

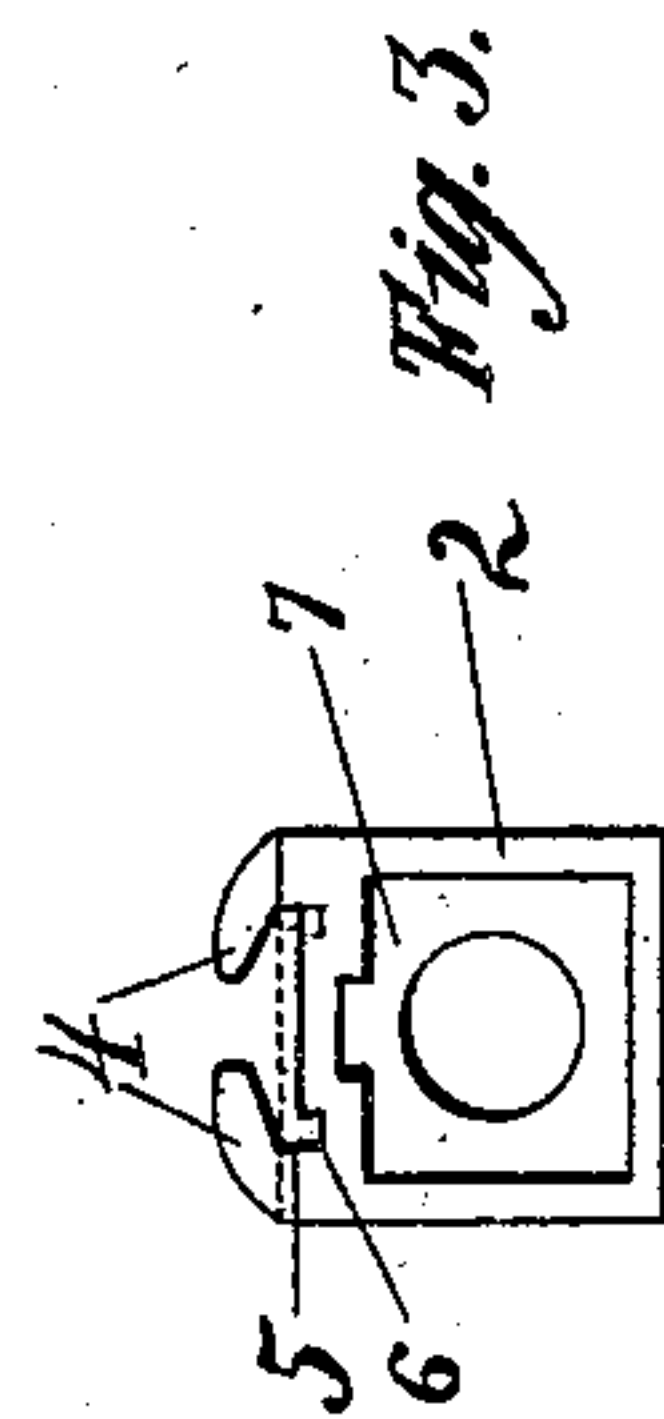
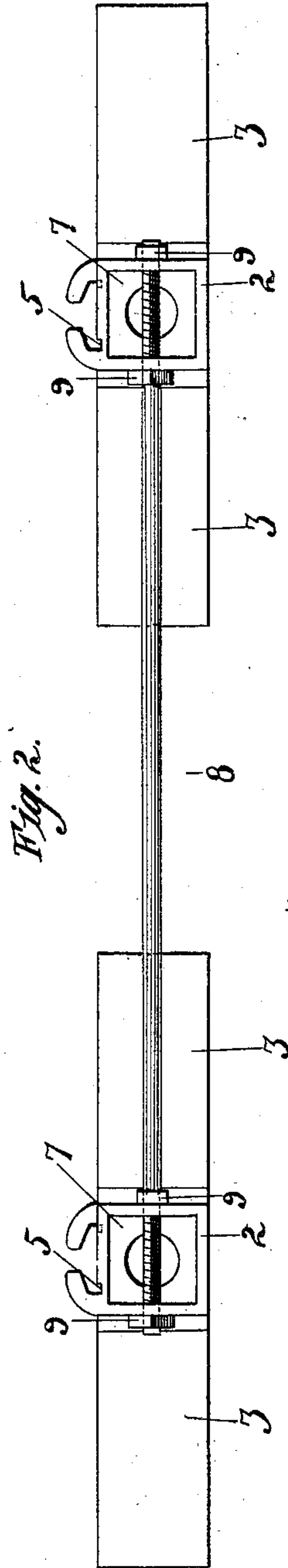
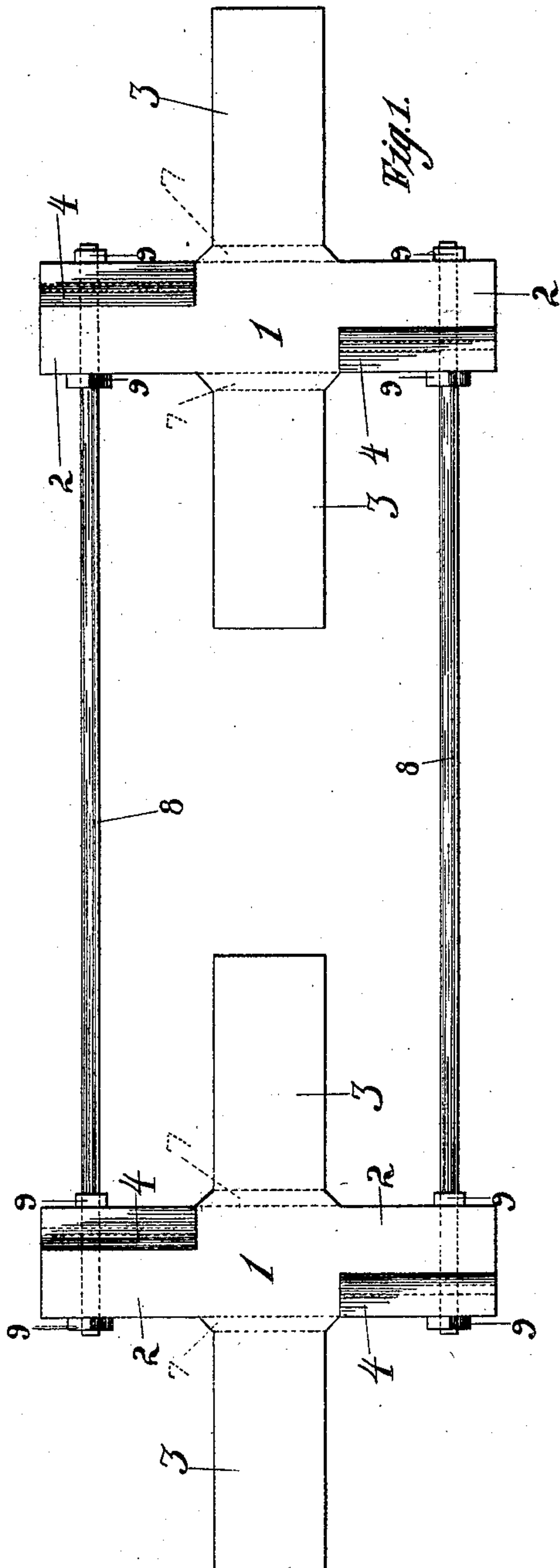
No. 897,100.

PATENTED AUG. 25, 1908.

J. D. HAZLET & G. W. HAIGHT.

RAILWAY TIE.

APPLICATION FILED NOV. 2, 1907.



Attest:

Benton W. Stahl.
Edward N. Barton

Inventors.

John D. Hazlet.
George W. Haight.

By Spear, Middleton, Donaldson & Spear
Attys.

UNITED STATES PATENT OFFICE.

JOHN D. HAZLET AND GEORGE W. HAIGHT, OF FRANKLIN, PENNSYLVANIA.

RAILWAY-TIE.

No. 897,100.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed November 2, 1907. Serial No. 400,400.

To all whom it may concern:

Be it known that we, JOHN D. HAZLET and GEORGE W. HAIGHT, citizens of the United States, residing at Franklin, Pennsylvania, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

Our invention relates to railroad ties and our object is to provide a tie in which that portion under one rail will be, in a measure, independent of that under the opposite rail, so that one section or portion of the tie will not affect the other section or portion and thus cause breakage in case the ballast on one side of the road-bed settles more than that upon the opposite portion of the road-bed.

We aim also to provide a tie which may be readily and quickly applied to the rails and one which may be turned out at the foundry with a minimum amount of labor, no machine fitting being required and a clean even surface being provided for the rail under the lip or flange intended to grasp the flange of the rail.

Other objects of our invention will appear from the following description.

The invention consists in the features and combination and arrangement of parts hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a tie. Fig. 2 is a side elevation. Fig. 3 is a detail view of a modification.

In these drawings 1 indicates a tie member of substantially the form of a cross, said member being molded preferably of metal and of hollow form, the arms 2 of said member being adapted to lie beneath and support the rail while the arms 3 of the tie block or member extend transversely of but only partly across the track, these arms 3 extending equally upon opposite sides of the rail. The portions 2 of the tie member are provided with lugs or lips 4 overhanging the surface upon which the rail rests, these lips or lugs being adapted to engage the flange of the rail to hold the same in place. One of these lips is provided at the outer edge of one arm 2 of the tie member and the other lip or lug is provided at the inner edge of the other arm 2 of said member. In other words, the lips or lugs are arranged staggered or in diagonal relation and by reason of this the tie member can be quickly placed into connection with the rail by simply placing said member beneath the rail with its arms 2 extend-

ing at an inclination to the rail flange so that the rail flange will lie between the adjacent ends of the lips or lugs 4 and then by simply swinging the tie member around so that the arms 2 will coincide in direction with the rail; the lips or lugs will be brought in position overlying the flanges of the rail and the tie being then fixed in this position it will hold the rail in place.

In order to avoid any special fitting or machining of the tie member after it leaves the molds in the foundry, and to provide a clean, even surface to bear against the rail flange we form in the molding operation grooves 5, at the point where the lugs or lips join the arms or members 2. This groove insures the formation of a shoulder or bearing consisting of the inner face of the lip or lug free from round corners or projections at the point where the lip or lug joins the arm 2, and thus no special planing or machining of the tie member at this point is necessary.

We do not limit ourselves to the form of lug as this may be bolted or otherwise and a groove of equal width, as the bottom flange of the rail, may be formed throughout the entire length of the arms 2 as in Fig. 3 and the rail flange may be seated in this groove. At the same time the groove 5, above mentioned, may be employed. By the use of the groove 6 for receiving the entire flange of the rail spreading of the rails will be avoided. Whatever stock is omitted for the formation of this groove may be located beneath the groove, or in other words, the shell of the member may be of equal thickness throughout, notwithstanding the formation therein of the groove for the rail flange. The hollow tie member we prefer to reinforce by means of interior bridges or braces as shown at 7, these bridges being provided with openings. The plane of the upper face of the tie is indicated by the dotted line Fig. 3.

A complete tie is made up of one of the members above described under one rail and a similar member under the opposite rail and where these members are arranged directly opposite each other with the arms 3 axially in line the two members are connected together by tie-bolts or rods 8 which extend through the arms 2 of the tie members or blocks, the end of these tie rods or bolts being threaded and receiving nuts 9 on opposite sides of the arms 2. These tie bolts are adjustable so that the tie blocks may be drawn together and held in proper position rela-

tively to each other, and as they have a certain degree of flexibility the tie rods will permit one block to settle in respect to the other without danger of breaking the cross ties,
 5 each tie block or member comprising the complete cross tie having a certain amount of independent action in respect to its companion block located under the opposite rail.

We do not, of course, limit ourselves to the
 10 opposite arrangement of the blocks or members constituting the complete cross tie as it will be obvious that the tie block or members may be arranged in staggered relation to each other in which event the tie bolt extending
 15 from the left hand arm 2 of one tie block or member would connect with the right hand arm 2 of the companion tie block or member located under the other rail.

We do not limit ourselves to any particular
 20 cross sectional form of the tie members. They may be used either with or without concrete.

We claim as our invention:—

1. A railway tie comprising the two mem-
 25 bers each of substantially cross form with

arms adapted to underlie the rail and with arms extending at right angles thereto to lie on opposite sides of the track rail, the last mentioned arms extending but part way across the track and tie-bolts connecting the
 30 tie members together, said tie bolts being connected to the arms of the crosses which are adapted to underlie the rails, substantially as described.

2. A cross tie for railways comprising two
 35 members each of substantially cross form having arms to underlie the rails and arms to extend transversely and on both sides thereof, one set of said arms having lugs to engage the rail, said lugs being arranged at
 40 the ends of the underlying arms and staggered in relation to each other, substantially as described.

In testimony whereof, we affix our signatures in presence of two witnesses.

JOHN D. HAZLET.
 GEORGE W. HAIGHT.

Witnesses:

ALFRED L. HAIGHT,
 WILLIAM G. MAPLE.