LADEN.

TIE PLATE.

APPLICATION FILED JULY 29, 1909.

960,964.

Patented June 7, 1910.

2 SHEETS—SHEET 1.

Fig. 1

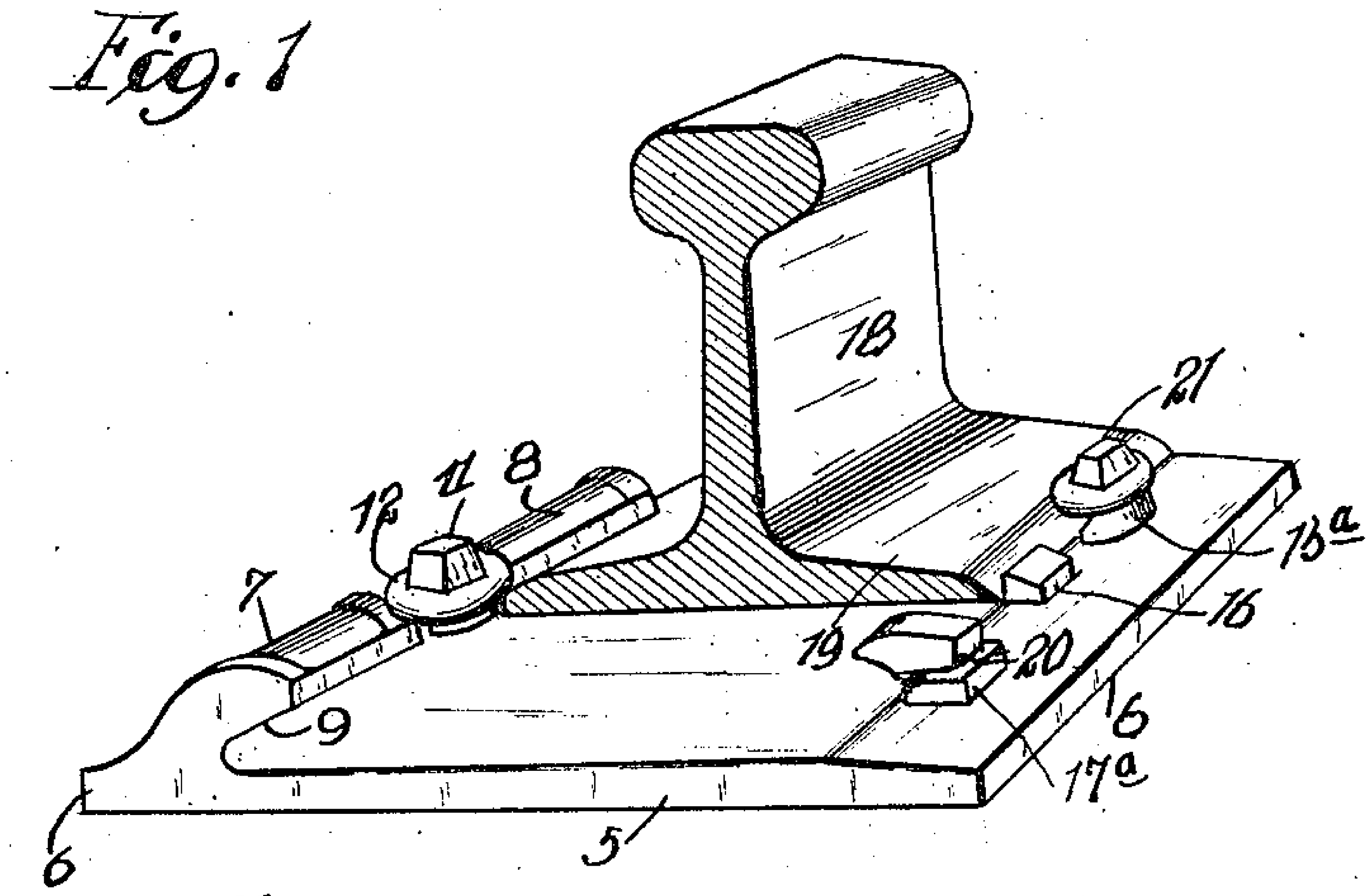


Fig. 2

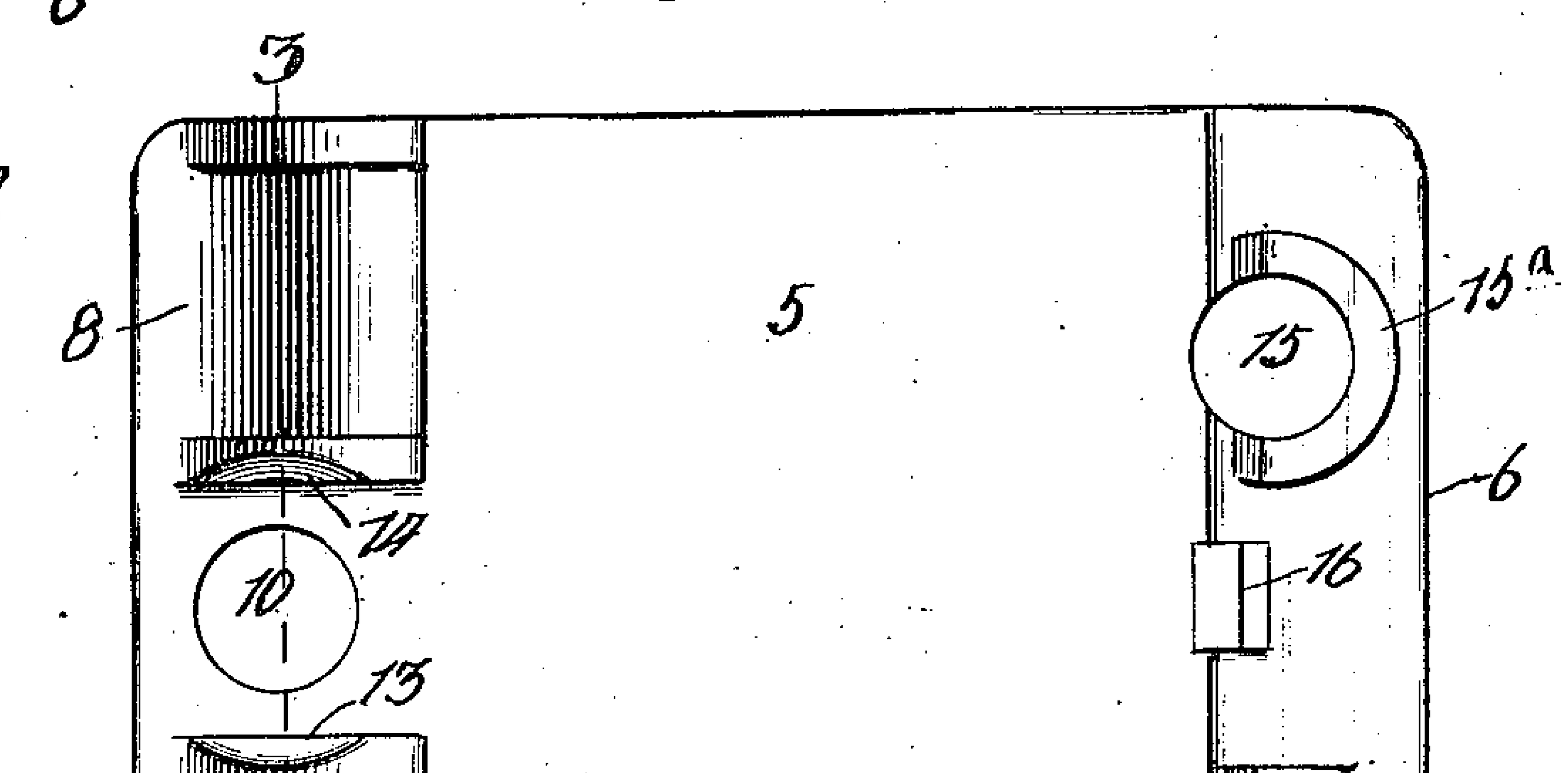


Fig. 3

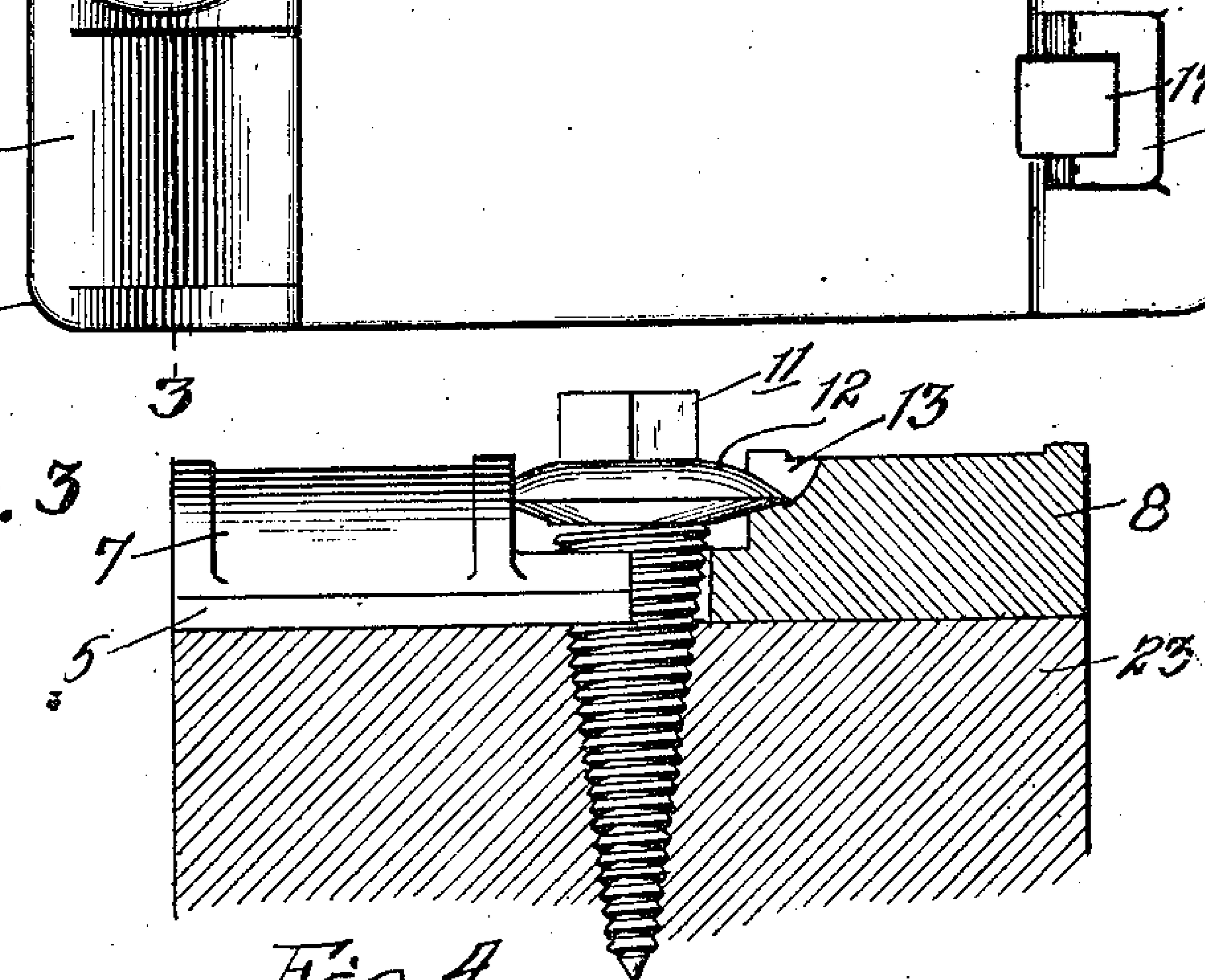
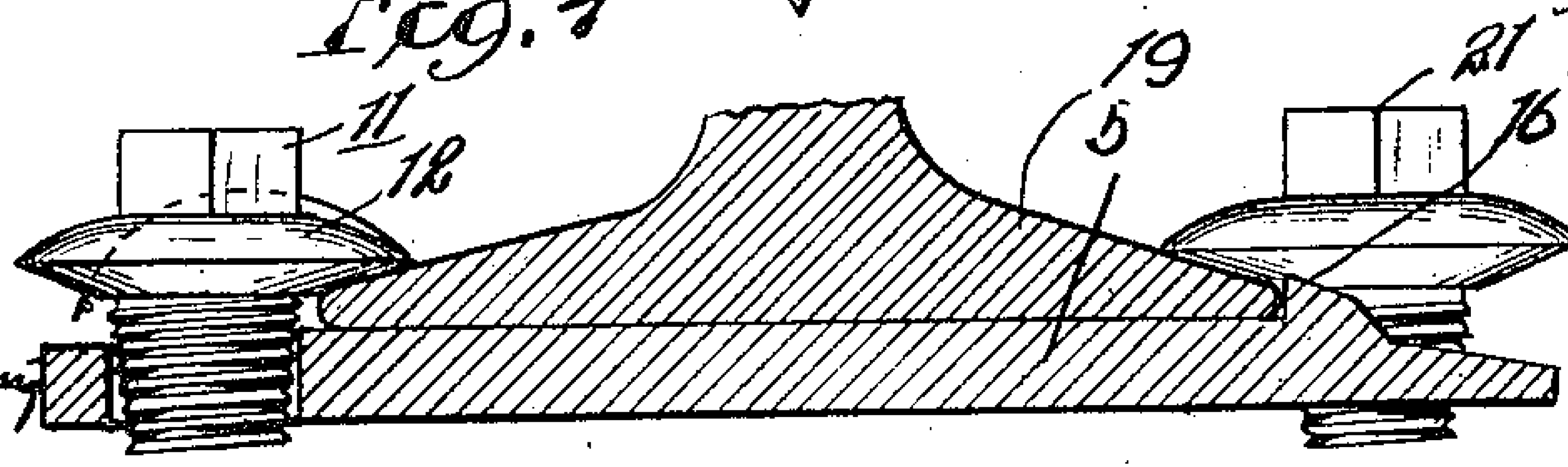


Fig. 4



Witnesses:

Wm. P. Bond

Pierson W. Banning

Inventor:

Patrick Laden

by Banning & Banning

Att'ys.

P. LADEN.

TIE PLATE.

APPLICATION FILED JULY 29, 1909.

960,964.

Patented June 7, 1910.

2 SHEETS—SHEET 2.

Fig. 5.

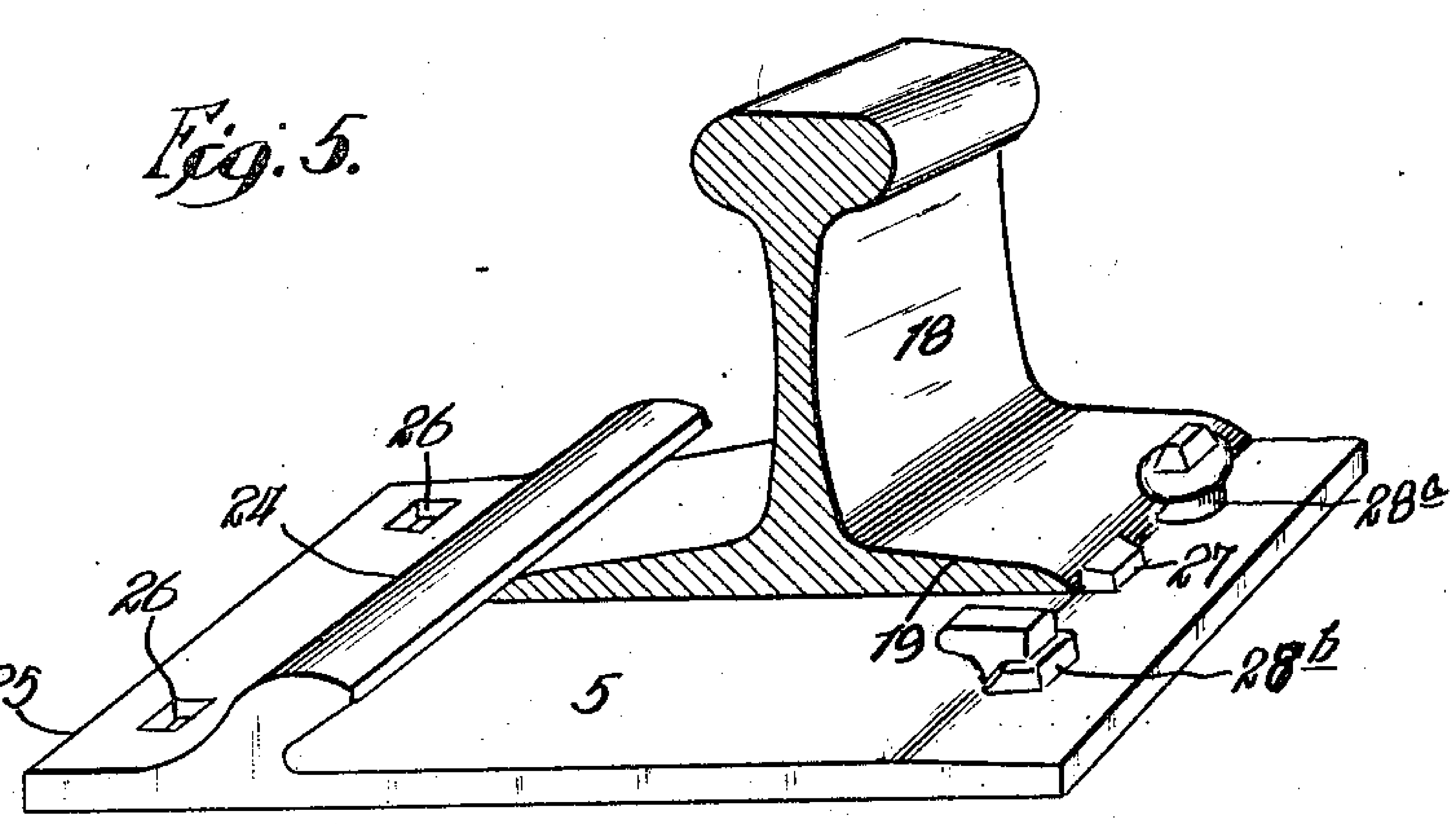
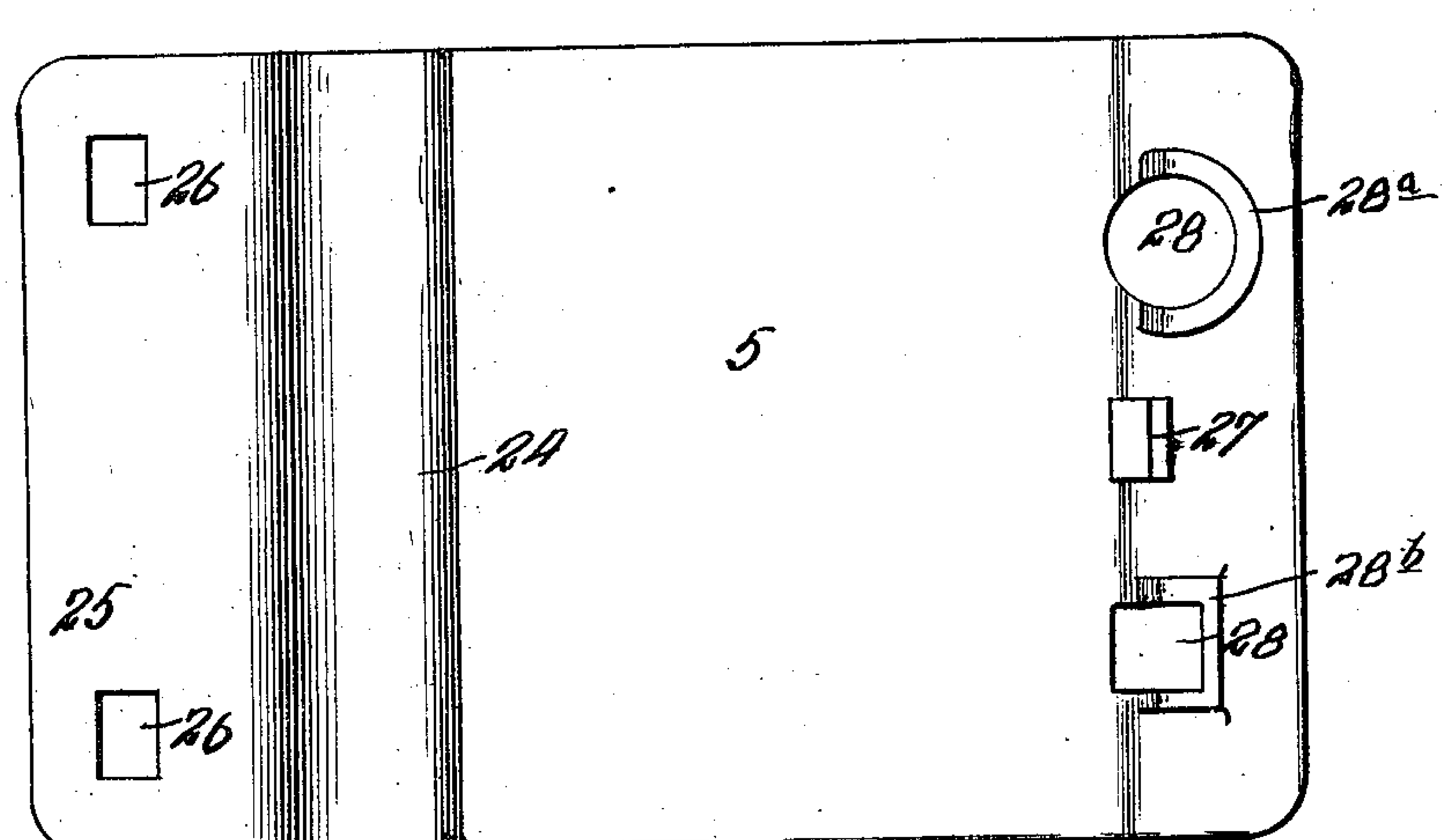


Fig. 6.



Witnesses:
Wm. P. Bond
Pierson W. Banning

Inventor:
Patrick Laden
by Banning & Banning
Attys.

UNITED STATES PATENT OFFICE.

PATRICK LADEN, OF MATTOON, ILLINOIS, ASSIGNOR TO RAILWAY SPECIALTY & SUPPLY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

TIE-PLATE.

960,964. Specification of Letters Patent. **Patented June 7, 1910.**

Application filed July 29, 1909. Serial No. 510,246.

To all whom it may concern:

Be it known that I, PATRICK LADEN, a citizen of the United States, residing in Mattoon, in the county of Coles and State of Illinois, have invented a certain new and useful Improvement in Tie-Plates, of which the following is a specification.

This invention relates to certain improvements in railway tie plates and has for one of its objects to provide a tie plate that will be exceedingly durable and efficient in use, the plate being constructed to prevent lateral movement of the rail and subsequent widening of the gage, and designed so that it may be rapidly laid even when screw spikes are used.

Other objects will appear from a detailed description of the invention, which consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of this improved tie plate, having a section of rail in engagement therewith; Fig. 2, a top plan view of the tie plate; Fig. 3, an elevation partly in section taken on line 3—3 of Fig. 2; Fig. 4, a transverse sectional elevation of the device; Fig. 5, a perspective view with a modified form of gripping jaw; Fig. 6, a top of plan view thereof.

Referring to Figs. 1 and 2, this improved tie plate comprises, as shown, a flat metallic body or base plate 5, having straight outer edges 6, to which, on one side thereof, are formed integral jaws 7 and 8, having upperly slanting under-walls 9. Between the jaws 7 and 8, as indicated in Fig. 2, is formed an opening 10 for receiving a spike 11, herewith shown as a screw spike, but may be constructed in any other way as desired, the head 12 of which when in lowermost position rests against recessed seats 13 and 14 formed in the inner side walls of the jaws 7 and 8 for locking and maintaining the spike 11 in positive vertical position, the tendency of the spike when under pressure being to impinge against the recessed seats.

The opposite side of the tie plate, as shown has an opening 15, here shown as circular, but may be of any other formation; adjacent to which is a lug 16, although the same may be dispensed with if desired. On the farther side of this lug is an opening so recessed that the driving of a spike there through will tend to force the rail into the opposite jaws. The tie plate is proportioned for receiving a railway rail 18, whose base 19 engages on one side the jaws 7 and 8; and on the other side the lug 16. As shown, the tie plate is first affixed to the rail by means of a spike 20 and later screw spikes 12 and 21 may be added, the construction of this plate being such that the track is ready for traffic as soon as the spike 20 is driven home. The jaws 7 and 8 are formed so as to wedge upon the rail base, and the latter is forced into the jaws by driving the spike 20 into the plate.

Fig. 5 shows a construction of tie plate provided on one side with an elongated integral gripping jaw 24, the outer edge 25 of the plate projecting beyond said jaw, and has spike openings 26 there through. The opposite side of this tie plate may have an intermediate lug 27 if desired and spike openings 28, although this lug may be dispensed with if necessary. It is obvious that either continuous or broken jaws may be used in this device with equal serviceability, but the provision of gripping jaws on but one side thereof is exceedingly practicable and effective, since it enables the tie plate to be readily positioned and locked to the rail by driving a spike oppositely from the gripping jaws.

In some cases it is desirable to employ reinforcing shoulders about the spike openings for supporting the spike heads. In Fig. 2 the supporting shoulders 15^A and 17^A are shown about the circular and rectangular openings, and in Fig. 6, the supporting or reinforcing shoulders are indicated at 28^A and 28^B. Further, it is to be understood that the lugs 27 and 16 may be omitted without impairing the utility of the plate, since the spike openings 17 and 28 extend partially beneath the rail base 19, so that when spikes are driven therein they will cause the rail base to fixedly engage the opposite gripping jaws, thus locking the device to the rail.

What I claim as new and desire to secure by Letters Patent is:

1. A railway tie plate having gripping jaws on one side thereof and spaced apart, for an opening in the plate base, the edges of the gripping jaws adjacent the opening being partially cut away, forming a recessed

seat for a spike, the opposite side of the tie plate having a lug for alining the base of a railway rail with the opposite gripping jaws, the base of the tie plate having suitable spike openings for receiving spikes for securing the plate to a railway tie, substantially as described.

2. A railway tie plate having gripping jaws on one side thereof and spaced apart for an opening in the plate base, the jaws being formed so as to wedge upon the rail base when the latter is forced into the jaws, the edges of the gripping jaws adjacent to the opening being partially cut away and forming a recessed seat for a spike, the opposite side of the tie plate having a lug for alining the base of the railway rail with the opposite gripping jaws, the base of the tie plate having spike openings for receiving spikes for securing the plate to a railway tie, substantially as described.

3. A railway tie plate having gripping jaws on one side and spaced apart, for a spike opening between them, the edges of the gripping jaws having recesses formed therein for seating a spike head and retaining the same in position, the opposite side of the plate having spike openings, substantially as described.

4. A railway tie plate having gripping jaws on one side and spaced apart for a spike opening between them, the edges of the gripping jaws having recesses formed therein for seating a spike head and retaining the same in position, the opposite side of the plate having a spike opening extending partially beneath the rail base so that when a spike is driven therethrough it will cause the rail base to fixedly engage the opposite gripping jaws, substantially as described.

5. A railway tie plate having on one side a gripping jaw, the jaw being formed so as to wedge upon a rail base when the latter is forced thereinto, the opposite side of the tie plate having a spike opening extending partially beneath the rail base so that when a spike is driven therethrough it will cause the rail base to fixedly engage the opposite gripping jaw, substantially as described.

PATRICK LADEN.

Witnesses:
EDWARD C. CRAIG,
JAMES W. HOUGH.