a of

such blocks extending partially under the rail flange and thereby interlocking therewith and the shoulder 2^b of each block forming the abutment for a side of the rail flange as shown in Fig. 1.

In Figs. 6 and 7 I have illustrated a modified form of construction of tie-plate in which the body portion or tie-plate proper marked 5 is perfectly flat as to its upper face, that is ungrooved, and provided with the adjustable and removable portions or strips 6 resting flat upon said body portion and having an extended flanged portion 6^a inwardly directed underneath the rail flange as clearly shown in Fig. 6. Each strip 6 is provided on its upper face with a flat portion 6^b having spike holes 6^a, in the form of slots, and inclined surface 6^a, against which the inclined underside of the head of the screw spike 7 bears and a shoulder 6^c against which a side of the rail flange abuts. However, this adjustable strip or block differs from the first described form in that it extends transversely and all the way across the plate 5. It is obvious that these removable blocks or strips 6 are adjustable to fit properly upon the plate 5 in order to adapt it to the particular rail to which the tie-plate is applied, it being understood that the plate 5 is likewise provided with elongated or slot-like spike holes 5^a for said adjustment purposes. This form of tie-plate is extremely simple and economical of manufacture and the same is readily adapted for different rail flange widths, the only change necessitated for different rails being the location of the spike holes in the plate 5.

In Fig. 8 I have illustrated another modification wherein the adjustable portions are reduced at their adjacent ends and arranged to slide upon each other thereat for adjustment purposes. These portions may or may not be provided with a so-called abrasion plate but in the present instance I have shown such a plate 9.

As shown in the modification illustrated in Fig. 9, the adjustable blocks may be interlocked with the plate proper and the adjustment obtained by different positioning with respect to complementary projections and notches or grooves in the plate and blocks. To this end the blocks 10 have on their under surface a series of projections and notches which fit corresponding projections and notches in the plate 11, which by preference

rests upon a bottom plate 12. It will be understood that these projections and notches have a certain relation to the standard rail flange widths so that when the parts of the tie-plate are in the relative position shown they will accommodate a certain flange width and that when the blocks are adjusted outwardly the distance of one notch they will accommodate another flange width. This tie-plate like the others may be provided with either transverse or longitudinal bottom flanges but in the present instance these flanges 12^a which are on the bottom plate are of the longitudinal type.

I claim:

1. A tie-plate comprising a body portion, and a portion adjustable thereon in a longitudinal line toward and away from the rail when in position, said adjustable portion having a spike hole; substantially as described.

2. A tie-plate comprising a body portion, and portions adjustable thereon longitudinally toward and away from the rail when in position, said adjustable portions being arranged to interlock with the body portion; substantially as described.

3. A tie-plate comprising a body portion, and portions adjustable thereon longitudinally toward and away from the rail when in position, said adjustable portions being arranged to interlock with both the body portion and with the rail; substantially as described.

4. A tie-plate comprising a body portion having a longitudinal groove, and blocks fitting and movable therein toward and away from the rail when in position, and having spike openings; substantially as described.

5. A tie-plate comprising a body portion having a plurality of longitudinal grooves, and a plurality of blocks fitting therein at opposite ends and having spike openings; substantially as described.

6. A tie-plate comprising a body portion having a longitudinal groove, and blocks fitting and movable therein toward and away from the rail when in position, and having spike openings, said blocks having inwardly directed flanges extending beneath the rail when in position; substantially as described.

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Witnesses:

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