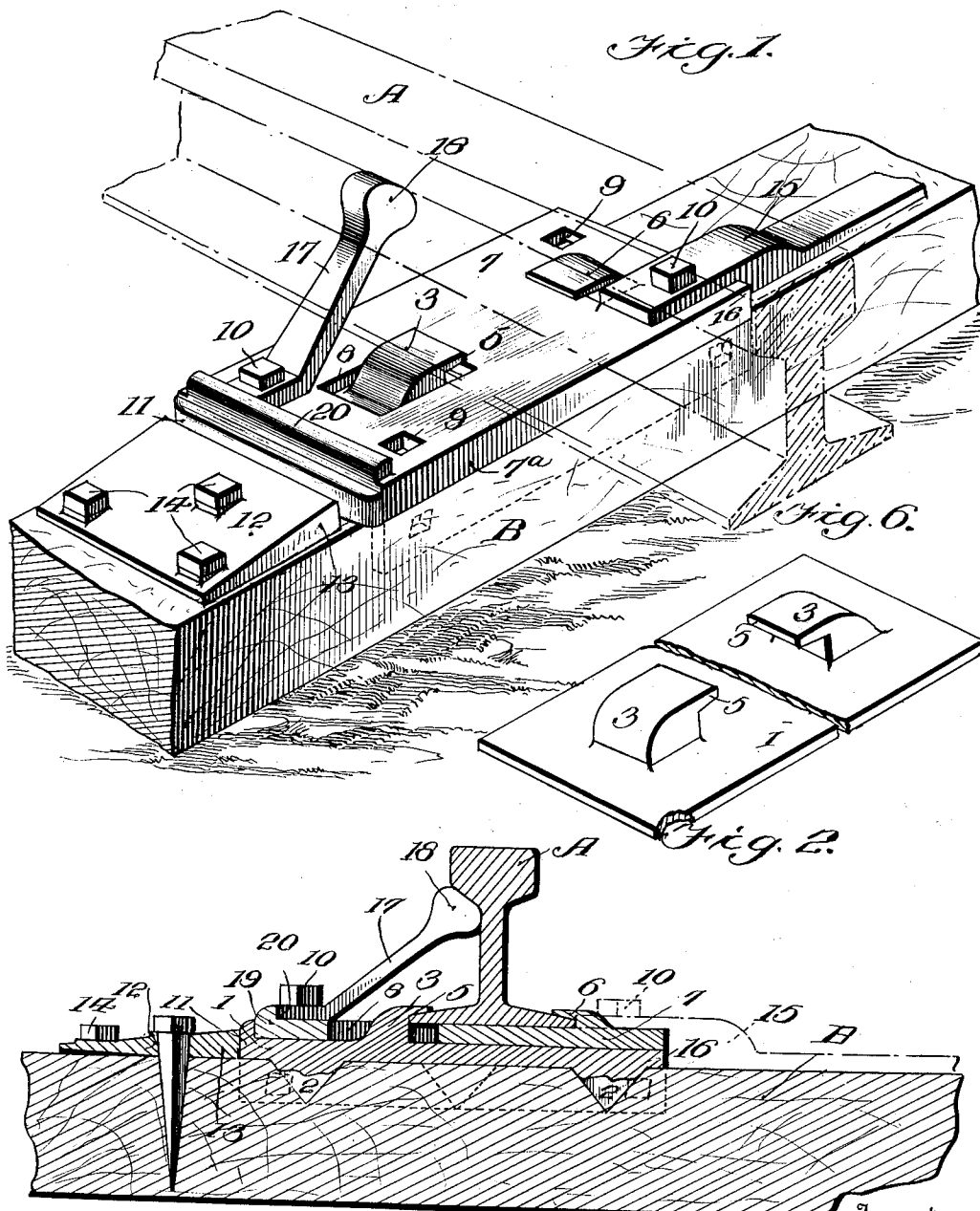


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RAIL FASTENER.
APPLICATION FILED JAN. 9, 1912.

1,050,580.

Patented Jan. 14, 1913.

2 SHEETS—SHEET 1.



Inventor
J. H. Volk.

Witnesses
K. M. T. P. P.
Jeana M. Fallon.

By

A. M. Tracy, Attorney.

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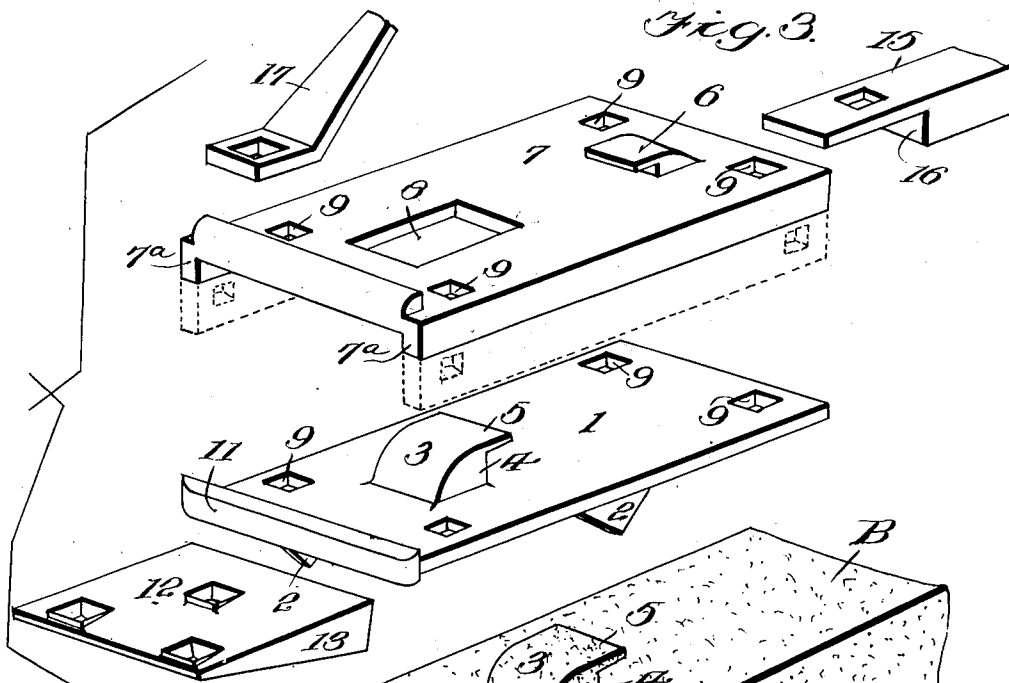
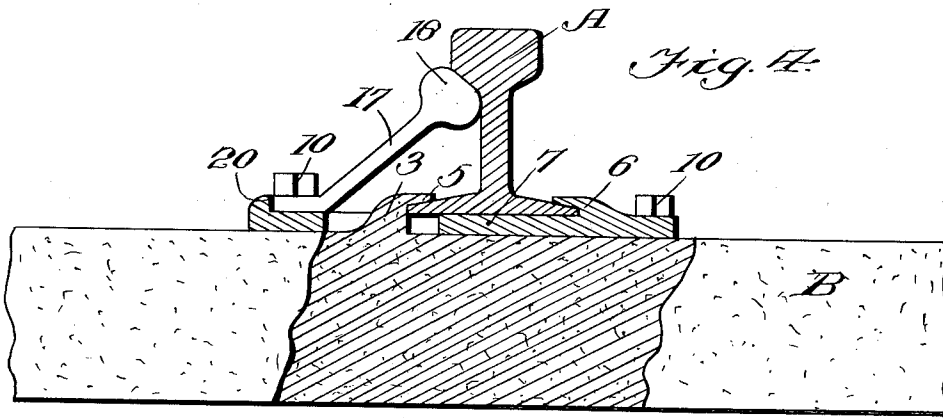


Fig. 5.

Inventor
J. H. Volk.

Witnesses
K. M. E. E. E.
J. M. F. E. E.

A. M. E. E. E. Attorney.

UNITED STATES PATENT OFFICE.

JOHN H. VOLK, OF POST FALLS, IDAHO.

RAIL-FASTENER.

1,050,580.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed January 9, 1912. Serial No. 670,328.

To all whom it may concern:

Be it known that I, JOHN H. VOLK, citizen of the United States, residing at Post Falls, in the county of Kootenai and State of Idaho, have invented certain new and useful Improvements in Rail-Fasteners, of which the following is a specification.

This invention relates to railroad track construction and aims to provide a device of simple and durable form which will effectively prevent all spreading of the track rails.

A further aim is the provision of a rail fastening device which will be readily applicable to wooden cross ties of ordinary track construction and which will also be suitable for use in connection with metallic cross ties.

A still further aim is to provide coacting rail engaging members adapted to engage the rail base and be disposed above the cross ties in place of the usual track fastening devices.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain construction, arrangements and combinations of the parts as I will hereinafter fully describe and claim.

For a full understanding of the invention and the merits thereof, and also to acquire a knowledge of the details of construction and a means for effecting the result, reference is to be had to the following description and accompanying drawings in which:—

Figure 1 is a perspective view of a complete improved track fastening device in engagement with a track rail. Fig. 2 is a combined elevation and a partial cross section of the same. Fig. 3 is a perspective view of the various members of the device before assembling. Fig. 4 is a combined elevation and cross section of the device attached to a metallic tie. Fig. 5 is a perspective of a metallic tie adapted to be used with the improved device. Fig. 6 shows the plate 1 of sufficient length to support both of its fixed lugs.

Corresponding and like parts are referred

to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

For the purpose of clearance, the device of this invention is shown in connection with a portion of railroad track in which A designates the rails and B the ties thereof. A base or plate 1 adapted to rest on a cross tie beneath the track rail is formed with a plurality of staggered depending lips 2, which bite into the tie and prevent both longitudinal and lateral movement of the plate. The upper face of the plate is provided with an upstanding lug 3, cut away as at 4 to form an overhanging lip 5 adapted to fit over and engage the outer side of the rail base.

It might be desirable under some circumstances to increase the length of the plate 1 so that it could carry both of the lugs 5 as shown in Fig. 6. This construction would render unnecessary the use of the depending lips 2.

In case metallic ties are used, as in Figs. 4 and 5, the lug 3 would, of course, be integral with the tie, and thus obviate the use of the plate 1.

Engaging the under side of the base of the rail and coacting with the lug 3 is a second lug 6 which is preferably integral with a second plate 7 which latter is disposed above the plate 1 and supports the track rail A, there being depending lateral flanges 7^a formed on each side of the plate 7, said flanges being adapted to embrace the base 1 and prevent independent lateral movement of the members 1 and 7. In some cases, as where ties of uniform width are used, these flanges 7^a could be relatively long and embrace the tie, and further insure the stability of the device, as shown by the dotted lines in Figs. 1 and 3.

The plate 7 is provided with a longitudinal slot 8 through which the lug 3 projects and engages the rail, said slot being of sufficient length to permit the plate 7 to slide on the plate 1, and thus allow the rail base to be gripped between the two lugs 3 and 6, in which position apertures 9 formed in the plates 1 and 7, register and permit the

insertion of fastening devices, preferably in the form of spikes 10, which pass downwardly into the cross ties and secure the parts in assembled position.

5 In order to positively prevent any movement of the plates 1 and 7, and thus prevent subsequent spreading of the rails, the plate 1 is provided with an upstanding portion 11, which forms a bearing against which a plate 12 abuts, said plate being outwardly tapered to avoid unnecessary weight, its sides 13 being right triangles whereby it may rest squarely upon the tie and against the base plate. The plate 12 is secured in this position by fastening members 14 which pass through the plate and engage the tie. Attention is here directed to the fact that the portion 11 of the plate 1 further acts as a stop to the plate 7 and to permit the apertures 9 of the two plates to register. If desired, spreading of the rails may be further insured against by an angular rail spanning bar 15 which connects the diametrically opposite plates of the parallel rails and is formed with a shoulder 16 on the under side on each end, which shoulder is adapted to abut against the inner end of the adjacent plate 7 and be secured in this position by one of the spikes 10 which pierces the bar before passing through the plates and entering the tie.

Any tendency of the rail A to roll over outwardly is effectually prevented, by means of inclined angular braces 17 disposed at desired intervals along the rail and each secured in place by one of the spikes 10 which passes through an opening provided for that purpose in the lower end of the brace. The upper end 18 of said brace is preferably enlarged and conforms substantially to the shape of a portion of the rail beneath the tread thereof, thus allowing the brace to engage a relatively large surface of the rail and thereby constitute an effectual brace which prevents the rail from rolling laterally outward. A transverse bead 19 having a flat inner face 20 extends across the outer end of the plate 7, against which bead the brace 17 bears, so that should the spike 10 become accidentally loosened, said brace will still be held in place between the rail and the bead.

Although the plates 1 and 7 have been shown as having but one upstanding lug each, the construction is not necessarily limited in this as a plurality of lugs could be used if desired. These lugs need not, of course, conform to the specific shape shown in the drawings.

60 Having thus described my invention, what is claimed is:

1. The combination with a railroad track, of a rail securing device mounted on some of the cross ties beneath the track rails, and

embodying a fixed plate and a movable plate 65 extending under the track rails and provided with lugs to engage the opposite sides of the rails, means for securing the outer ends of both plates to the tie, a spacing bar spanning the parallel rails and disposed longitudinally of the ties, said bar having under-cut ends adapted to bear against and project over the inner ends of the plates, and fastening devices inserted through the inner ends of the plates and the ends of the 75 spanning bar to secure the same to the tie.

2. The combination with a railroad track, of superimposed plates interposed between the rails and ties of the track and having openings adapted to register, said plates having opposed lugs to engage the opposite edges of the rail base and the lower plate also having a transverse flange at its outer end to engage the end of the upper plate, and fastening devices inserted through the 85 openings in the plates into the tie.

3. The combination with a railroad track, of a fixed under-cut lug adapted to engage one side of the rail base, a plate slidably mounted under the rail and having an under-cut lug adapted to engage the opposite side of the rail base, a transverse flange at the outer end of said plate, a brace having its lower end resting upon said plate and against said flange and its upper end bearing against the rail, and fastening devices to secure the plate to the tie and the brace to the plate.

4. The combination with a railroad track, of a fixed plate secured to a cross tie beneath 100 the track rail, means depending from said plate to prevent the movement thereof independently of the tie, a movable plate disposed above the fixed plate and capable of sliding longitudinally thereon, depending lateral flanges formed on the movable plate and adapted to embrace the fixed plate to prevent lateral movement of the movable plate independently of the cross tie, coacting rail engaging lugs provided on the 110 plates, and means for securing said lugs in engagement with the base of the rail.

5. The combination with a railroad track, of a fixed undercut lug operatively secured to a cross tie thereof and adapted to engage 115 one side of the rail base, a sliding lug mounted on a plate and adapted to engage the other side of the rail base, fastening devices for securing the lugs in adjusted position, and a brace engaging one of the fastening devices, bearing against the rail and adapted to prevent rolling over of the latter.

6. The combination with a railroad track, of superimposed rail engaging plates interposed between the rails and the ties 120 thereof and both projecting beyond both sides of the rails, one of the plates being rigidly secured to the tie and provided on

its outer end with an upstanding flange to
engage the outer end of the superposed
plate, opposed rail-engaging lugs formed
on the plates, and a third plate rigidly se-
cured to the tie with its inner end bearing
against the flange of the rigid plate to
brace the latter.

In testimony whereof I affix my signa-
ture in presence of two witnesses.

JOHN H. VOLK. [L. s.]

Witnesses:

BESSIE I. ENDERS,
FRANK H. SHIELDS.