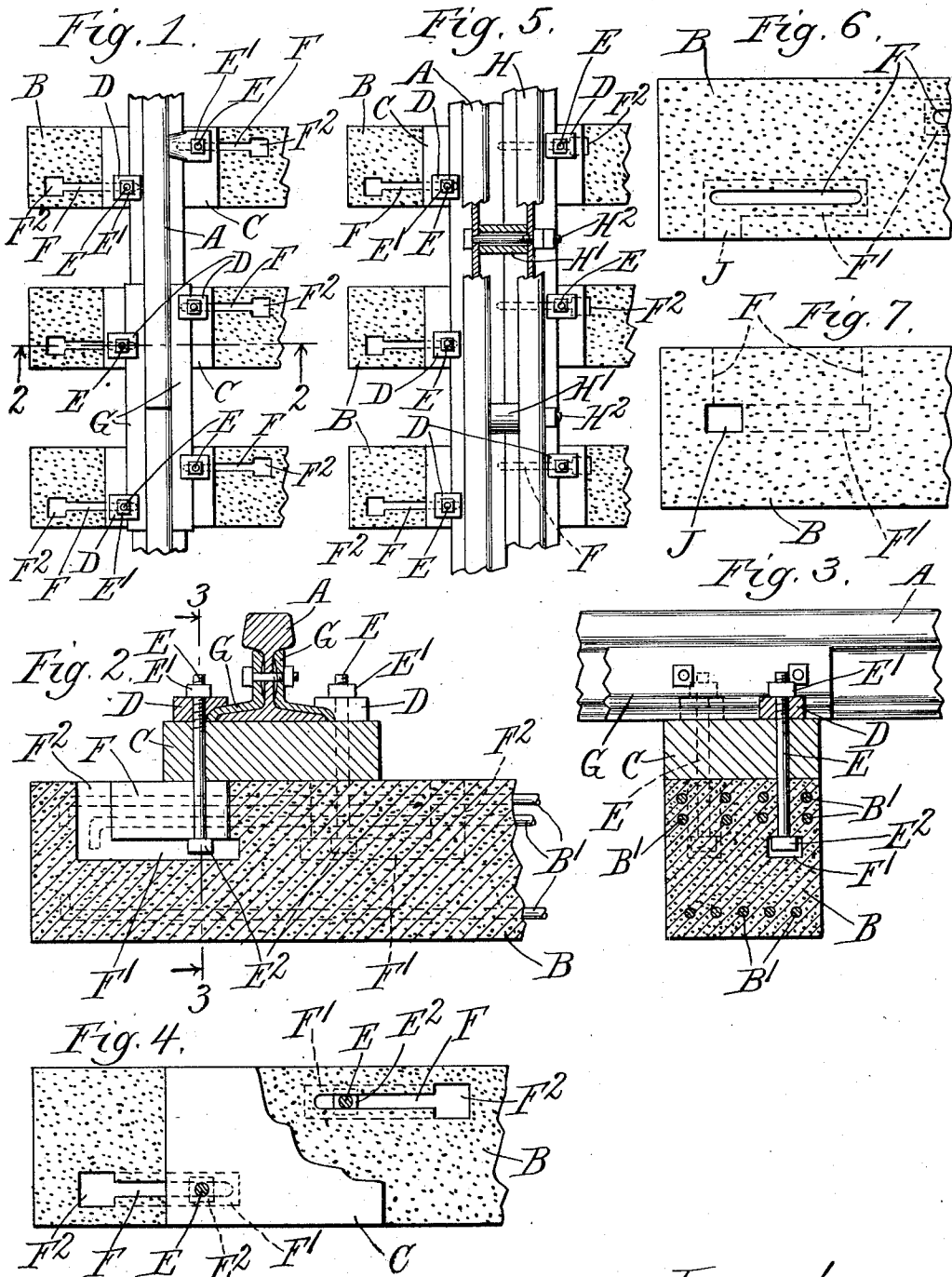


W. H. PRUYN, JR.
 CONCRETE RAILWAY TIE.
 APPLICATION FILED MAY 13, 1910.

998,550.

Patented July 18, 1911.



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UNITED STATES PATENT OFFICE.

WILLIAM H. PRUYN, JR., OF CHICAGO, ILLINOIS.

CONCRETE RAILWAY-TIE.

998,550.

Specification of Letters Patent. Patented July 18, 1911.

Application filed May 13, 1910. Serial No. 561,031.

To all whom it may concern:

Be it known that I, WILLIAM H. PRUYN, Jr., a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Concrete Railway-Ties, of which the following is a specification.

My invention relates to improvements in concrete railway ties and has for its object to provide ties independent of the required distance between adjacent means for connecting the rail and tie.

It is illustrated in the accompanying drawings, wherein—

Figure 1 shows a plan view of a rail in connection with a concrete tie; Fig. 2, a section on an enlarged scale on line 2—2 of Fig. 1; Fig. 3, a section along line 3—3 of Fig. 2; Fig. 4, a plan view of the tie with the rail removed; Fig. 5, a plan view of a double rail showing the ties; Fig. 6, a plan view of a modification; Fig. 7, a side elevation of Fig. 6.

Like parts are indicated by like letters throughout the several figures.

A is the rail, B, the body of the tie, preferably having the reinforcing rods B^1 , B^1 , embedded therein.

C is a plate preferably of wood and of any desired thickness, resting on top of the tie and furnishing a bearing place for the rail.

D, D are securing plates adapted to overhang the flange of the rail.

E, E are bolts having nuts E^1 , E^1 , and heads E^2 .

The apertures or slots F are located in the tie parallel with its axis at a point intermediate the center of the tie and the outer edge, and terminate at the bottom in the longitudinally disposed pocket F^1 , which is about the size of and engages the bolt head E^2 , and terminate at opposite ends in the vertical pocket F^2 at right angles with the pocket F^1 . The angle bar G completes the joint in the rail A and rests upon the ties. The skirt of the bar comes down and incloses the rail flange and it is necessary that the bolts be spaced farther apart than when they engage the rail alone. This is provided for by the aperture or slot F.

Fig. 5 shows the rail H having the base of its flange in immediate contact with the flange of the rail A, the two rails being separated by the spacers H^1 and connected by the bolt H^2 . The rails are held down by

means of the bolt E and plates D in the usual manner, the pocket or slot F permitting the displacement of the bolts to compensate for the increased width of the flange.

Figs. 6 and 7 show a tie wherein, instead of the vertical pocket F^2 , is found the horizontal pocket J in the side wall of the tie at right angles to the pocket F^1 .

It will be evident that while I have shown in my drawings an operative device, still many changes might be made both in size, shape and arrangement of parts without departing materially from the spirit of my invention.

The use and operation of my device are as follows:—In the use of concrete ties, it has been customary to provide them with holes for the rail-holding bolt. The location of these holes was fixed at the time the tie was made, and no flexibility or adjustability allowed. In order, however, to use these ties beneath the angle bar or beneath a double rail of increased width or in connection with a switch or frog, it is necessary that provision be made for changing the position of the bolt. This I do by substituting for the usual circular bolt hole an elongated bolt slot, this slot being parallel with the axis of the tie. The bolt may be moved back and forth in such slot to compensate for the width of the rail base. I provide a pocket at the base of this slot and parallel with it to hold the bolt head and provide at one end a pocket connecting the inner pocket with the outside of the tie, thus permitting the introduction of the bolt head in such bolt-holding pocket.

I claim:

1. A concrete tie bolt engaging portions and means for adjustably supporting the bolt within such portions, said means comprising a bolt engaging slot and a pocket in connection with said slot and both within the body of the tie.

2. A concrete tie bolt engaging portions and means for adjustably supporting the bolt within such portions, said means comprising a bolt engaging slot and a pocket parallel with and in connection with said slot and both within the body of the tie.

3. A concrete tie having a vertical bolt engaging slot parallel with the axis of the tie and a thin lateral nut pocket beneath and parallel with said slot, a connection between said pocket and the exterior of the tie

larger in cross section than and connected with the bolt engaging slot.

4. A concrete tie having a vertical bolt engaging slot parallel with the axis of the tie, a thin lateral nut pocket beneath and parallel with said slot, and a vertically disposed pocket at right angles to said lateral pocket.

5. A concrete tie having a vertical bolt engaging slot parallel with the axis of the tie, a thin lateral nut pocket beneath and parallel with said slot, and a vertically disposed pocket at right angles with said lateral pocket, said pocket in connection with said bolt engaging slot.

6. A concrete tie having a vertical bolt engaging longitudinally disposed slot and a thin lateral nut pocket beneath and parallel with said slot, both of them within and integral with the body of the tie.

7. A concrete tie having a vertical bolt engaging longitudinally disposed slot, a thin lateral nut pocket beneath and parallel with said slot and a vertically disposed pocket at right angles to said lateral pocket, all of them embedded within the concrete body of the tie.

8. A concrete tie having a plurality of vertical bolt engaging longitudinally disposed slots, nut pockets beneath and in line with said bolt engaging slots, said slots terminating in pockets of relatively increased cross section, said slots and said pockets completely embedded within the body of the tie.

WILLIAM H. PRUYN, Jr.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."