

No. 841,298.

PATENTED JAN. 15, 1907.

J. W. WYKE.
RAIL FASTENER.

APPLICATION FILED OCT. 9, 1906.

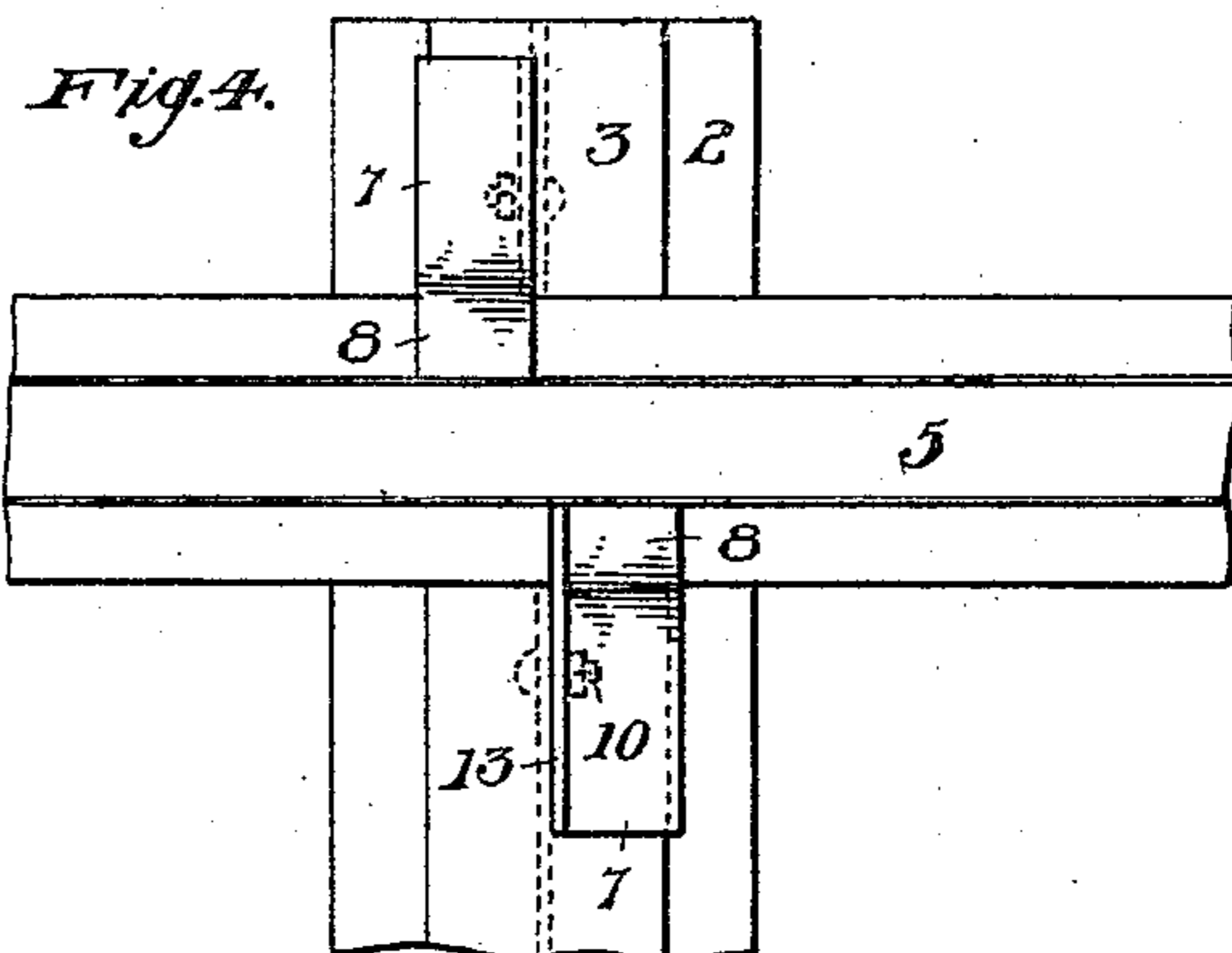
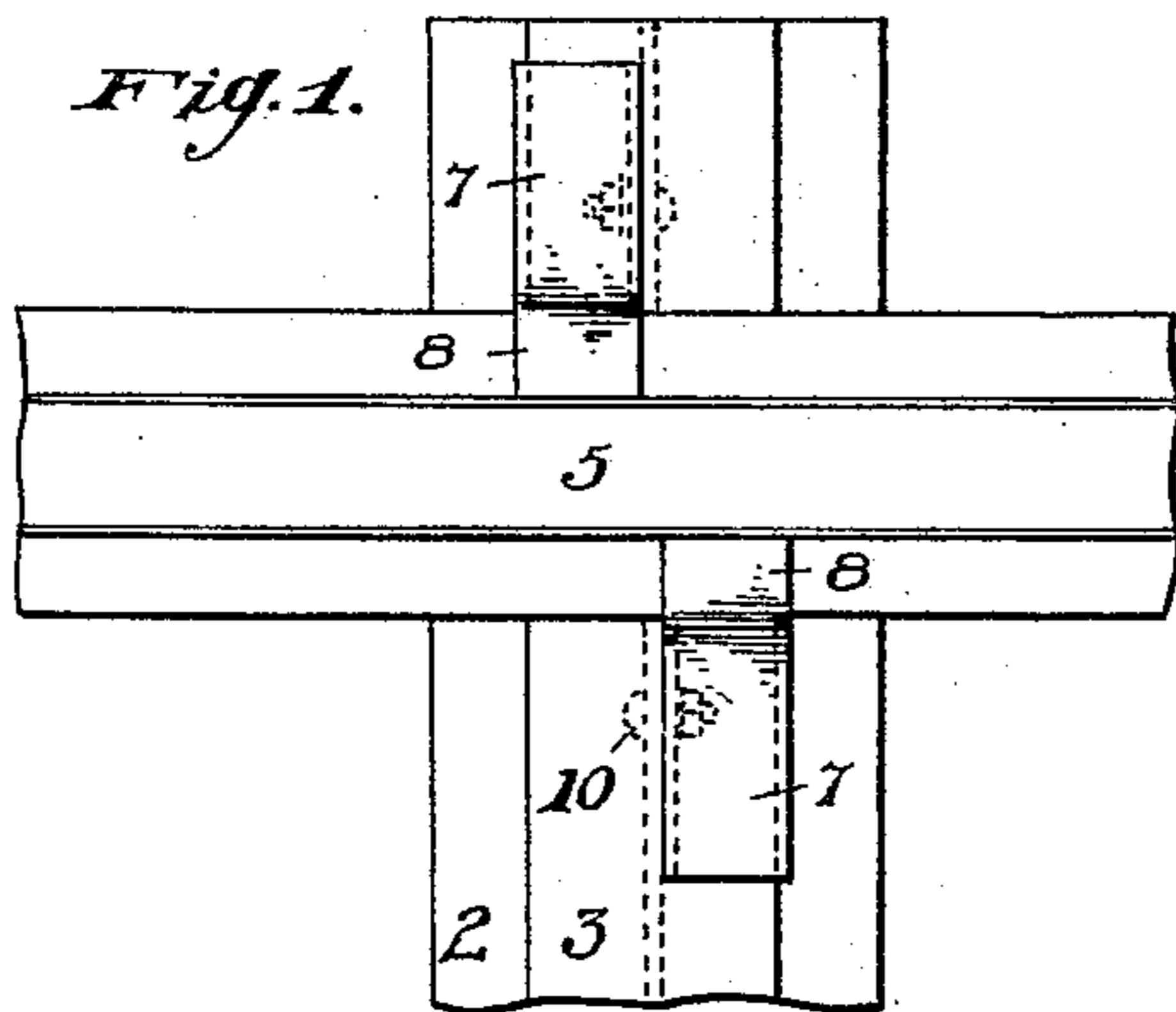


Fig. 2.

Fig. 5.

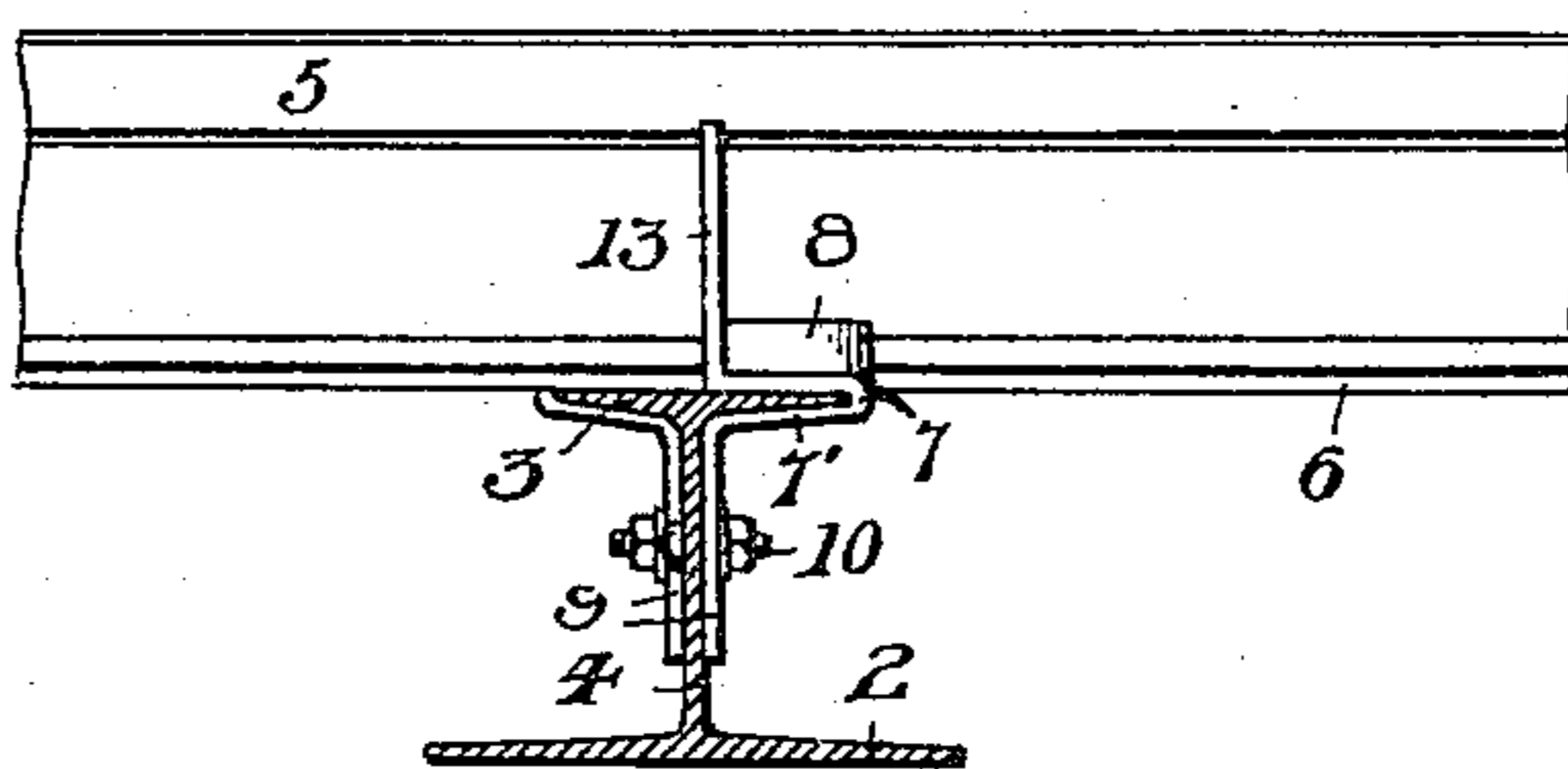
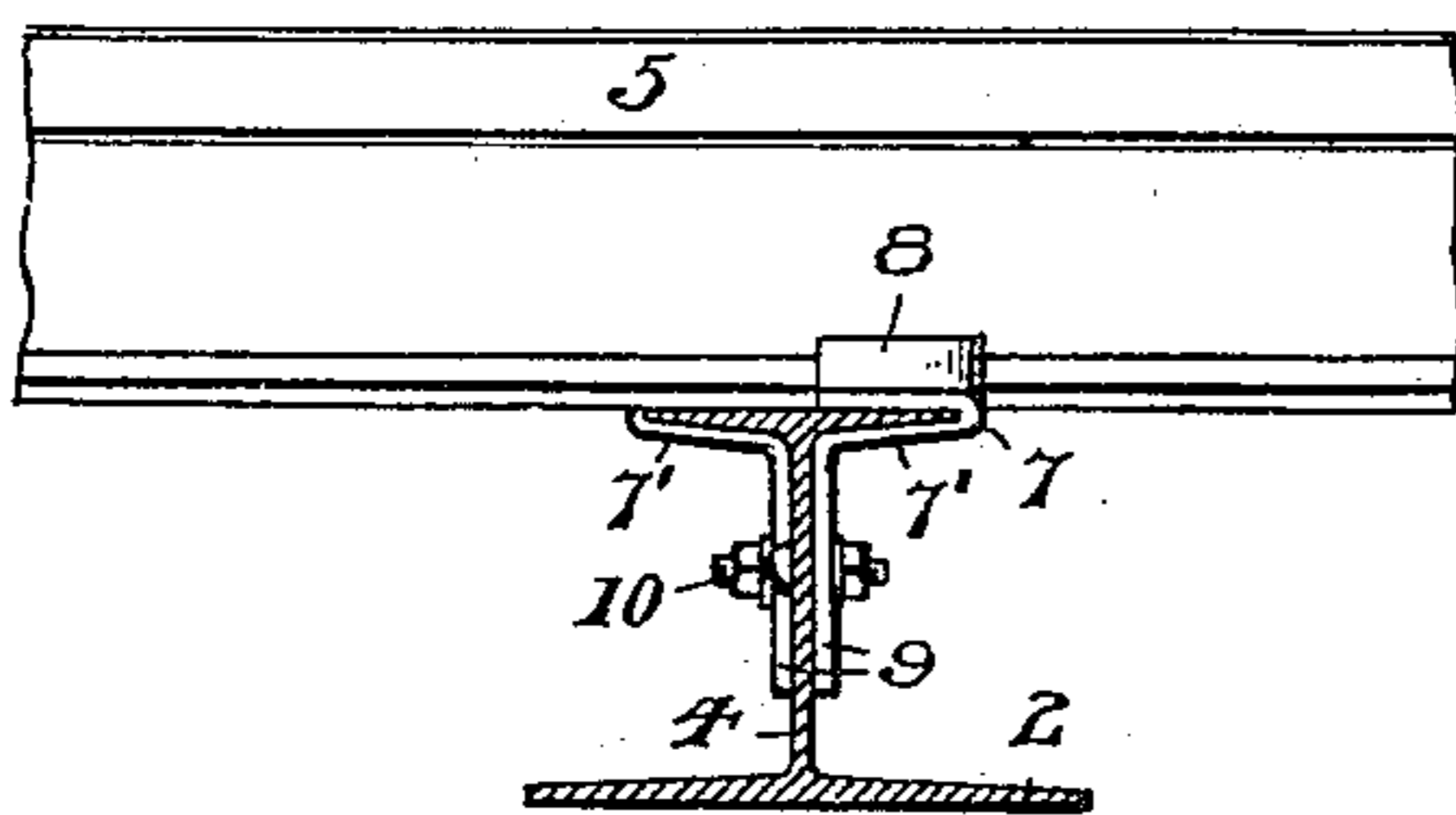


Fig. 3.

Fig. 6.

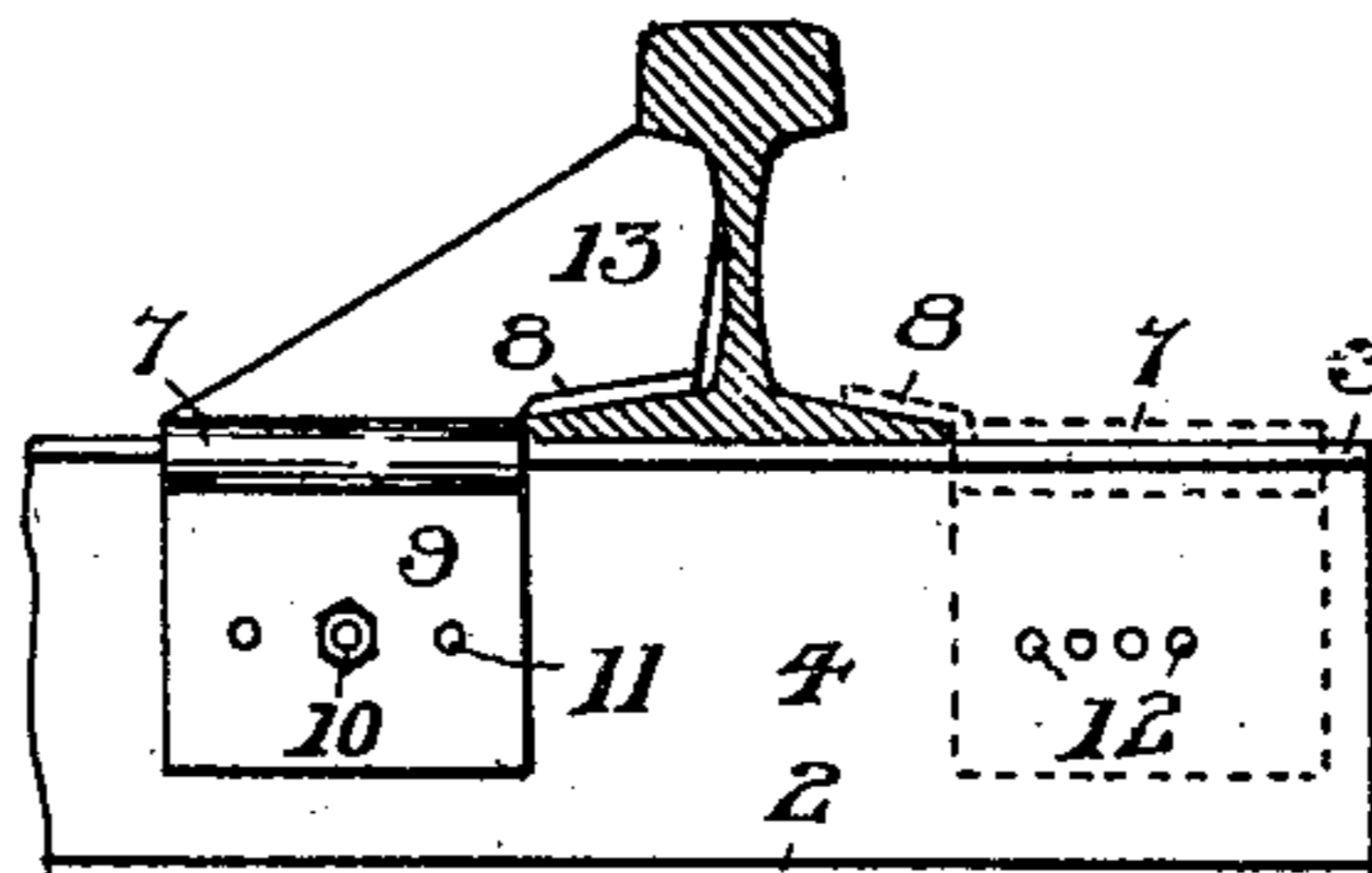
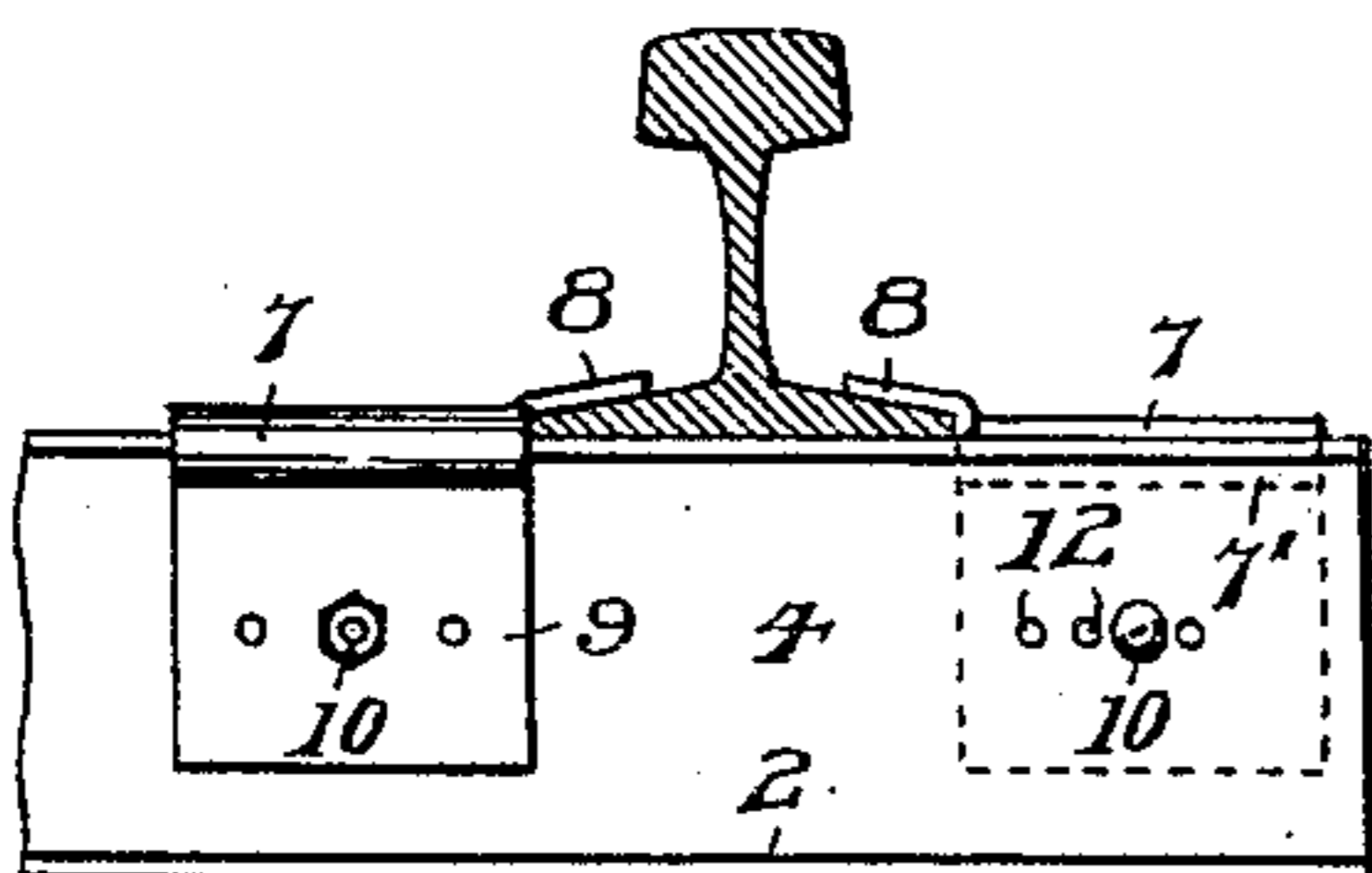
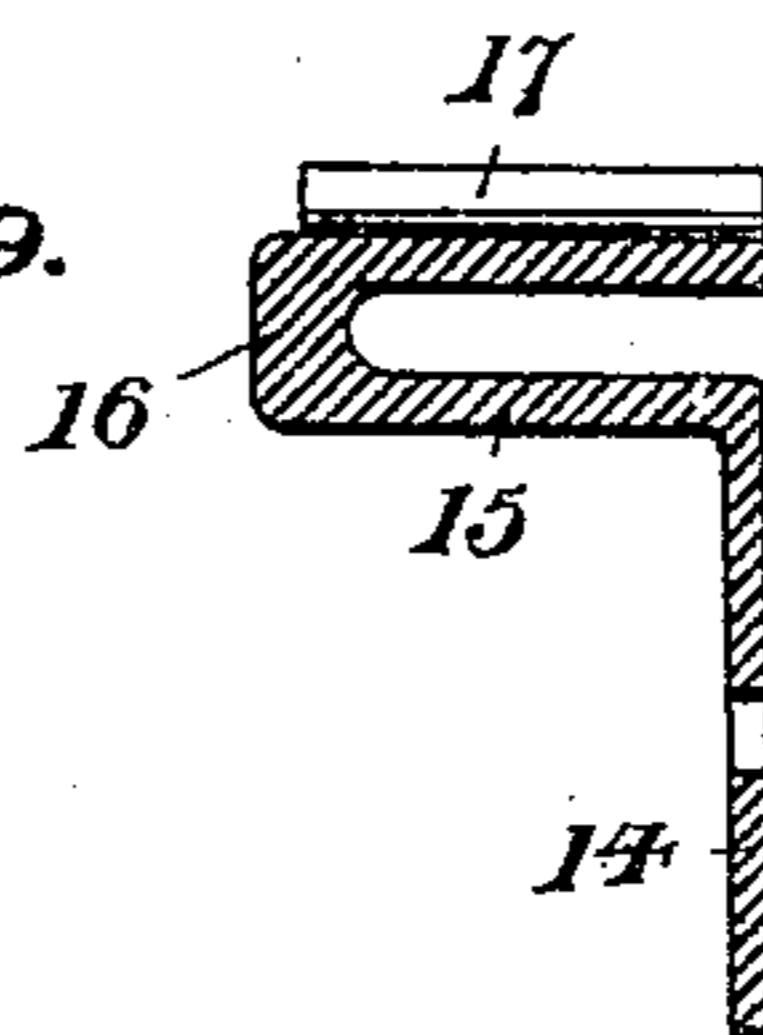
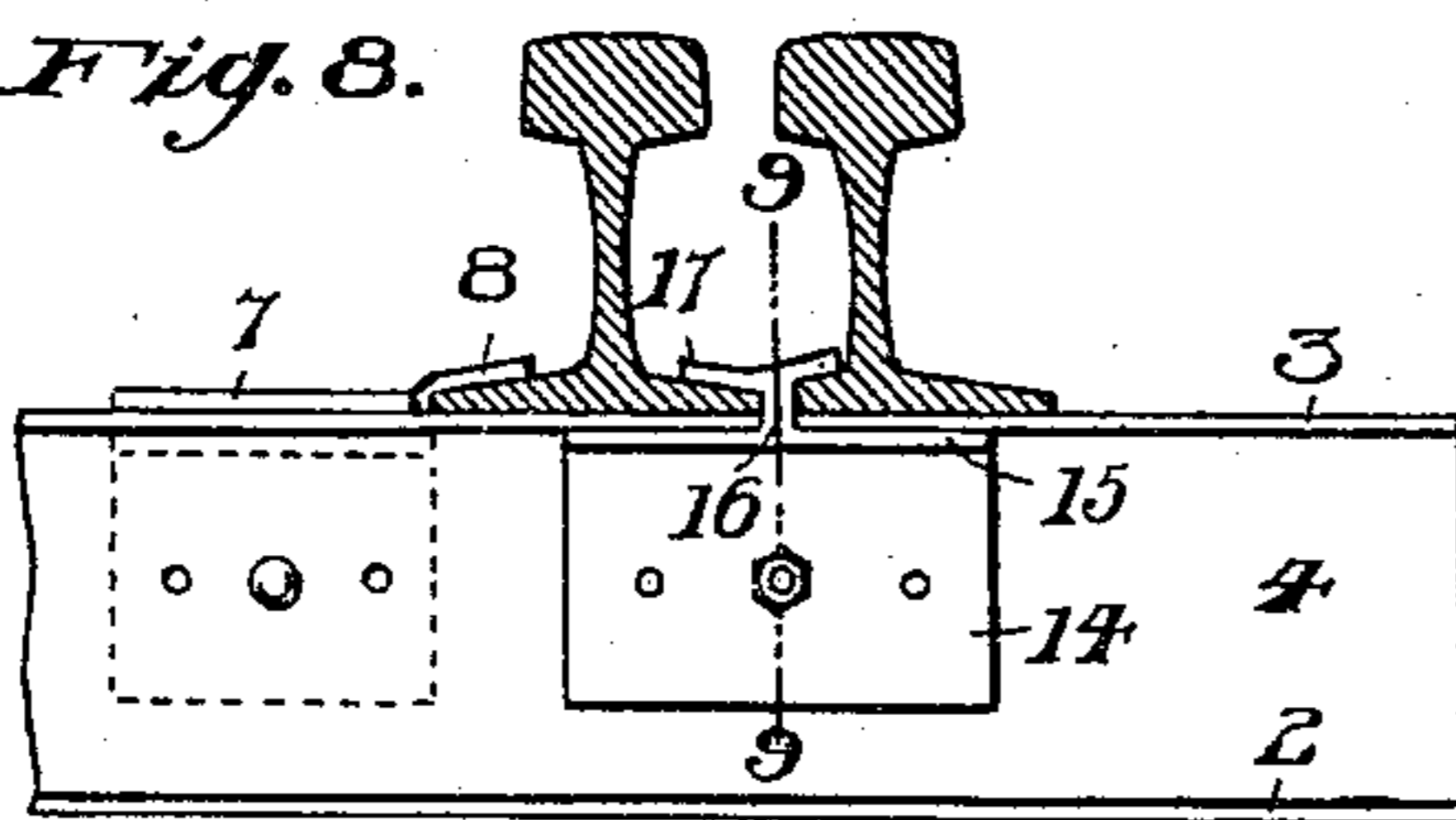


Fig. 8.

Fig. 9.



witnesses:

J. P. Appleman,
P. S. Chambers,

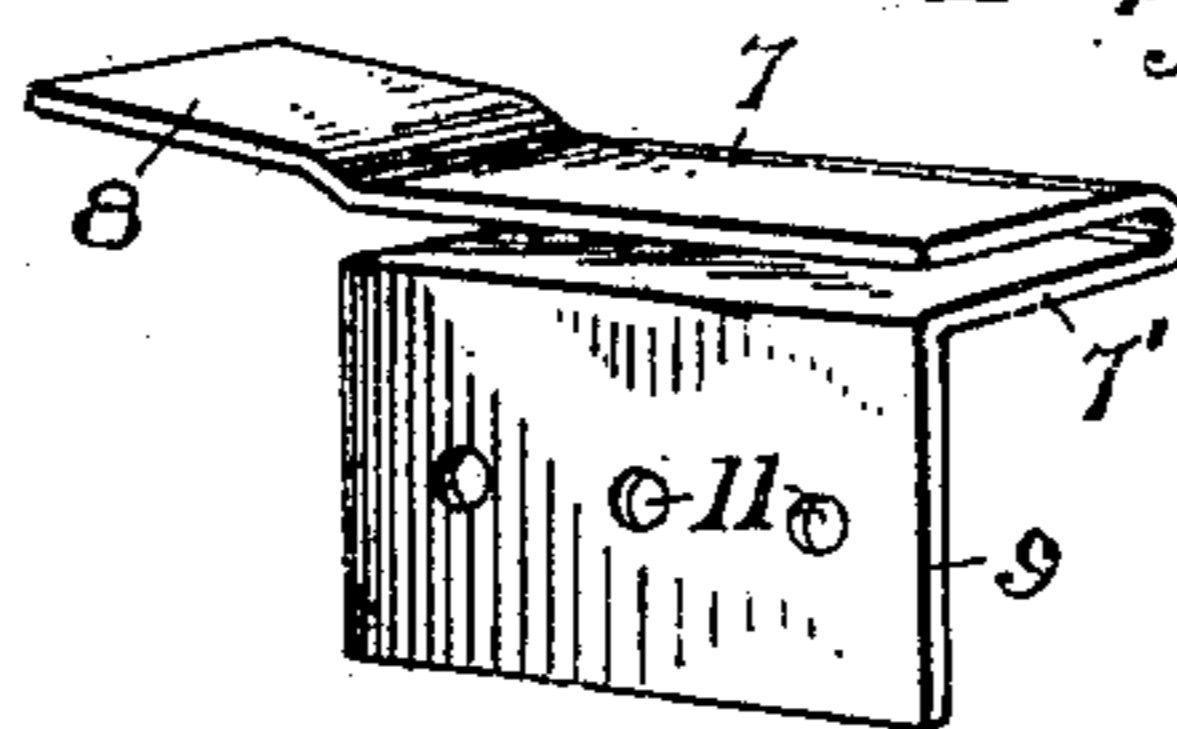


Fig. 7.

Inventor

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UNITED STATES PATENT OFFICE.

JOHN W. WYKE, OF SWISSVALE, PENNSYLVANIA.

RAIL-FASTENER.

No. 841,298.

Specification of Letters Patent.

Patented Jan. 15, 1907.

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To all whom it may concern:

Be it known that I, JOHN W. WYKE, a resident of Swissvale, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Fasteners, of which the following is a specification.

This invention relates to a rail-fastening, and has particular reference to a device of improved construction for use in connection with flanged metallic ties.

A fastening device now in general use consists of a clip which is bolted to the top face of the tie and formed with a lip which overhangs and clamps the flange of the rail. One objection to this form of device is that the lateral crowding of the rail subjects the bolt to great strain and in many cases has caused it to shear off and release the clip altogether. To overcome this difficulty, I have designed a form of fastening which embraces the tie-flange and has a depending part which is adapted to be secured to the web or vertical member of the tie, the fastener operating in such manner as to distribute the strain over the portion of the tie which it embraces or engages, thus relieving the fastening-bolt of the direct strain to which it is subjected in the fastener of prior design to which I have referred.

In the accompanying drawings, Figure 1 is a top plan view of a portion of a rail and tie having my improved fastening device applied thereto; and Fig. 2 is a side elevation of the parts shown in Fig. 1, the tie being in section. Fig. 3 is a side elevation of the tie and fastening device shown in Figs. 1 and 2, the rail being in section. Figs. 4, 5, and 6 are views similar to Figs. 1, 2, and 3, respectively, illustrating the fastening device constructed with a brace or chair. Fig. 7 is a detail view of the fastener. Fig. 8 is a side elevation of an adaptation of the fastener for use between and for securing both a main and guard rail, the rails being shown in section. Fig. 9 is a sectional view of the guard-rail fastening taken on line 9 9 of Fig. 8.

Referring to the drawings, the metallic tie for which the improved fastening device is specially designed is of modified I-beam section, of which the base-flange 2 is somewhat wider than the top flange 3, these flanges being united by a conventional center or vertical web portion 4. The rail 5 may rest directly on the tie—that is, with its base-flange bearing on the top face of flange 3.

The fastening device consists of a U-shaped body portion 7, which embraces one side or approximately one-half of top flange 3 of the tie. The upper part of this body portion is extended at one end to form tongue 8, which has sufficient upward deflection to fit over and tightly embrace rail-flange 6, as shown. The under member 7' of body 7 has its longitudinal edge portion extended downward to form the plate-like extension 9, which bears against web 4 of the tie and to which it is secured by a bolt 10. Flange 9 is preferably formed with three or more bolt-holes 11, and the tie-web also has a series of holes 12, which are preferably slightly closer together than flange-holes 11. With the bolt-holes thus arranged in both the fastener and the tie, provision is made for fastening rails of any weight or size.

Body 7 of the fastening device tightly grips the tie-flange and withstands to a considerable extent the lateral thrust of the rail, the strain upon the fastening-bolt being indirect and not of such a nature as to cause it to shear.

In Figs. 4, 5, and 6 I have shown one of the fastening devices constructed with an inclined chair or brace 13 for the rail, the same being formed by extending upwardly the edge of the tongue 8 and the edge of the top member of the fastener-body, from which the tongue projects. Thus the improved fastener may be used at curves and other places where it is necessary to provide the rail with a lateral brace or support.

In Figs. 8 and 9 I have shown an adaptation of the device for use between a main rail and a guard-rail where the space between the rail-flanges is very restricted. In fact, one side of the guard-rail flange is usually cut away, so that the rail-heads may be as close together as necessary. In this adaptation the fastening consists of a plate-like member 14, which corresponds to plate or flange 9 of the construction first described, and it is also formed with an under portion 15, which corresponds to part 7' of body 7. Projecting upwardly from part 15, between the closely-adjacent rail-flanges, is a narrow but relatively thick web 16, and extending inward from this web over the tie and overhanging the rail-flanges are the opposite tongues or clips 17, the hold of each of which is substantially the same as that of the tongue 8 of the principal construction.

I claim—

1. An improved rail-fastener comprising a fastener-body shaped to partially embrace a flanged tie, a rail-holding extension carried
5 by the upper portion of the fastener, and a downward extension carried thereby adapted to be secured to the tie.

2. An improved rail-fastener comprising a
10 U-shaped body portion adapted to embrace the flange of the tie, a rail-holding extension on the top member of the body, and a depending extension on the bottom member thereof adapted to be secured to the tie.

3. An improved rail-fastener comprising a
15 flange-embracing body portion having a top member adapted to rest on the top face of a flange and a bottom member adapted to bear upward against the under face of the flange, a

plate-like extension depending from the inner edge of said under portion of the body for fas- 20
tening to the rail-web, the top portion of the body being extended in the direction of the length of the tie and deflected upwardly for overhanging the rail-flange.

4. An improved rail-fastening comprising 25
a flange-embracing body portion having an end extension for overhanging the rail-flange, means for securing the fastener to the flanged tie which it embraces, and a chair or brace extending upward from the fastener-body. 30

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

JOHN W. WYKE.

Witnesses:

R. A. AGNEW,
H. B. LEMMON.