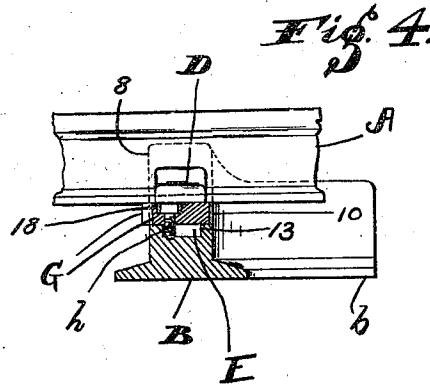
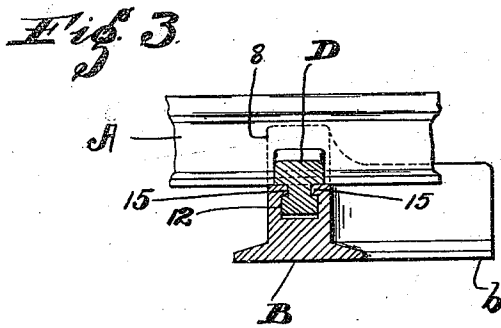
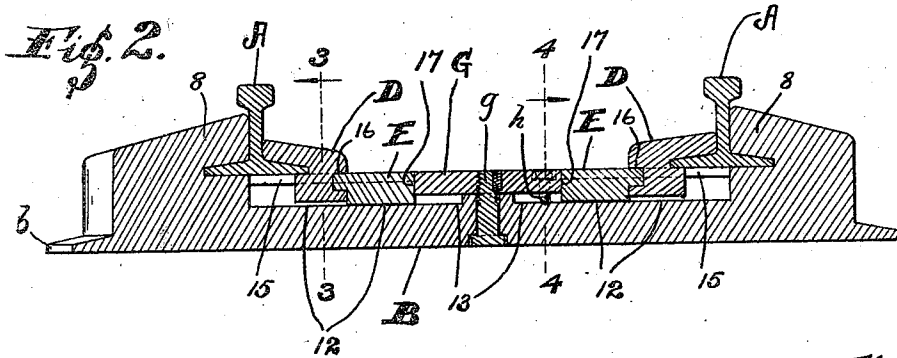
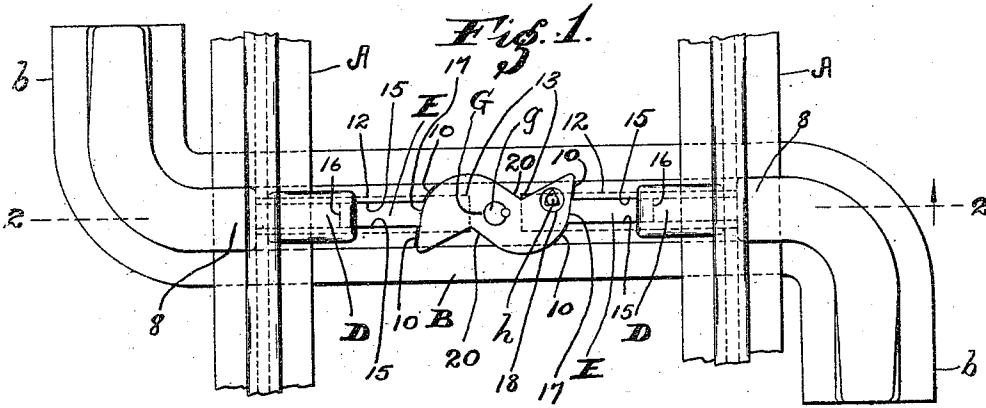


M. KELP.
RAIL SECURING MEANS.
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Patented Aug. 22, 1911.

1,001.281.

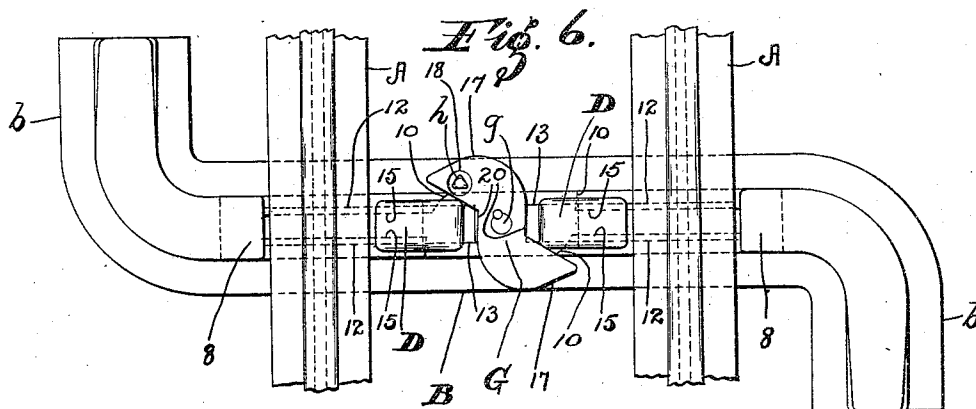
2 SHEETS-SHEET 1.



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UNITED STATES PATENT OFFICE.

MARTIN KELP, OF ALLIANCE, OHIO.

RAIL-SECURING MEANS.

1,001,281.

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To all whom it may concern:

Be it known that I, MARTIN KELP, a subject of the King of Hungary, residing at Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Rail-Securing Means; and I 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 the same.

This invention relates to improvements in rail-securing means, and pertains more especially to means applicable for securing the rails of a railway track to metal ties.

The primary object of this invention is to avoid the use of bolts and nuts or similar securing devices in holding the said rails down upon the ties.

Another object is to provide rail-securing means of the character indicated which do not interfere with the renewal of the rails with facility.

Another object is to provide rail-securing means of the character indicated whose component parts are readily assembled.

Another object is to provide rail-securing means of the character indicated which are simple and durable in construction, reliable in their operation and not liable to get out of order.

With these objects in view, this invention consists in certain structural features, and combinations and arrangement of parts hereinafter described, pointed out in the claims, and illustrated in the accompanying drawings.

In the said drawings, Figure 1 is a top plan of a portion of a railway-track and a tie extending under and transversely of the said track and provided with my improved rail-securing means. Fig. 2 is a vertical section on line 2—2, Fig. 1, looking in the direction indicated by the arrow. Fig. 3 is a vertical section on line 3—3, Fig. 2, looking in the direction indicated by the arrow. Fig. 4 is a vertical section on line 4—4, Fig. 2, looking in the direction indicated by the arrow. Figs. 5 and 6 are top plans illustrating the manner of rendering the rail-clamping blocks of my improved rail-securing means inoperative to permit the rails to be lifted from the tie for renewal or other purposes.

In the said drawings, A and A indicate the two laterally spaced rails of a railway-

track, and B, a metal tie extending under and transversely of the track. The tie B therefore extends under and is instrumental in supporting the rails A. The tie B extends a suitable distance laterally and outwardly beyond the outer sides of the rails, and each end portion *b* of the tie projects laterally of the tie and consequently longitudinally of the adjacent rail. Obviously the laterally projecting end portions *b* of the tie, when the tie is embedded in the ground or ballast, are instrumental in preventing displacement of the tie laterally of the track. The tie B has two lugs 8 and 8 arranged to be engaged by and forming abutments for the outer side of opposite rails respectively. Each lug or abutment 8 engages the adjacent edge of the base of the adjacent rail and extends over the adjacent portion of the said base and into engagement with the outer side of the web of the said rail. The tie B is provided centrally between its abutments 8 and 8 with a recess 10 which extends transversely of and through the tie at the top of the tie, and the tie is provided between the said recess and each abutment 8 with a slideway 12 arranged longitudinally of the tie centrally between the sides of the tie and extending inwardly, as at 13, into the bottom of the said recess. The tie B is provided at the top thereof and at each side of each slideway with a laterally and inwardly projecting flange 15 arranged longitudinally of the tie and spaced from the flange at the opposite side of the said slideway and extending from the recess 10 outwardly a suitable distance. Each slideway 12 is engaged by a clamping block D which extends under the flanges 15 extending along the said slideway, which bar is supported from the tie and arranged to clamp the adjacent rail against the adjacent abutment 8 on the tie. Each rail-clamping block D is contoured at its outer end to render it capable of embracing the adjacent portion of the base of the adjacent rail to be clamped against the adjacent abutment 8 and is provided in its inner end with a recess 16 spaced from the top and bottom of the block and engaged by a spacing block E which engages the slideway engaged by the said rail-clamping block and extends between the latter and the recess 10.

A rotary member G, which rests on the bottom of the recess 10, is pivoted centrally

and vertically, as at *g*, to the tie and arranged to operate between the spacing blocks E and E. The pivoted member G terminates in two oppositely arranged cams 17 and 17 which are arranged at opposite sides respectively of the axis of the said member G and engage the inner end of the different spacing blocks E respectively, or release the respective spacing block, according as the said pivoted member is rotated to the extent required in the one or the other direction. The recess 10 has the dimensions required to accommodate the location and operation of the pivoted member G.

In Fig. 5 the pivoted member G extends transversely of the recesses 10 and has its cams 17 and 17 out of the way of the spacing blocks E which are shown loose between the said pivoted member and the rail-clamping blocks D. Upon actuating the pivoted member G from the position shown in Fig. 5 into the position shown in Figs. 1 and 2 the cams 17 come into engagement with the inner end of the different spacing blocks E respectively and actuate the latter outwardly so as to result in the actuation of the rail-clamping blocks D into their rail-clamping position shown in Figs. 1 and 2.

By the construction hereinbefore described it will be observed that each rail A is clamped firmly against the adjacent abutment 8 when the pivoted member G has been rotated into the position shown in Figs. 1 and 2, and the said pivoted member, when the blocks D clamp the rail, is locked or secured in the said position by a suitably applied set-screw *h* with which the said pivoted member is provided, which set-screw is arranged vertically and in the said position of the said pivoted member (see Fig. 4) extends into the extension 13 of one of the slideways 12 and locks or secures the said pivoted member to the tie. The pivoted member G is provided in the top thereof with a recess 18 arranged to receive the head of the set-screw in the locking position of the set-screw, and obviously a set-screw having a head of special configuration, as, for instance, the triangular head shown, can not be manipulated by an ordinary wrench so that the liability of the said set-screw being accidentally or otherwise withdrawn is reduced to a minimum. Obviously the set-screw *h* is withdrawn far enough to permit the pivoted member G to move into its inoperative position, shown in Figs. 5 and 6, preparatory to releasing the rails from the tie, and it will be observed that the said pivoted member is provided with recesses 20 which, when the said pivoted member is in the said position, permit a movement of the spacing blocks E toward each other far enough to accommodate their withdrawal from the recesses 16 in the rail-

clamping blocks into the position shown in Fig. 5, whereupon the spacing blocks are free to be removed upwardly from the tie so that the rail-clamping blocks can be moved from the rails, as shown in Fig. 6, and permit the rails to be lifted from the tie.

By the construction hereinbefore described it will be observed that a proper manipulation of the pivoted member G simultaneously operates both rail-clamping blocks so as to cause both rails to be simultaneously clamped to the tie, and, similarly, both rails are simultaneously released from the tie upon actuating the said pivoted member into its inoperative position shown in Figs. 5 and 6.

What I claim is:—

1. The combination, with a rail, and a railway-tie extending under and instrumental in supporting the rail, said tie having an abutment for one side of the rail, of a rail-clamping block arranged at the opposite side of the rail and shiftable longitudinally of the tie, which block at one end engages the rail; a spacing block movable longitudinally of the tie and engaging the opposite end of the rail-clamping block, and a member pivoted to the tie and terminating in a cam engaging the other end of the spacing block, said cam adapted to crowd the spacing block toward the rail and thereby cause the rail-clamping block to clamp the rail against the abutment, or adapted to release the spacing block, according as the said pivoted member has been rotated to the extent required in the one or the other direction.

2. The combination, with a rail, and a railway-tie extending under and instrumental in supporting the rail, said tie having an abutment for one side of the rail, of a rail-clamping block arranged at the opposite side of the rail and shiftable longitudinally of the tie, which block at one end engages the rail; a spacing block movable longitudinally of the tie and engaging the opposite end of the rail-clamping block; a member pivoted to the tie and terminating in a cam which engages the other end of the spacing block and is instrumental in causing the latter to hold the rail-clamping block in its rail-clamping position, and means for locking the said pivoted member to the tie when the rail-clamping block is in its rail-clamping position.

3. The combination, with a rail, and a railway-tie extending under and instrumental in supporting the rail, said tie having an abutment for one side of the rail, of a rail-clamping block arranged at the opposite side of the rail and shiftable longitudinally of and held to the tie, which block is contoured at one end to embrace the adjacent portion of the base of the rail and provided in its opposite end with a recess which

is spaced from the top of the block; a spacing block movable longitudinally of the tie and engaging at one end with the said recess, and a member pivoted to the tie and terminating in a cam which engages the other end of the spacing block and is instrumental in causing the latter to hold the rail-clamping block in its rail-clamping position.

4. The combination, with a rail, and a railway-tie extending under and instrumental in supporting the rail, said tie having an abutment for one side of the rail, of a rail-clamping block arranged at the opposite side of the rail and shiftable longitudinally of the tie, which block at one end engages the rail; a spacing block engaging at one end with the opposite end of the rail-clamping block; a member pivoted to the tie and terminating in a cam which engages the other end of the spacing block, and a substantially vertically arranged set-screw spaced from the axis of and borne by the said pivoted member, which set-screw in the rail-clamping position of the first-mentioned block is arranged to lock the said pivoted member to the tie.

5. The combination, with a railway-tie adapted to extend under and instrumental in supporting the two rails of a railway-track, which tie has two abutments for the outer sides of opposite rails respectively and is provided at the top of the tie and centrally between the said abutments with a recess extending transversely of and through the tie, said tie being provided between the

said recess and each abutment with a slideway arranged longitudinally of the tie and centrally between the sides of the tie and extending into the bottom of the aforesaid recess; a rail-clamping block engaging the said slideway, and a member pivoted substantially vertically to the tie centrally of the aforesaid recess and terminating in oppositely disposed cams arranged at opposite sides respectively of the axis of the said pivoted member, and spacing blocks engaging the aforesaid slideways and interposed between the said pivoted member and the rail-clamping blocks.

6. The combination, with a railway-tie adapted to extend under and instrumental in supporting the two rails of a railway-track, which tie has two abutments spaced longitudinally of the tie and provided at the top of the tie and centrally between the abutments with a recess extending transversely of and through the tie, of the rail-clamping blocks D, the spacing blocks E, and the member G which is pivoted substantially vertically to the tie centrally of the aforesaid recess and having the cams 17 and the recesses 20, all arranged and operating substantially as shown, for the purpose specified.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

MARTIN KELP.

Witnesses:

B. C. BROWN,
N. L. McDONNELL.