

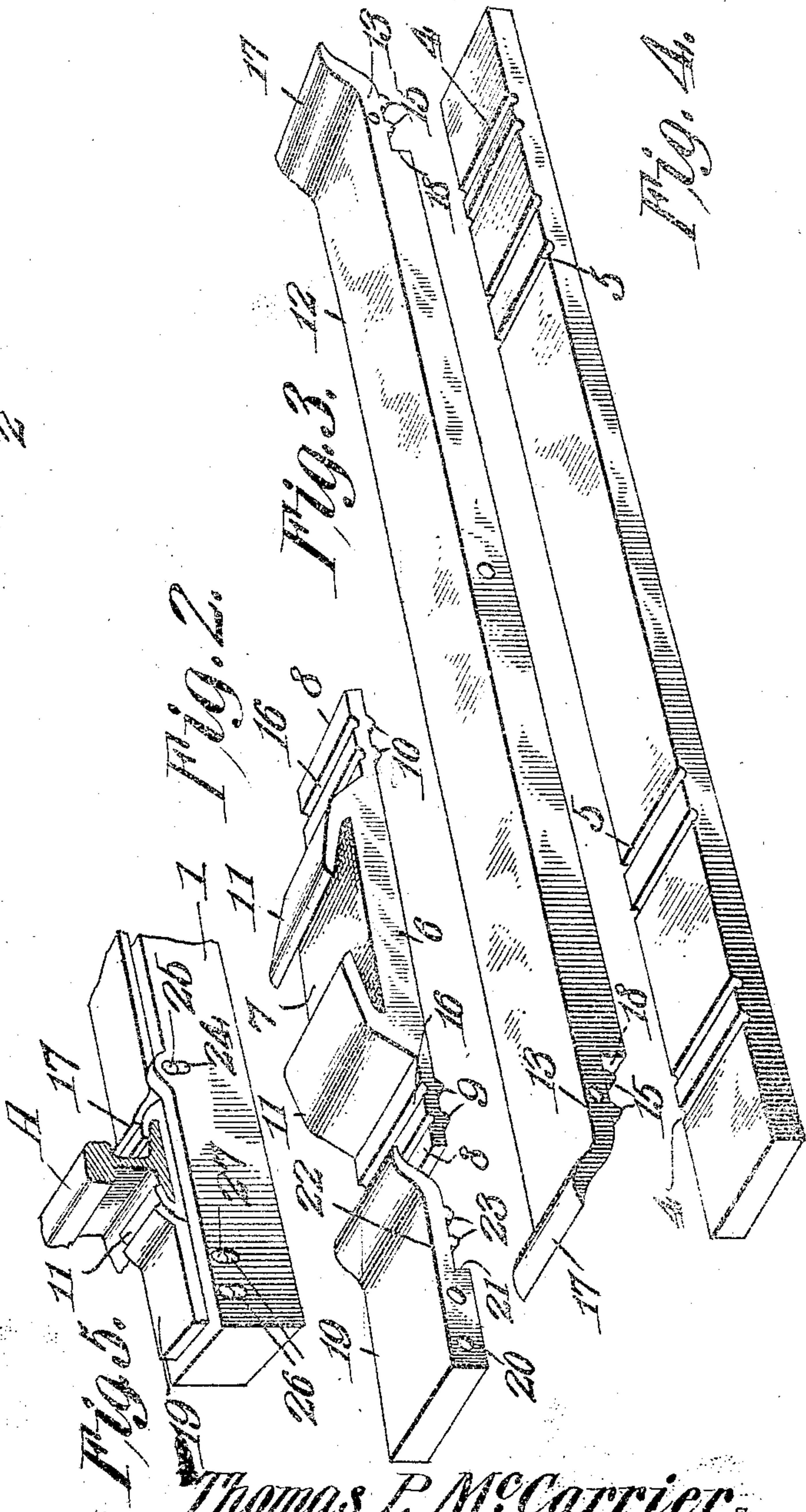
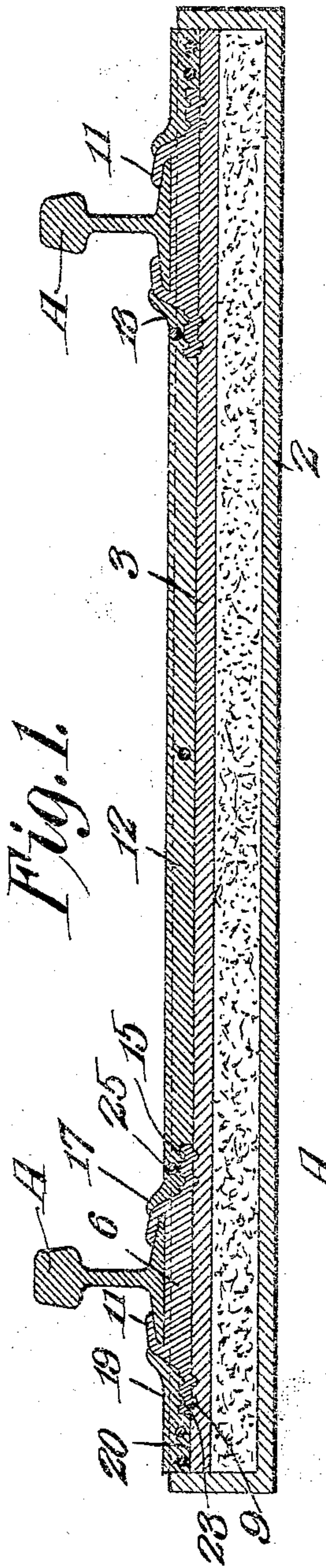
T. P. McCARRIER & H. E. HANNA.

RAIL TIE.

APPLICATION FILED DEC. 23, 1908.

917,641.

Patented Apr. 6, 1909.



Thomas P. McCarrier Inventor
Herbert E. Hanna,

Witnesses

T. P. McCarrier

James M. Welch

By *Victor J. Evans*

Attorney

UNITED STATES PATENT OFFICE.

THOMAS P. McCARRIER AND HERBERT E. HANNA, OF KENYON, RHODE ISLAND.

RAIL-TIE.

No. 917,641.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed December 23, 1908. Serial No. 468,961.

To all whom it may concern:

Be it known that we, THOMAS P. McCARRIER and HERBERT E. HANNA, citizens of the United States, residing at Kenyon, in the county of Washington and State of Rhode Island, have invented new and useful Improvements in Rail-Ties, of which the following is a specification.

This invention relates to rail ties, and more particularly to that class of metallic ties, and has for an object to provide a tie of this character which will be extremely simple, and which will embody a novel form of support arranged to also form a cushioning means for absorbing vibrations incident to the weight of moving trains.

A further object of this invention is to provide a novel form of rail clamping means arranged to hold the rails against creeping toward or away from each other.

A still further object of our invention is to provide means obviating the use of spikes or similar fastening means to be permanently engaged with the base flanges of rails, thus providing simple and novel means for allowing for the expansion and contraction of the rails.

Other objects and advantages will be apparent as the nature of the invention is better set forth, and it will be understood that changes within the scope of the claims may be resorted to without departing from the spirit of the invention.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a longitudinal section taken through the tie. Fig. 2 is a perspective view of one of the rail receiving elements. Fig. 3 is a perspective view of one of the clamping elements. Fig. 4 is a perspective view of the base plate. Fig. 5 is a detail perspective view of a portion of the tie.

Referring now more particularly to the drawing, there is shown a rail tie consisting preferably of a rectangular body 1 having an open top. We provide said rectangular body with a support of sand or the like 2, and we place upon the upper surface of the support, a base plate 3 shaped to conform to the body or receptacle, and closely confined at all of its edges against the inner walls of said body or receptacle. The base plate is provided adjacent to each end with

a series of transversely disposed grooves 4, and adjacent to these grooves the plate is provided with a similar series of grooves 5.

Rail receiving elements are indicated at 6 and are each preferably provided with a centrally located enlarged portion 7 and an outwardly extending reduced portion 8 having formed integral therewith upon their under faces a transversely disposed series of beads 9 and 10, the beads 9 being arranged in the grooves 4, and the beads 10 in the grooves 5 and are correspondingly shaped to conform to the shape of said grooves. Each element 6 is provided with upwardly directed angularly disposed flanges 11 for engaging the base flanges of rails A shown in Fig. 1 of the drawing. A clamping element is illustrated at 12 and is also shaped to fit between the side walls of the body or receptacle 1 and is provided at its ends with reduced portions 13 having upon their under faces transversely extending beads 15 seated in correspondingly shaped grooves 16 formed in the inner reduced portions 8 of the rail receiving members 6. The reduced portions 13 of the clamping element 12 are provided with curved clamping flanges 17 as clearly shown in Fig. 3 of the drawing, and these flanges are arranged to overlap portions of the flanges 11 at the inner ends of the clamping elements 6. By forming the reduced portions 13 it will be seen that the element 12 is provided at its ends with shoulders 18 which abut against the inner reduced portions 8 of the elements 6 as clearly indicated in Fig. 1 of the drawing.

Supplemental clamping elements are indicated at 19, and are each provided with a depending portion 20 forming a shoulder 21 and an inwardly extending reduced portion 22. The portions 22 of said supplemental clamping elements are provided with depending beads 23 which are seated in the grooves 16 in the outer reduced portions 8 of the elements 6. The shoulders 21 abut against the outer edges of the outer reduced portions 8 of said elements 6 as clearly shown in Fig. 1.

In practice, the supplemental elements 19, and the element 12 extend slightly above the upper edges of the body or receptacle 1 so that in the passing of a train, the said elements may be moved downwardly against the support 2 which latter effectively serves as a cushion. The side walls of the body or receptacle 1 are provided with vertically disposed elongated slots 24, and the clamping

element 12 carries a plurality of guide pins 25 disposed in said slots. The side walls are also provided with slots 26 identical in construction to the slots 24, and these slots receive pins 27 carried by the supplemental clamping elements 19.

From the construction herein set forth and described it will be seen that an extremely simple, strong and durable railway tie is provided, and it is evident that in view of the arrangement of parts herein set forth and described, the rails A may be effectively engaged with the tie and held against lateral creeping movement. The construction is also such that provision is made for longitudinal movement of the rails A incident to their expansion during the change of temperature. While we preferably employ sand for the cushion or support, it will of course be understood that we may utilize any other similar element or material for effecting the same result. It may be stated that when sand is used it is packed in the receptacle under pressure.

25 We claim:—

1. A tie of the class described comprising a receptacle having a cushioning support, a base plate mounted upon the support, rail-receiving elements removably engaged with the base plate, clamping elements for the rail-receiving elements, and means engaged with the clamping elements and with the walls of the receptacle for holding the rail-

receiving elements against movement toward or away from each other. 35

2. A tie of the class described comprising a receptacle having a cushioning support, rail-receiving means disposed above the support and movable vertically between walls of the receptacle, a clamping element disposed between the rail-receiving means, means carried by the clamping element for sliding engagement with the walls of the receptacle, and supplemental clamping elements located adjacent to the ends of the clamping element and provided with means for sliding engagement with walls of the receptacle. 40 45

3. A tie of the class described comprising a receptacle having a cushion therein of sand or the like, a base plate mounted upon the cushion, rail receiving elements removably engaged with the base plate, clamping elements for the rail receiving elements, and means slidably mounted in the walls of the receptacle and engaged with the clamping elements for holding the rail receiving elements against movement toward or away from each other. 50 55

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

THOMAS P. McCARRIER.
HERBERT E. HANNA.

Witnesses:

ALBERTUS E. GREENE,
JOHN S. KENYON.