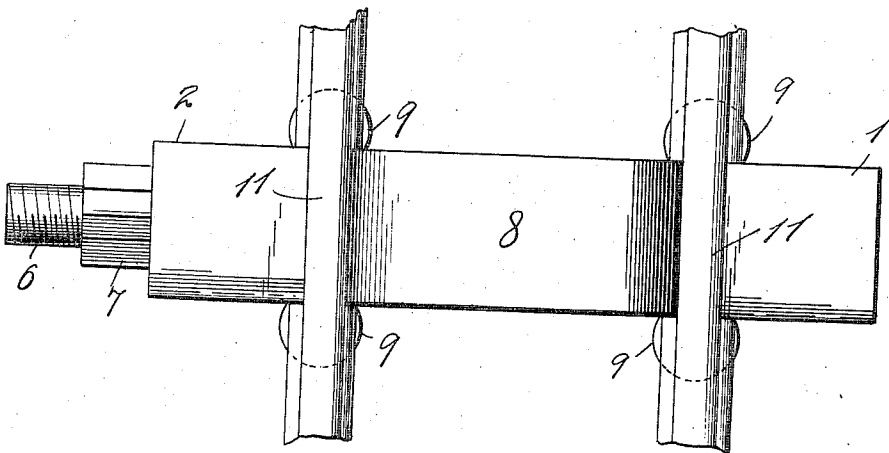
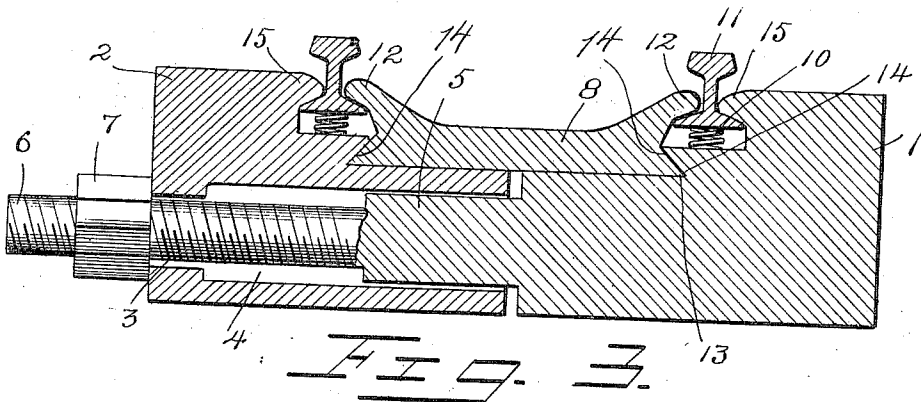
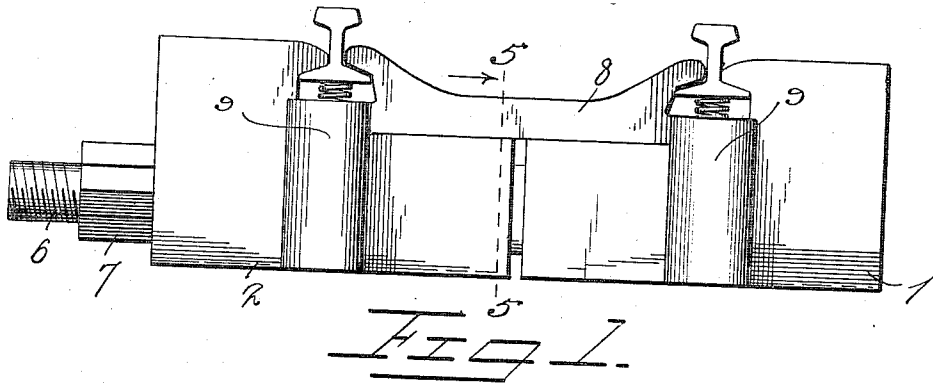


W. J. STEVENTON.
RAILWAY TIE.
APPLICATION FILED JUNE 7, 1911.

1,018,787.

Patented Feb. 27, 1912.
3 SHEETS—SHEET 1.



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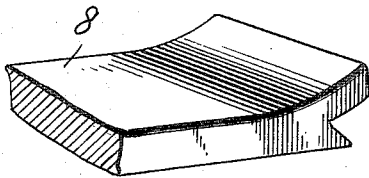
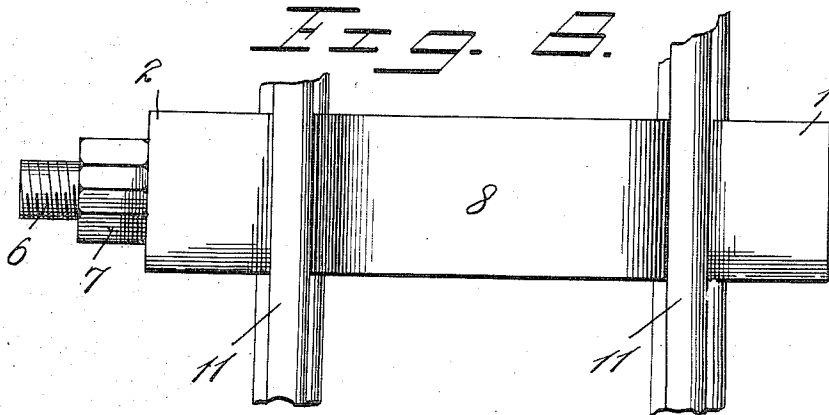
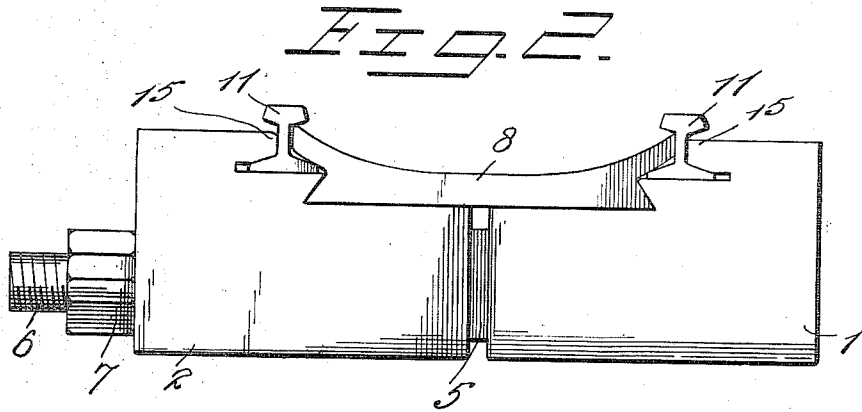
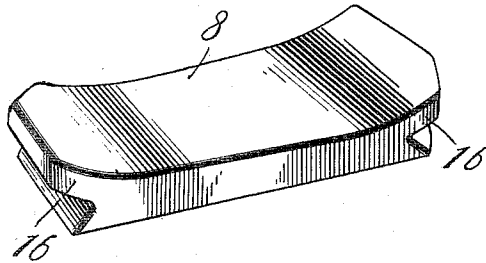


Fig. 10.



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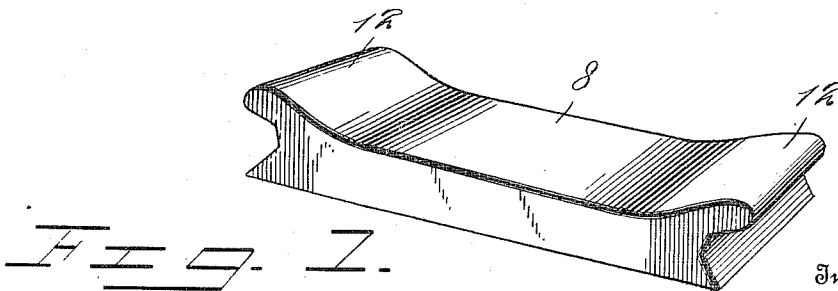
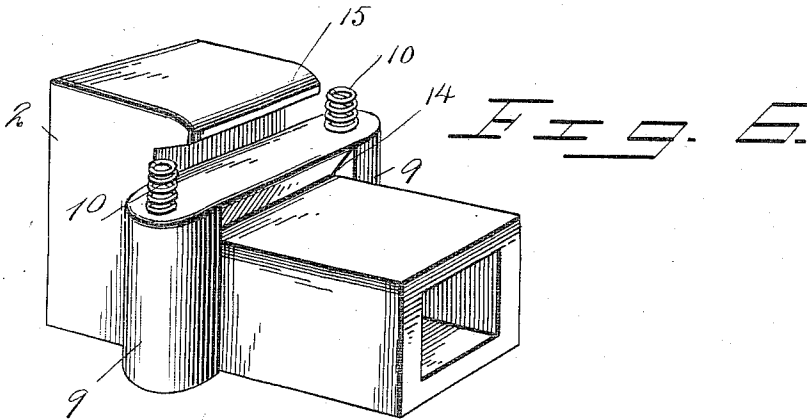
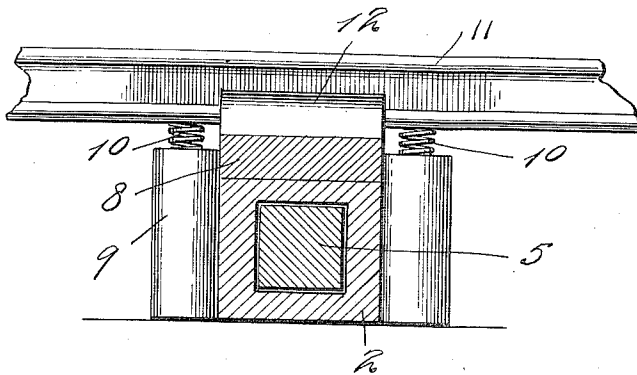
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3 SHEETS—SHEET 3.

Fig. 5



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UNITED STATES PATENT OFFICE.

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RAILWAY-TIE.

1,018,787.

Specification of Letters Patent.

Patented Feb. 27, 1912.

Application filed June 7, 1911. Serial No. 631,674.

To all whom it may concern:

Be it known that I, WALTER J. STEVENTON, a citizen of the United States, residing at Nesquehoning, in the county of Carbon and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention relates to railway rail ties, and the object in view is to construct a tie of steel or concrete in such a manner that it will be at once permanent and durable and one that will effectively provide against the tendency of the rails to spread under excessive strain.

Another object of my invention is to provide means for resiliently supporting the rail on the tie by the employment of spring members suitably mounted between the rail and the tie. This feature comprehends a twofold advantage, the greatest of these being to materially reduce the frictional wear on the locomotive and trains passing over the track, as well as that of the tie and rail, thereby effecting a great saving in repairs, and that of lessening the vibration imparted to the speeding coaches, which must necessarily result in a greater amount of ease and comfort to the passengers.

A further object of my invention is to substantially prevent the lateral spreading of the rails, thus more effectively guarding against accidents to trains, and conserving the life and property of the railroad and its patrons.

A still further object of my invention is to provide a railroad tie and equipments that can be quickly and permanently placed in position upon the track bed without employing the use of spikes, screws, bolts, nuts, et cetera, as is now the common practice. This I consider an important feature of my invention inasmuch as it provides against the possibility of the spikes, screws, et cetera, becoming loose, thereby exposing the railroad companies to costly damage suits for loss of life and property. This feature also anticipates a saving of time and labor

in replacing rails, resetting ties, and other work incident to railroad track repairs. 50

A still further object of my invention is to provide in combination with a railroad tie, an interlocking removable brace adapted to be screwed into the said tie.

Referring to the accompanying drawings, 55 forming a part of the specification, wherein like characters are employed to denote corresponding parts throughout the several views, Figure 1, illustrates in front elevation the preferred form of my improved tie, 60 showing the method of resiliently mounting the rails. Fig. 2, illustrates in front elevation a modified form of my tie. Fig. 3, illustrates a transverse sectional elevation of Fig. 1, showing clearly the method I employ in locking the parts of the tie together and housing the rails thereon. Fig. 65 4, illustrates a top plan view of Fig. 1, Fig. 5, is a side elevation partly in section on line 5—5, of Fig. 1. Fig. 6, illustrates in 70 perspective the female half of my tie, Fig. 7, illustrates in perspective the interlocking removable brace forming a part of the tie, Fig. 8, illustrates a top plan view of Fig. 2, Fig. 9, illustrates a fragment of the interlocking removable brace employed in a 75 modified form of my tie, and Fig. 10, illustrates a modification of the brace shown in Fig. 9, having its diagonally opposite corners rounded to permit of more easy adjustment to said tie. 80

Referring to the Figs. 1, 3, 4, 5, 6, and 7, my tie comprises a fixed or stationary half designated by the numeral 1, and a movable half 2. The movable half 2, is provided 85 with a bore 3, and a square recess 4. The fixed half 1, is provided with an integral square lug 5, terminating in a bolt 6. Said lug 5, is adapted to enter the recess 4, and the bolt 6, is adapted to be projected through 90 the bore 3. A nut 7, is provided and adapted to be screwed on bolt 6, for the purpose of locking the said halves 1, and 2, together in their normally adjusted positions. A removable interlocking brace 8, is provided 95 and adapted to be rigidly locked into posi-

tion between the halves 1, and 2, through the agency of bolt 7. Oppositely disposed integral housings 9, are provided on both of the tie halves 1, and 2, which are adapted to
 5 separate the resilient spring members 10, on which the rails 11, are seated. Said brace 8, is provided with oppositely disposed shoulders 12, which are adapted to fixedly engage the rails 11, having oppositely arranged out-
 10 wardly tapering flanges 13, adapted to be keyed into inwardly tapering recesses 14. Tapering shoulders or abutments 15, shaped to conform to the lower flange of the rails 11, are provided on said halves 1, and 2,
 15 these abutments cooperating with the locking brace 8, and providing permanent means for holding the rails 11, in their respective positions.

Referring to the Figs. 2, 8, and 9, which
 20 show a modified form of my tie, I employ the same numerals to indicate like parts, and the same description applies to these figures as is applied to the figures in the preferred form previously described, the only differ-
 25 ence being that I omit the means for resiliently seating the rails and the oppositely arranged housings.

It will be noted in the figures above referred to that the rails are seated directly
 30 upon the halves 1, and 2.

Referring to Fig. 10, this illustration shows a modification of the removable brace 8, having its diagonally opposite corners rounded or beveled at 16—16. This bevel-
 35 ing or rounding of the corners is provided in order that the same may be adjusted into position on the tie without necessitating the spreading of the halves of the tie as widely apart in placing same in position as would
 40 be necessary were the corners less square.

In order to apply my improved tie, the opposite halves are first separated and slid under the rails. The male half 1, is then projected into the female half 2. The rails
 45 11, are then placed in position on the spring members 10, or on the base of the tie in the modified form, as the case may be, after which the brace 8, is adjusted into position. The nut 7, is then allowed to engage the
 50 bolt 6, and is screwed securely against the end of the female half 2, thereby urging the two halves together, and securely locking the brace 8, and the rails 11, in place.

While I have shown my invention in this preferred form in the accompanying illus-
 55 trations, it will be evident that minor changes may be resorted to without departing from the spirit or purpose of the invention, hence I do not limit myself to the exact form herein shown and described but reserve
 60 the right to make such alterations, changes, modifications, et cetera, that may come right-

fully within the scope and purpose of my invention.

Having described my invention, that which I claim and desire to secure by Letters Patent is—

1. In combination with railroad rails, a stationary support for one rail, a movable support for the opposite rail, a rigid brace overlying both supports, and means interlocking with the brace for clamping the supports against the braces, to hold the rail in rigid set position.

2. In combination in a device of the kind described oppositely arranged interlocking supports, rails resiliently seated on the said supports, movable abutments, guides mounted on the supports for movably guiding the rails, and means for actuating said interlocking supports.

3. In combination in a device of the kind described a stationary support having a socket for one flange of a rail, an oppositely arranged movable support having a socket for one flange of the opposite rail, a brace mounted on both supports engaging the opposite flange of the rail, and means engaging and interlocking with the brace for interlocking the supports.

4. In combination in a device of the kind described a fixed and a movable abutment upon which the rails are resiliently supported at their ends, and wedge means interposed between the rails for clamping the rails against said abutment.

5. A railroad tie composed of a fixed abutment carrying a screw-threaded shank, a movable abutment engaging said shank, outwardly extending resilient supports for rails carried by each abutment and means interposed between the rails engaged by said movable abutment for rigidly clamping the rails in position.

6. In a railroad tie having interlocking supports for rails and abutments for the outer flanges of the rails a clamp composed of a base carried by the interlocking supports and integral lugs for engaging the opposite flanges of the rails and binding against the ribs of the rails when said supports are rigidly interlocked.

7. In a railroad tie having interlocking supports for rails and abutments bearing upon the outer flanges of each rail, the combination of a screw-threaded socket piece and an oppositely arranged screw-threaded abutment, forming said interlocking supports, a shoulder formed upon each support, and a rigid clamp held between said shoulder, the clamp having integral offsets for engaging the inner flanges of the clamps and urging the rails against the outer abutments when the supports are interlocked, spring

supports for the rails and guideways for said spring supports.

8. In a railroad tie composed of a rail supports having recesses for the reception of the outer flanges of each rail and means for interlocking said supports, the combination of outwardly extending alining housings carried by each support contiguous to its recesses, springs in each housing supporting the rails and braces overlying each support having offsets urging the rails within

the recesses when the supports are interlocked, said offsets forming recesses cooperating with those in the supports to form a guideway for the springs.

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

WALTER J. STEVENTON.

Witnesses:

HARRY J. STEVENTON,
HARRY JAMES.