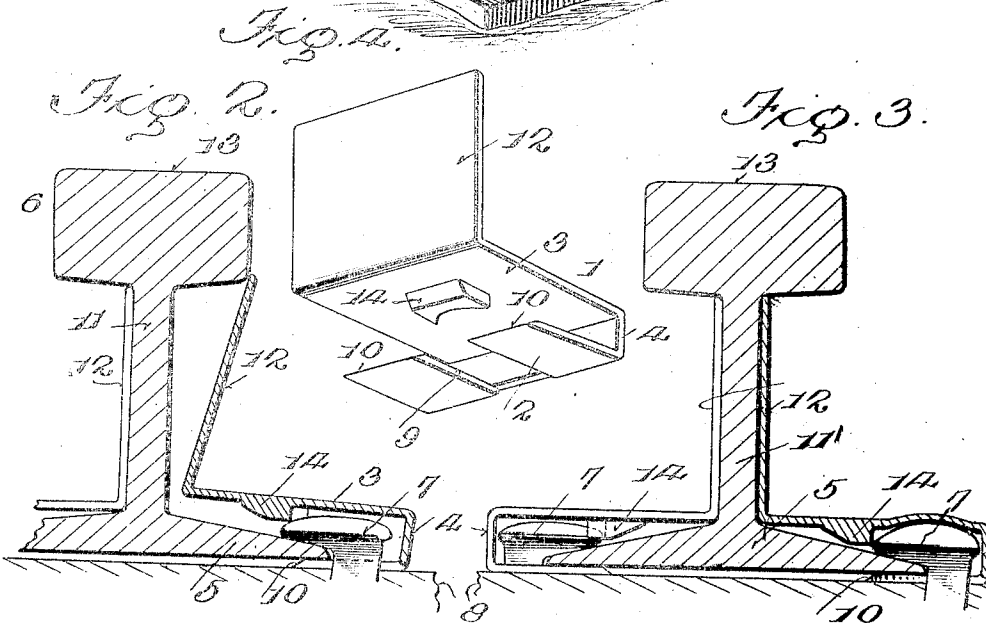
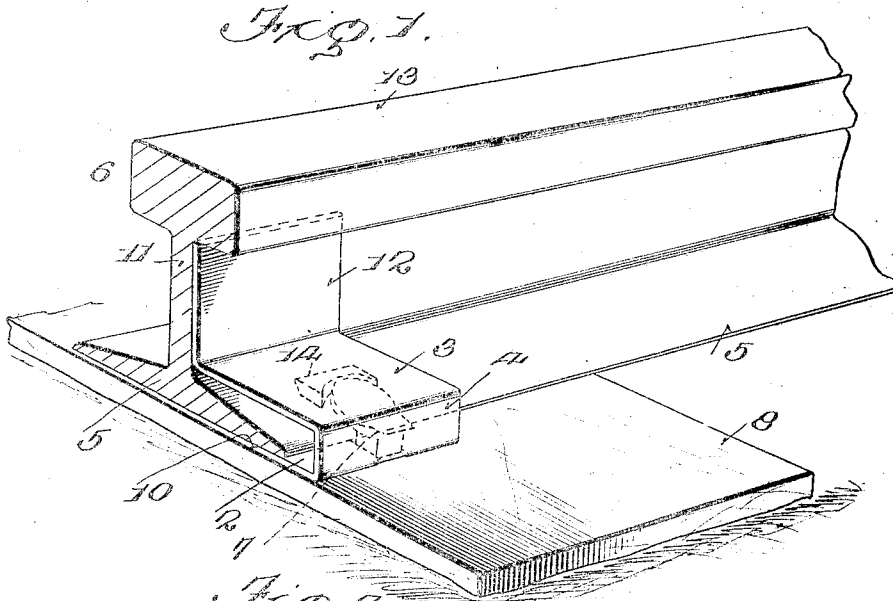


H. O. CRIPPEN.
SPIKE HOLDER.
APPLICATION FILED SEPT. 17, 1909.

953,987.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.



Inventor

H. O. Crippen

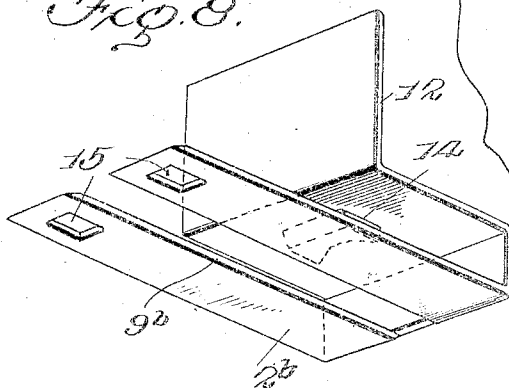
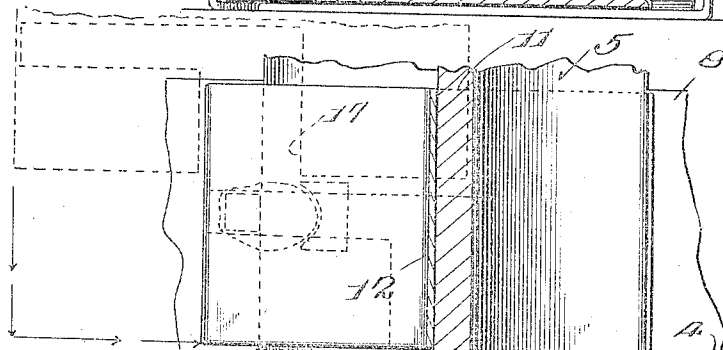
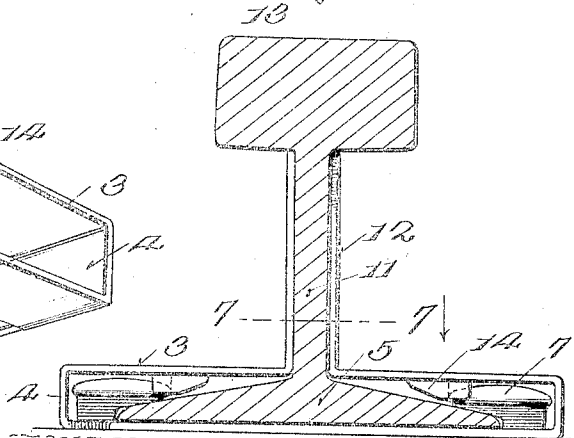
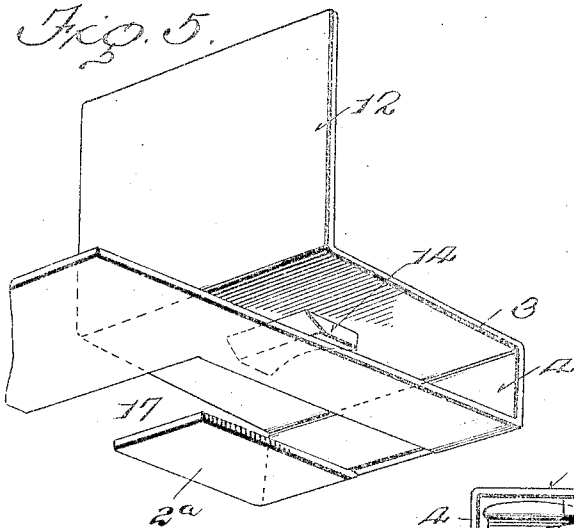
Witnesses
W. N. Woodson,
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By

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953,987.

2 SHEETS—SHEET 2.



H. O. Gripper

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UNITED STATES PATENT OFFICE.

HERBERT O. CRIPPEN, OF SANFORD, FLORIDA.

SPIKE-HOLDER.

953,987.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed September 17, 1909. Serial No. 518,191.

To all whom it may concern:

Be it known that I, HERBERT O. CRIPPEN, citizen of the United States, residing at Sanford, in the county of Orange and State of Florida, have invented certain new and useful Improvements in Spike-Holders, of which the following is a specification.

This invention comprehends certain new and useful improvements in track equipment for railways, and relates more particularly to the improved spike holder described and claimed in my allowed application. Serial No. 479,463, filed February 23, 1909. This holder is in the form of a clip which embraces the base flange of the rail in proximity to a spike, the upper member of the clip being yieldable downwardly to bear forcibly against the head of the spike, and being held under stress in such position by means of a plate snapping under the head of the rail and against the web thereof.

The object of the present invention is an improved device of this character which is held firmly in place in a novel and efficient manner, the upper member of the clip being provided with a depending lug that engages the head of the spike when said member is sprung downwardly into an operative position against the latter, and thus positively retains the holder against accidental lateral displacement from the rail.

A further object of the invention is an improved spike holder which is susceptible of use in connection with the ordinary rails, and wooden ties in general use; which may be easily and quickly attached to the rail and requires no subsequent attention; and which effectually maintains the spike against possible loosening movement and also shields the same from the weather.

With these and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and then point out the novel features of in the appended claims.

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

Figure 1 is a sectional perspective view illustrating the application of the invention; Fig. 2 is a transverse section showing the

position of the spike holder before it has been sprung into place; Fig. 3 is a similar view showing the spike holder completely attached; Fig. 4 is a detail perspective view of the holder detached; and, Figs. 5, 6, 7 and 8 illustrate modifications hereinafter specifically described.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

My improved spike holder is preferably constructed of an integral sheet of suitable spring metal which is doubled upon itself intermediate of its ends to constitute a substantially U-shaped clip 1, the clip consisting of spaced members 2 and 3 and a connecting plate or web 4. The clip embraces the edge of the base flange 5 of a conventional rail 6 at a point where said flange is engaged by a spike 7, the lower member of the clip, designated 2, being interposed between the base flange and the upper surface of the tie 8. This lower member is bifurcated to embrace the upstanding portion of the spike and for this purpose has a slot 9 extending centrally and longitudinally thereof, it being noted that by virtue of such an arrangement the clip is held against creeping or moving longitudinally with respect to the rail. The extremities of the bifurcations of the member 2 are preferably tapered or sharpened, as indicated at 10, to admit of said member being more easily inserted in place. The upper member 3 of the clip is supported at a suitable elevation by means of the connecting plate 4 which upstands substantially vertically from the surface of the tie. In the present instance the upper member is considerably longer than the lower member and is inclined inwardly toward the web 11 of the rail and extends over and is normally spaced apart from the head of the spike and the corresponding base flange 5. The upper member is arranged to yield downwardly to assume the operative position illustrated in Fig. 3, wherein it bears forcibly against the head of the spike to maintain the latter against possible loosening movement in the tie. In order to hold the upper member under stress in such operative position, the metal forming the holder is extended angularly and upwardly beyond the extremity of said member to form a tension plate 12 which is adapted to be snapped under the head 13 of the rail in abutting re-

lation to the web 11. The bend at the terminal of the upper member fits snugly in the angle formed at the juncture of the web 11 with the corresponding base flange 5, so as to strengthen the structure as a whole, it being observed that the upper member is slightly bowed intermediate of its ends, as best seen in Fig. 3.

The structure hereinbefore described is disclosed in my previous application above referred to.

The essential feature of the present invention is the provision of simple and efficient means whereby the holder is retained rigidly in operative relation to the rail against accidental lateral displacement. This is accomplished through the instrumentality of a lug 14 that depends from the lower face of the member 3 and is spaced apart inwardly from the connecting plate 4, so as to co-operate therewith to form, in effect, a seat for the reception of the spike head. The lug is disposed above the upper surface of the spike head in the raised or inoperative position of the member 3, and is movable downwardly with said member so as to assume a position in abutting relation to the inner side of the spike head. The face of the lug which contacts with the spike head is preferably concaved, as shown, so as to fit the spike head snugly and thus secure a broad bearing surface to distribute strain. Attention is here directed to the fact that the lug is automatically engaged with the spike head when the upper member 2 is sprung downwardly into an operative position and forms a positive lock, so that the possibility of the spike holder becoming displaced is effectually obviated. It is also to be observed that as no bolts, screws, or similar fastening devices, are employed in attaching the holder to the rail, the attaching operation may be effected with greater ease and facility which is quite an economy and admits of a track being equipped with the invention at a minimum cost.

When applying my improved spike holder to the rail, the clip 1 is slipped transversely, so as to embrace the edge of the base flange 5 at a point where the latter is engaged with the spike, the lower member 2 being inserted between the base flange and the upper face of the tie with the upstanding portion of the spike accommodated in the slot 9. The upper member 3 is carried inwardly across the spike head and over the adjacent base flange 5, by this lateral movement, it being particularly noted that as the upper member is in its normal or raised position, sufficient clearance is afforded to permit the lug 14 to pass inwardly over and beyond the spike head. The upper end of the tension plate 12 abuts against the corresponding side face of the head of the rail when the holder is pushed laterally into position in this man-

ner, so that the tension plate is deflected or bent outwardly or backwardly by such movement. The parts now assume the positions shown in Fig. 2. To complete the attachment of the holder, it is merely necessary to press the upper member of the clip downwardly to bear against the spike head and engage the lug 14 therewith, the member being automatically retained in this position through the instrumentality of the tension plate 12 which is moved downwardly to clear the head 13 and snaps under the same and against the web 11 (see Fig. 3):

When in place the holder serves in addition to its primary function, to substantially house the spike head to protect the same from the weather, while the tension plate that abuts against the web of the rail assists in materially bracing the latter. Should occasion require that the holder be removed from the rail, as in event of taking up the track, such may be conveniently accomplished by inserting a wedge between the web 11 and the tension plate 12 to force the latter outwardly from beneath the head 13 of the rail, whereupon the holder is released and may be slipped laterally out of association with the rail.

In another embodiment of the invention the lower member 2^a of the clip is extended considerably beyond the upper member, so as to be of sufficient length to extend transversely entirely beneath the base of the rail to serve as a tie plate. In this instance the lower member 2^a is provided with a slot 17 having an angular or bayonet formation, one branch of the slot leading from a longitudinal edge of the lower member and the other branch being disposed longitudinally with respect to the lower member and terminating in proximity to the juncture of the same with the connecting plate 4 (see Fig. 5). When applying this form of the device to the rail, the lower member 2^a is inserted transversely beneath the base of the rail until the open end of the slot 17 is brought in alinement with the spike, the clip being then moved longitudinally with respect to the rail to move the spike through the adjacent branch of the slot, whereupon the remaining branch of the slot permits the clip to be further shifted transversely to assume its final position with relation to the rail. In practice it is contemplated to apply two of these holders to the rail where it rests on each tie, the holders being placed side by side and being disposed oppositely with the upper members and tension plates engaging opposite sides of the rail, as shown in Figs. 6 and 7, the combined width of the two lower members being substantially equal to the width of the tie to constitute a complete tie plate.

A still further embodiment of the inven-

tion is illustrated in Fig. 8 wherein the extended lower member 2^b of the clip is formed with a slot 9^b extending centrally and longitudinally thereof in lieu of the angular slot 17. The lower member 2^b is thus bifurcated and the bifurcations are of such length as to be adapted to project beyond the opposite side of the rail base from the connecting plate 4, the extremities of the bifurcations being preferably apertured, as indicated at 15, in order to admit of spikes being inserted therethrough into the tie to further retain the holder in place.

Among the many advantages attained with the present invention, attention is directed to the fact that the rail is prevented to a considerable extent from settling and cutting into the tie, since the holder bears upon the spike head and thus materially assists in supporting the rail. Furthermore, even if the rail should settle, it is to be noted that the holder will cause the spike to settle with the rail, so that the spike will be maintained always in firm engagement with the rail.

Having thus described the invention, what I claim is:—

1. A spike holder including a plate adapted to be removably inserted beneath the base of a rail and formed with a spike slot opening through one edge thereof, a second plate connected to the first named plate and arranged to extend over and bear upon the head of the spike, and means carried by the last named plate for interlocking positively with the spike head to retain the spike holder against accidental displacement.

2. A spike holder including a clip embracing the base flange of the rail and extending over and bearing upon the head of the spike, the clip being removable laterally from the rail and the spike, and means carried by the clip for interlocking positively with the spike head to retain the holder against lateral displacement.

3. A spike holder embodying a member adapted to extend over the base flange of the rail and movable downwardly to bear upon the spike head, means carried by the member for taking under the base flange of the rail, and a depending lug also carried by the member and engaging the spike head in the lowered position of the member to maintain the holder against displacement.

4. A spike holder embodying a clip adapted to embrace the edge of the base flange of the rail, the upper member of the clip being yieldable downwardly to bear upon the head of the spike, a lug carried by said upper member and adapted in the lowered position thereof, to engage the spike head to maintain the clip against displacement, and means for holding the upper member under stress in said position.

5. A spike holder embodying a clip adapted to embrace the edge of the base flange of

the rail, the upper member of the clip being yieldable downwardly to bear upon the head of the spike, a lug carried by said upper member and adapted in the lowered position thereof, to engage the spike head to maintain the clip against displacement, and means carried by the upper member and adapted to snap under the head of the rail to hold the member under stress in said position.

6. A spike holder including a clip adapted to embrace the base flange of the rail and having a spring member extending over the head of the spike and normally spaced above the same, spike head engaging means disposed on the lower face of the member, the member being yieldable downwardly to bear upon the spike head and to engage the said means therewith, whereby to maintain the clip against displacement, and means for holding the member in lowered position.

7. A spike holder comprising a clip adapted to embrace the base flange of the rail with a member extending over the head of the spike and normally spaced above the same, the member being formed on its lower face with a seat and being movable downwardly to receive the spike head in said seat to maintain the clip against displacement, and means for holding the member in lowered position.

8. A spike holder including a base member, a second member arranged above and supported by the base plate and extending over and bearing upon the spike head, the second member being formed with a depending lug positively engaging the spike head to maintain the holder against displacement.

9. As a new article of manufacture, a spike holder including a clip consisting of spaced members, one of which is formed with a spike slot, and a spike head engaging lug projecting from the inner face of the other member.

10. A spike holder including a rail flange embracing spring clip consisting of spaced members, one of which is provided with a spike head engaging lug projecting from its inner face.

11. A spike holder including a member extending over the head of the spike and normally spaced above the same, means disposed on the lower face of the member for engaging the spike head, the member being movable downwardly into an operative position to bear upon the spike head and to engage the said means therewith, whereby to assist in maintaining the member against displacement, and means for holding the member in lowered position.

12. A spike holder including a plate adapted to rest upon the tie and formed with a spike slot opening through one edge thereof, a second plate connected to the first named plate and extending over and bearing upon the head of the spike, the holder being

removable from the spike, and a lug depending from the last named plate and designed to positively engage with the spike head to retain the holder against accidental
5 displacement.

13. As a new article of manufacture, a spike holder including a spring clip consisting of spaced members, one of said members being formed with a spike slot opening
10 through one edge thereof, and means provided on the inner face of the other member for positively interlocking with the spike head.

14. As a new article of manufacture, a

spike holder including a spring clip consisting of spaced members, a plate extended
15 angularly from the end of one member and away from the other member, and means disposed on the inner face of the said member for positively interlocking with the spike
20 head.

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

HERBERT O. CRIPPEN. [L. S.]

Witnesses:

W. N. WOODSON,
FREDERICK S. STITT.