

C. H. TIBBETTS.
 TRACK FASTENER.
 APPLICATION FILED SEPT. 1, 1909.

952,962.

Patented Mar. 22, 1910.

FIG. 1.

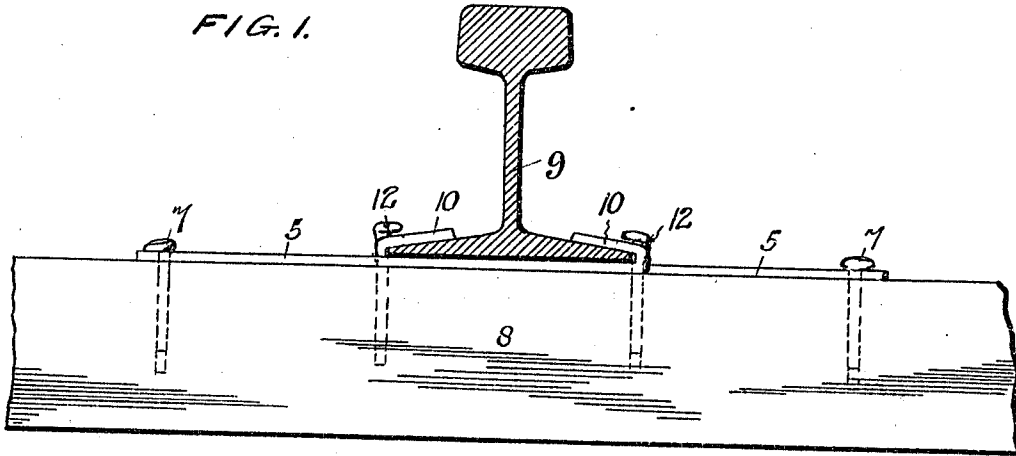


FIG. 2.

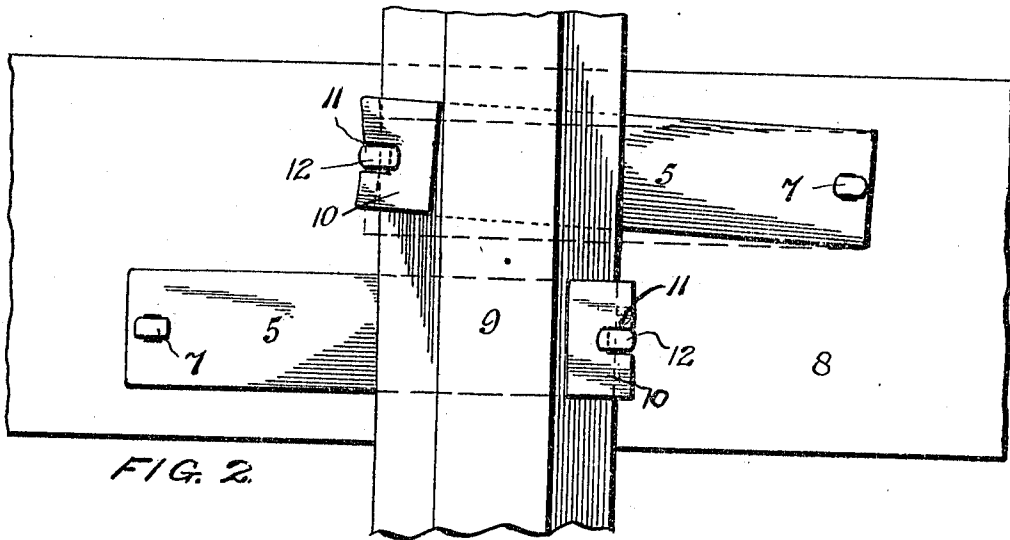
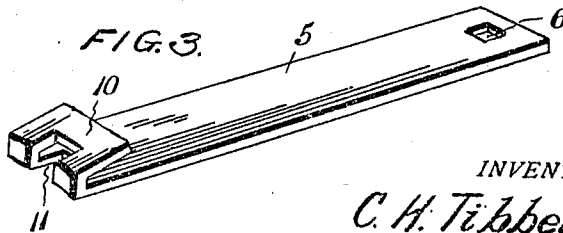


FIG. 3.



WITNESSES
 C. A. Davies

Myron G. Clear

INVENTOR
 C. H. Tibbetts,

By C. L. Parker, Attorney.

UNITED STATES PATENT OFFICE.

CHARLES H. TIBBETTS, OF NEW CASTLE, COLORADO.

TRACK-FASTENER.

952,962.

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To all whom it may concern:

Be it known that I, CHARLES H. TIBBETTS, citizen of the United States, residing at New Castle, in the county of Garfield and State of Colorado, have invented certain new and useful Improvements in Track-Fasteners, of which the following is a specification.

My invention relates to track fasteners, and more particularly to certain improvements upon the fasteners described and claimed in my Patents Nos. 768,410 and 836,617 and my object is to provide a more durable and efficient device.

In the accompanying drawings which illustrate my invention, and form a part of this specification, Figure 1 is a side elevation illustrating my improved track fasteners located upon a tie, and gripping a section of rail. Fig. 2 is a top plan view thereof, and, Fig. 3 is a perspective view of the same, removed.

The invention further contemplates a curved rail gripping hook for at least one of the plates so that, instead of the edge of the hook being subjected to the shearing strain of the base flange of the rail, such strain is applied to the curved surface which at its point of contact parallels the said flange.

In accordance with a preferred embodiment of my present invention, I provide a fastener comprising an elongated plate 5, having a central opening 6 adjacent at one end, by which it may be secured by a spike 7, to the tie 8, at a point some distance from the rail 9 to be fastened, the opposite end of the plate 5 being extended beneath the said rail and provided with an upturned hooked portion 10, at its extremity, to engage the base flange of rail 9 upon the side thereof, opposite the spike 7. The hooked end of the plate has a notch or cut out portion 11 adapted to receive a spike 12.

In use the plate is first secured to the tie in proper position as shown, by means of the spike 7. The free end of the plate is then forced angularly against the rail and secured in such position by a spike 12 driven through the notch 11 in the tie as shown in Fig. 2. The plates are used in pairs but it is not necessary to force both of the plates angularly as described so that one of the plates is ordinarily secured in a position at right angles to the rail as indicated in Fig. 2. This arrangement is preferred to that where-

in both plates are secured in an angular gripping position. In all cases the spike 12 prevents such vertical or horizontal movement as would tend to injure the spike 7 or wrench or tear it out of the tie. One or both of the plates 5 may have the extremity 10 transversely curved upon an arc reversed to that of the swinging movement of plate 5, whereby to form a curved rail-gripping surface and thus provide an increased area of engagement with the rail with respect to that shown in my patent hereinbefore mentioned. But as only one of the pair of rail supporting plates need be moved into an angular gripping relation with the rail such plate only is ordinarily provided with the gripping hook the other plate having a straight hooked portion as illustrated in Fig. 2.

In my patents above referred to, I disclose a rail clamp comprising an elongated plate having at one end, a hook to engage the base flange of a rail, the plate extending beneath the rail forming a vertically yielding fastening therefor and being secured at its opposite end to the tie. In one of these fasteners the rail is free to move vertically upward and in the other the construction is such that "creeping" of the rail causes angular movement of the fastener whereby to frictionally engage the edge of the rail base with the edge of its hook end, and hold the rail against movement.

The fasteners referred to have been found in experimental practice to be subject to certain disadvantages, notably a tendency to become loosened from the tie, by reason of either too great horizontal or vertical movements resulting in breaking or mutilating the spikes or wrenching or tearing them out of the tie. These disadvantages are fully overcome in the present invention as is also the tendency to mutilation due to the shearing action of the base flange of the rail against the engaging edge of the hooked end of the fastener. Distinguishing from these fasteners, the present invention provides means to positively prevent such vertical and horizontal movement of the free end of the plate as would subject the spike or spikes at the other end to injurious strains.

By reference to Fig. 1, it will be seen that the spikes 12 are driven into the tie so that their heads are spaced away from the plates 5, in order to permit limited vertical movements of the plates 5.

It will be understood from the drawing

that as in my prior inventions hereinbefore referred to, I employ two fastener plates for each rail upon a single tie, one being secured upon each side of the rail 9 and opposing one
5 another with respect to the rail.

It is to be understood that the length and width of the fastener plates may be widely varied within the spirit of my invention and the scope of the appended claims from narrow strips to broad plates fully covering the
10 top of the tie.

Having thus described my invention, I claim:

1. In a track fastener, a plate secured to
15 a tie and capable of limited vertical and horizontal angular movements, said plate having a portion thereof adapted to grip a rail upon said vertical and horizontal angular movements, and means for positively limiting such movements.

2. In a track fastener, a pair of plates pivotally secured to the tie upon opposite sides of the rail and remote therefrom and capable of angular movements in horizontal
25 and vertical planes, the said plates extending beneath the rail and each provided with means to positively limit the angular movements of the free ends of said plates.

3. In a track fastener, a pair of plates
30 pivotally secured to the tie upon opposite sides of the rail and capable of angular movements in vertical and in horizontal planes, the said plates extending beneath the rail and forming a vertically yielding fastening thereof and each plate being provided with a hook adapted to grip the rail
35 upon the side opposite its pivot and means to positively limit the said angular movements, substantially as described.

4. In a track fastener, a plate pivotally
40 secured upon a tie, and capable of angular movement, said plate having a curved rail-gripping surface to grip a rail upon angular movement thereof, substantially as described.
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5. In a track fastener, a plate pivotally secured upon a tie, and capable of angular

movement, said plate having a curved rail-gripping surface to grip a rail upon angular movement thereof, and means to secure said
50 plate in its angular gripping position, substantially as described.

6. In a track fastener, a pair of plates pivotally secured to the tie on opposite sides of the rail and capable of angular movements in vertical and in horizontal planes,
55 said plates extending beneath the rail and each provided with a curved rail gripping surface to grip the rail upon angular movement thereof and means to positively limit the said angular movements, substantially as described.
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7. In a track fastener, a plate pivotally connected at one end to a tie at a point remote from one side of a rail, said plate being capable of a limited vertical angular
65 movement, said plate extending beneath the rail and having its opposite free end formed to grip the rail upon the side of said rail opposite the side of the same nearest the pivot point, and fixed means arranged adjacent to and adapted to engage the free end of said plate for positively limiting the vertical angular movement of the same.
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8. In a track fastener, a plate pivotally
75 connected at one end to a tie at a point remote from one side of a rail, said plate being capable of a limited horizontal angular movement, said plate extending beneath the rail and having its opposite free end formed to grip the rail upon the side of said rail
80 opposite the side of the same nearest the pivot point, the free end of said plate being provided with a cut-out portion, and fixed means arranged within said cut-portion for limiting the horizontal movement of said
85 plate.

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

CHARLES H. TIBBETTS.

Witnesses:

Mrs. H. L. TIBBETTS,
W. E. HUGHES.