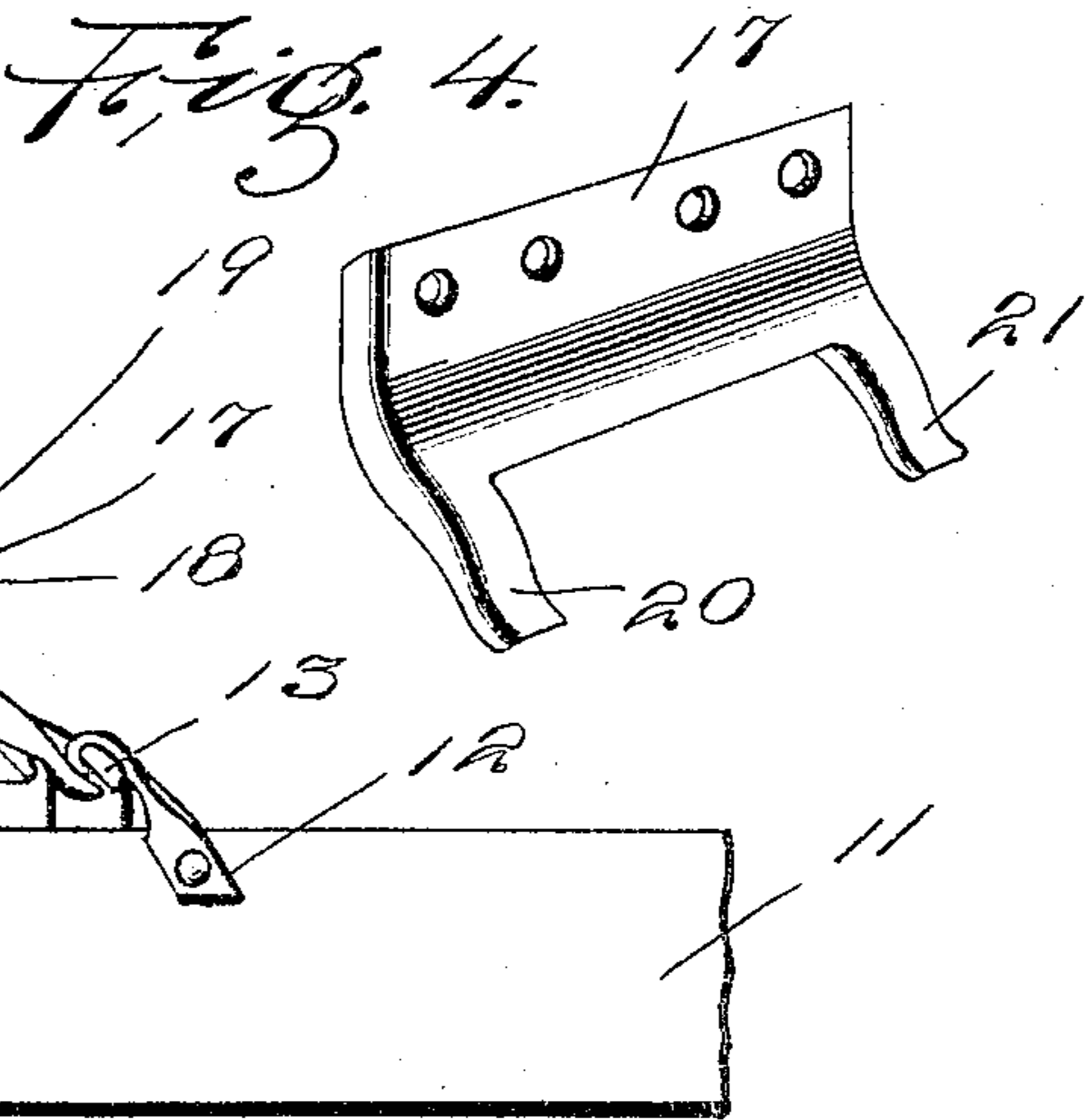
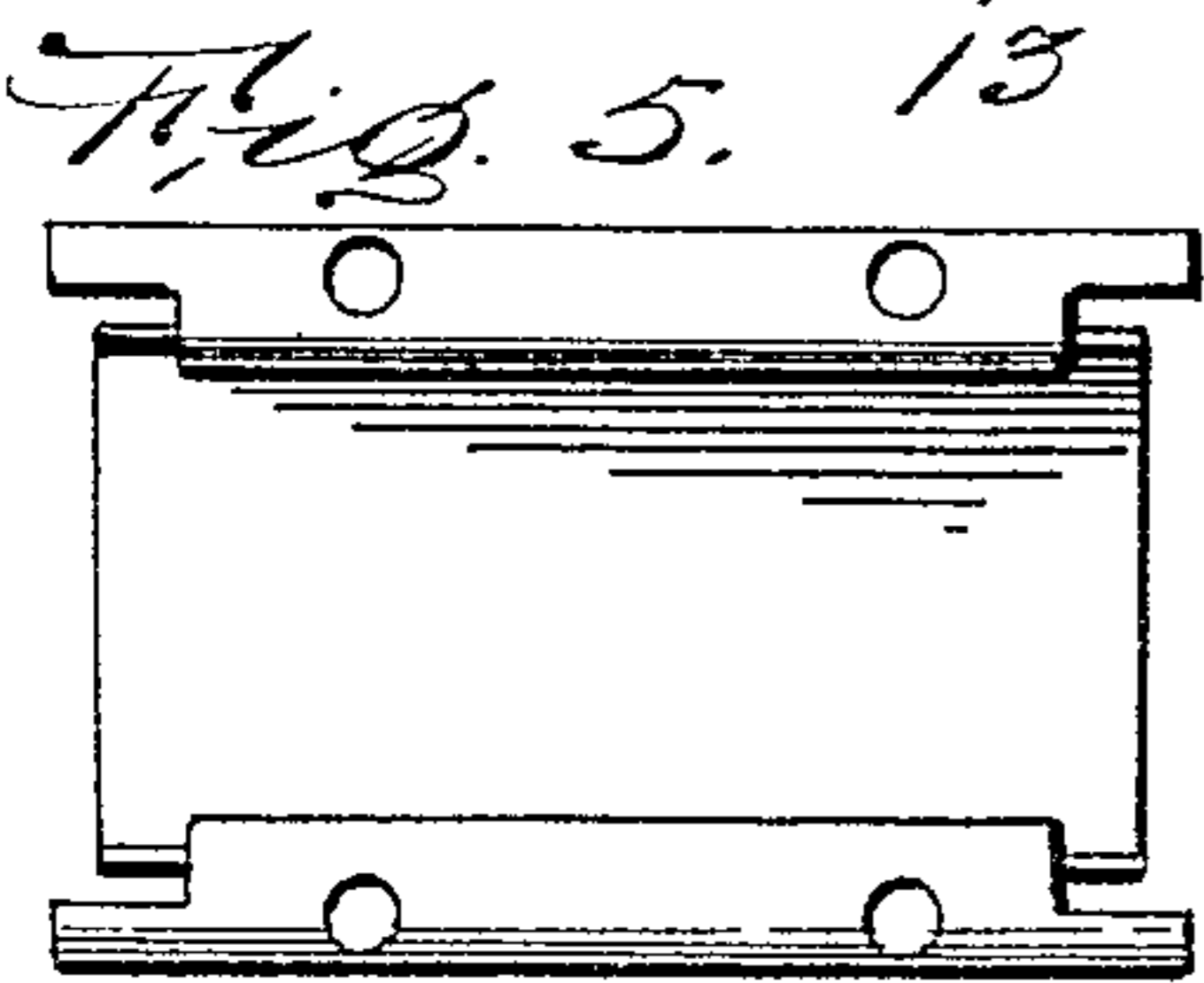
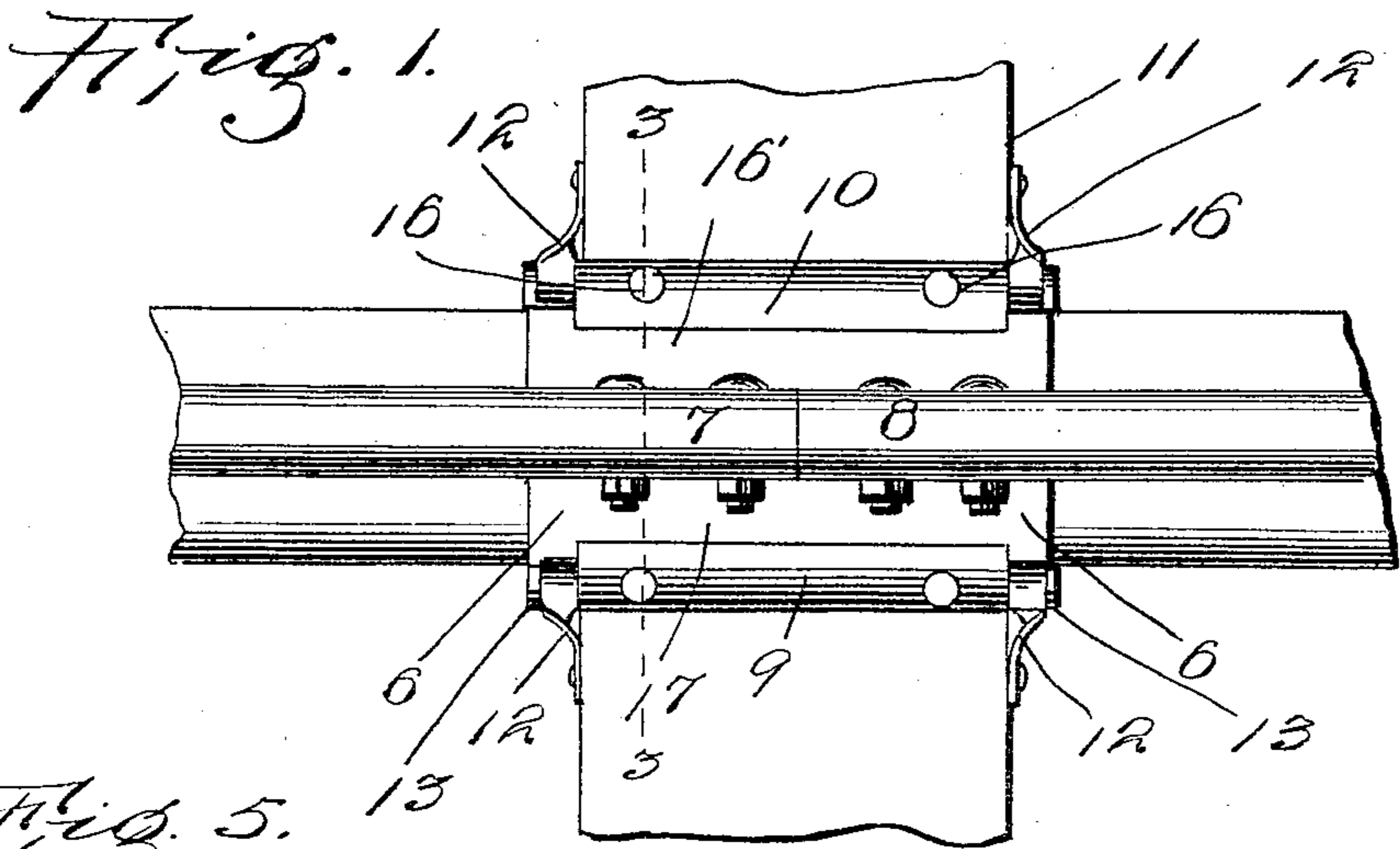


No. 778,657.

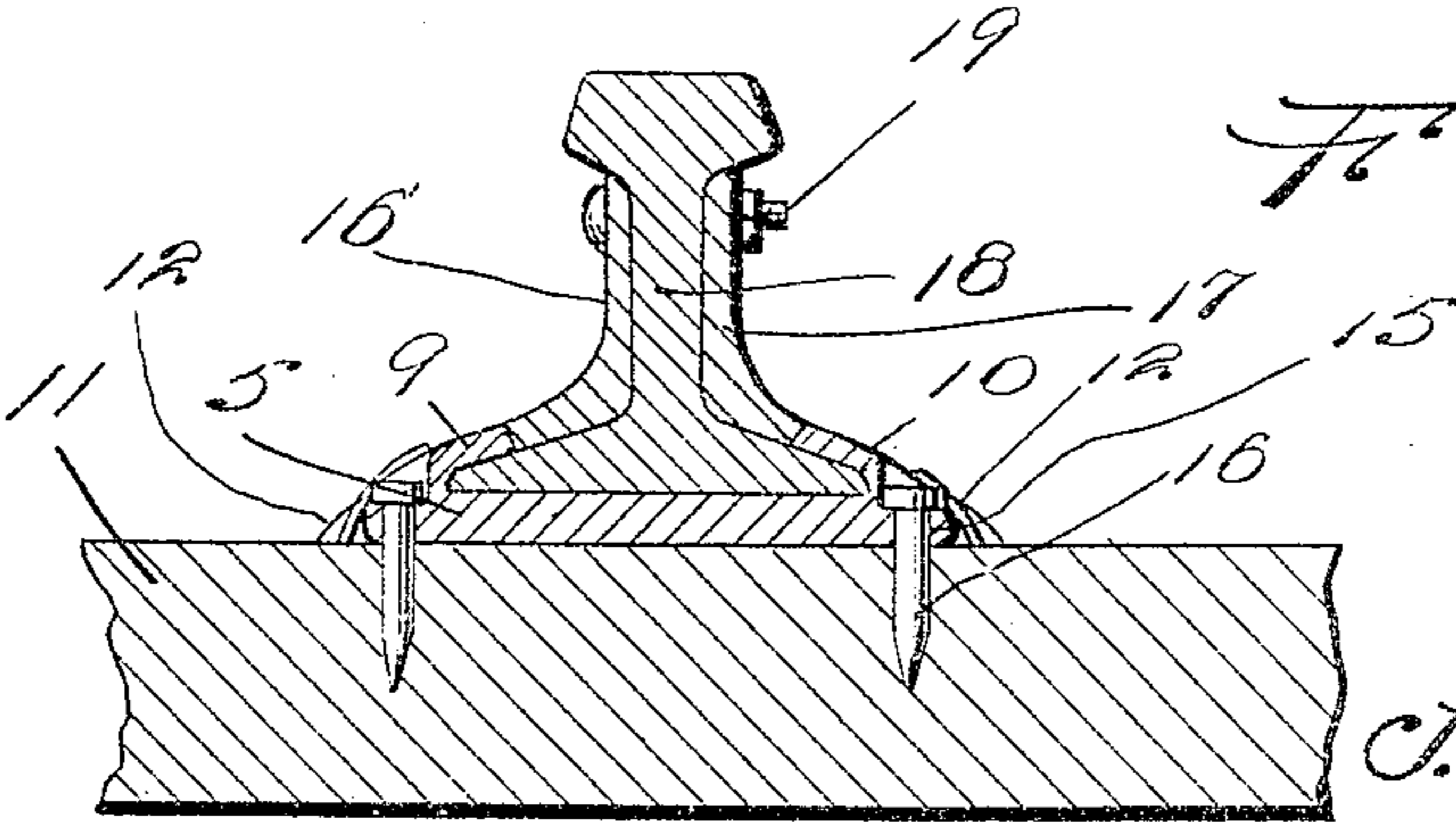
PATENTED DEC. 27, 1904.

J. G. GRETER.  
RAIL JOINT.

APPLICATION FILED MAY 25, 1904.



*Fig. 2.*



*Fig. 3.*

Witnesses  
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By  
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# UNITED STATES PATENT OFFICE.

JOHN G. GRETER, OF CRESTLINE, OHIO, ASSIGNOR OF TWO-FIFTHS TO  
GEORGE GRETER, OF SHELBY, OHIO.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 778,657, dated December 27, 1904.

Application filed May 25, 1904. Serial No. 209,720.

*To all whom it may concern:*

Be it known that I, JOHN G. GRETER, a citizen of the United States, residing at Crestline, in the county of Crawford, State of Ohio, have invented certain new and useful Improvements in Rail-Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to rail-joints; and it has for its object to provide a joint which will hold the rails securely together and which will itself be held securely upon a railway-tie, other objects and advantages of the invention being understood from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view showing the adjacent end portions of a pair of rails having a joint embodying the present invention, one of the upper plates being removed. Fig. 2 is a vertical section through a rail at one side of a tie and joint, the latter being in elevation. Fig. 3 is a section on line 3 3 of Fig. 1. Fig. 4 is a detail view of an upper plate. Fig. 5 is a top plan view of the base-plate with its flanges.

Referring now to the drawings, the present joint comprises a base-plate 5, which is designed to directly receive the bases 6 of the end portions of rails 7 and 8, the plate 5 having at its side or longitudinal edges the flanges 9 and 10, which extend upwardly and inwardly part way over the bases of the rails, so that to engage the rails with the plate they must be moved longitudinally. To hold the base-plate upon a tie 11, hooks 12 are provided, which are mounted upon the side faces of the tie and which engage the lugs or fingers 13, which project from the ends of the plate 5 at both sides thereof, these lugs being spaced from the bases 6 of the rails. It will be noted that the hooks are inclined so that they serve to hold the base-plate against lateral displacement as well as upward movement from the

tie. As a further means for holding the base-plate to the tie the plate is perforated, as shown at 15, and through these perforations are driven spikes 16 into the tie.

In connection with the base-plate or base of the joint there are employed two upper plates 16' and 17, which rest with their lower edges against the upper longitudinal edges of the flanges 9 and 10 and which are fitted against the base-flanges of the rails between the flanges 9 and 10 and the webs 18 of the rails and extend upwardly of the latter and terminate against the under faces of the threads of the rails. Through these plates and through the rails are engaged the usual bolts 19. From the end portions of the plates 16 and 17 extend curved fingers 20 and 21, respectively, which lie against the ends of the flanges 9 and 10, respectively, and engage beneath the fingers or lugs 13 and against the hooks 12, the plates being thus held securely against outward movement from the base.

From the above description it will be seen that there is provided a joint which is simple, cheap, and effective and which may be easily and quickly applied and removed.

In practice modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

It will be noted that the base-plate 5 extends slidably beyond the ends of the flanges 9 and 10, so that in placing a new rail the base 5 may be slipped longitudinally from the rail to be removed until the ends of the flanges 9 and 10 are flush with the end of the rail that is to remain. The end of the base 5 will then project beyond the end of the rail to remain and the rail to be removed will lie upon its projecting portion. When a new rail is put in place, it is disposed to lie with its end upon the projecting portion of the base 5 and the plate is then shifted longitudinally into the position shown in Fig. 1. It will furthermore be understood that the joint is held so securely to the tie that spreading of the rails is prevented.

What is claimed is—

1. A rail-joint comprising a base-plate having upwardly and inwardly extending flanges and terminal lugs, and means removably connected with said lugs for holding the plate to a tie. 5
2. A rail-joint comprising a base-plate adapted to receive the end portions of rails and having terminal lugs, additional plates adapted to fit against the sides of the rails and having fingers removably engaged beneath said lugs, and means removably engaged with said lugs for holding the base to a tie. 10
3. A rail-joint comprising a base-plate having upwardly and inwardly directed flanges and terminal lugs, plates disposed against the longitudinal edges of the flanges and forming continuations of the latter, said plates having fingers removably engaged beneath the lugs, and having alining perforations to receive bolts, and hooks engaged with the lugs and adapted for attachment to a tie. 15 20 25 30
4. A rail-joint comprising a base-plate having upwardly and inwardly directed flanges and terminal lugs, plates disposed against the longitudinal edges of the flanges and forming continuations of the latter, said plates having fingers removably engaged beneath the lugs, and means removably engaged with the lugs for holding the base-plate to a tie. 20

fingers removably engaged beneath the lugs, and means removably engaged with the lugs for holding the base-plate to a tie.

4. A rail-joint comprising a base-plate having upwardly and inwardly directed flanges and terminal lugs, plates disposed against the longitudinal edges of the flanges and forming continuations of the latter, said plates having fingers removably engaged beneath the lugs, and having alining perforations to receive bolts, and hooks engaged with the lugs and adapted for attachment to a tie.

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

JOHN G. GRETER.

Witnesses:

HENRY F. WEAVER,  
R. U. MILLER.