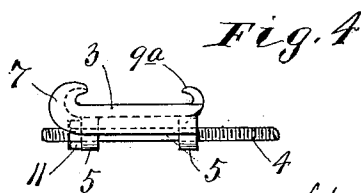
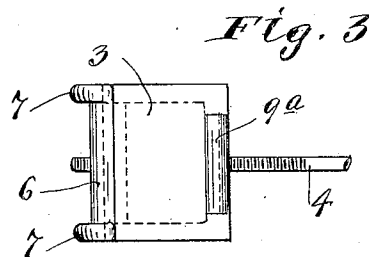
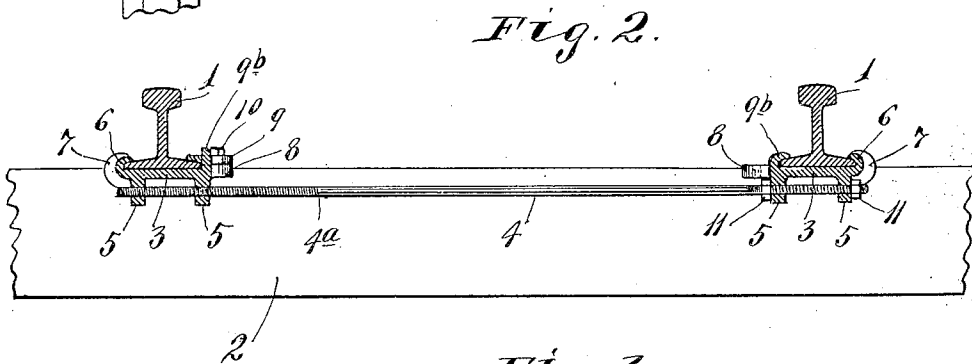
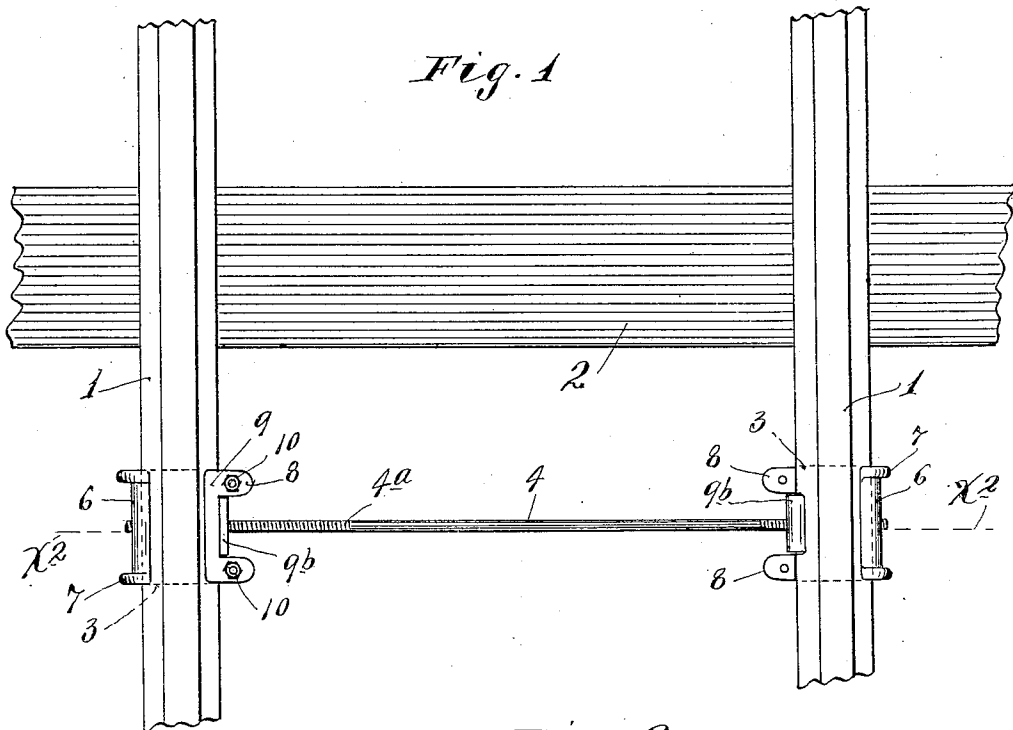


E. J. BRICKER.
RAILWAY TIE ROD.
APPLICATION FILED JAN. 21, 1909.

948,496.

Patented Feb. 8, 1910.



Witnesses.
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UNITED STATES PATENT OFFICE.

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RAILWAY-TIE ROD.

948,496.

Specification of Letters Patent.

Patented Feb. 8, 1910.

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To all whom it may concern:

Be it known that I, EDWARD J. BRICKER, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Railway-Tie Rods; and I do 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 appertains to make and use the same.

My invention has for its object to provide an improved railroad tie rod or rail spacing device, and to this end, it consists of the novel devices or combinations of devices hereinafter described and defined in the claims.

The invention is illustrated in the accompanying drawings wherein like characters indicate like parts throughout the several views.

Referring to the drawings: Figure 1 is a plan view, showing portions of track rails, and showing one of my improved spacing devices applied thereto; Fig. 2 is a section taken on the line $x^2 x^2$ of Fig. 1; Fig. 3 is a plan view, showing a modified form of the device; and Fig. 4 is a side elevation of the device shown in Fig. 3.

Referring first to the construction illustrated in Figs. 1 and 2, the numeral 1 indicates the rails and the numeral 2 the ties of an ordinary railroad track.

The device comprises a pair of rail clamping heads 3 and a tie spacing rod 4. The heads 3 are provided with depending lugs 5 that have threaded perforations, that receive the threaded ends of the rod 4. At their outer extremities, the heads 3 are formed with upwardly and inwardly turned rail clamping flanges 6, preferably reinforced by ribs 7 located at the ends of the head. At their inner extremities, aligned and joined with the ribs 7, the heads 3 are provided with inwardly projecting ears 8, to which the correspondingly spaced ears of a detachable rail clamping flange 9 are rigidly secured by bolts or screws 10. The edges of the detachable rail clamping flange 9, overlies and clamp the inner base of the rails, while the outer inwardly turned flanges 6 of said heads, engage and hold the outer base flanges of the rails. The tie rods 4, at one end, have threads extended to points 4^a, which are a less distance from the opposite end of the

rod, that is, the distance between the innermost lugs of the two clamping heads 3. As shown, this long threaded end of the rod is at the left in respect to Figs. 1 and 2, so that when the rod is first screwed substantially as far as it will go into the lugs of the left hand head 3, its right hand end will be located inward of the inner lugs 5 of the right hand head 3. This permits the threaded right hand end of the rod 4 to be screwed into the lugs 5 of the right hand head 3, after the two clamping heads have been secured to the rails and the rails properly spaced. From this statement, it will be understood that the threads at both ends of the rod, are in the same direction and the same number per inch. That is, if the threads at one end of the rod are right hand threads, say eight to the inch, the threads at the other end of the rod will also be right hand threads, eight to the inch, so that the screwing of the rod simultaneously in the lugs of both clamping heads, will not change the spacing of the rails. The threaded rod itself serves to hold the two clamping heads properly spaced, but to prevent accidental rotation of the rod, one or more lock nuts 11 are applied, as shown, to the right hand end of said rod, and are tightened against the lugs 5 and the said right hand head 3. Of course, these nuts might be applied to either end of the rod or to both ends of the rod.

The construction illustrated in Figs. 3 and 4 is like that above described, except that the detachable clamping flange 9 is dispensed with, and the clamping head is provided with an integrally formed clamping flange 9^a that is adapted to be bent over onto the inner foot flange of the rail. A clamping head of this kind would preferably be constructed of malleable iron in order to afford the clamping flange 9^a capable of being bent over onto the rail flange without breaking. The said clamping head, might, however, be a drop forging, or possibly even a steel casting.

The form of clamping head shown in Figs. 1 and 2, has the advantage that it may be easily removed from, and many times applied to a rail, and hence, is especially adapted for use in connection with temporary tracks. The form of head shown in Figs. 3 and 4, has the advantage that it affords a cheaper and more permanent structure than that shown in Figs. 1 and 2, and hence, is

especially adapted for use in connection with permanent tracks, or in other words, in connection with ordinary railway road bed construction, especially switches, curves and bridges.

In the preferred form of the device shown in Figs. 1 and 2, the heads 3, at their inner extremities, between their ears 8, are provided with integrally formed upwardly projecting clamping flanges 9^b that are adapted to be bent over onto the foot flange of the rail, thereby dispensing with the clamping flanges 9. This application of the head is shown at the right in Figs. 1 and 2. When used with the detachable clamping flanges 9, the said upturned flanges 9^b engage between the lugs of the said detachable clamping flanges and assist in holding the latter properly positioned.

The improved rail spacing device is highly efficient as a means for preventing spreading of rails. Furthermore, the device may be constructed at comparatively small cost.

What I claim is:

1. A rail spacing device comprising a pair of clamping heads, each having at one side of the rail a rigid rail clamping flange, and having at its other side a normally upturned

rail clamping flange, and a detachable rail clamping flange with lugs adapted to embrace said upturned flange, bolts for securing said detachable clamping flanges to the cooperating heads, and a spacing rod rigidly connecting the two clamping heads, the upturned clamping flanges of which heads are adapted to be bent onto the foot flanges of the rails whenever one of the said detachable clamping flanges is removed.

2. A rail spacing device comprising, a pair of clamping heads having inner and outer flanges for engagement with the foot flanges of the rails, and having depending lugs, and a tie rod having its ends threaded in the same direction, and having threaded engagement with the depending lugs of said clamping heads, and the threads on one end of which rod, extend to a point, which measured from the other end of said rod, is less distant than the space between the lugs of the said two clamping heads, substantially as described and for the purposes set forth.

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

EDWARD J. BRICKER.

Witnesses:

HARRY D. KILGORE,
F. D. MERCHANT.