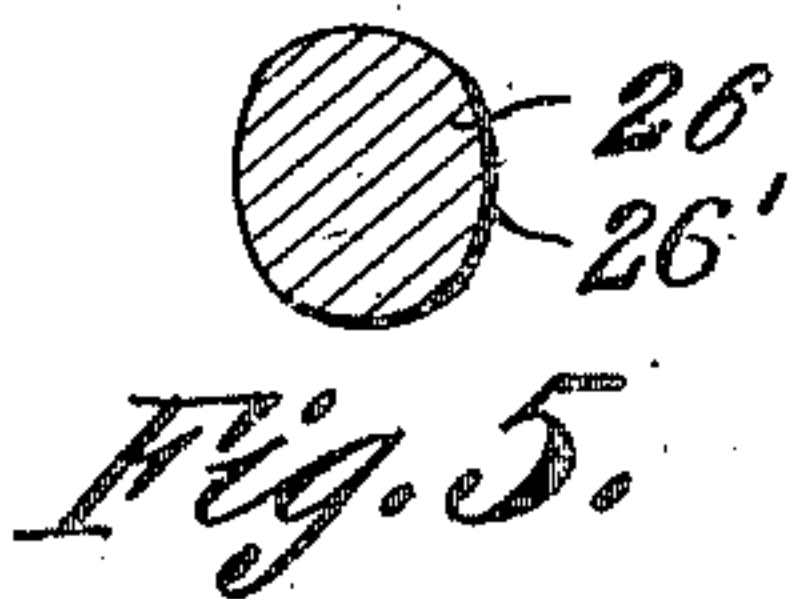
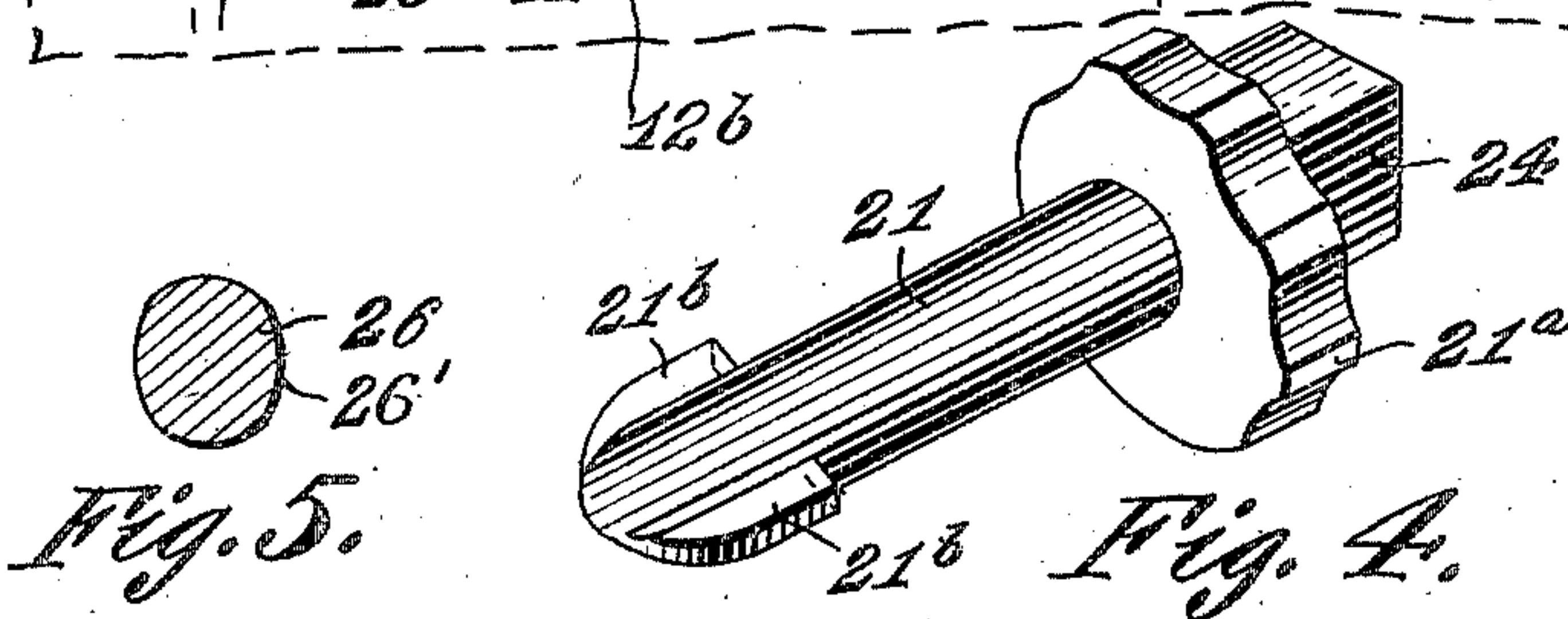
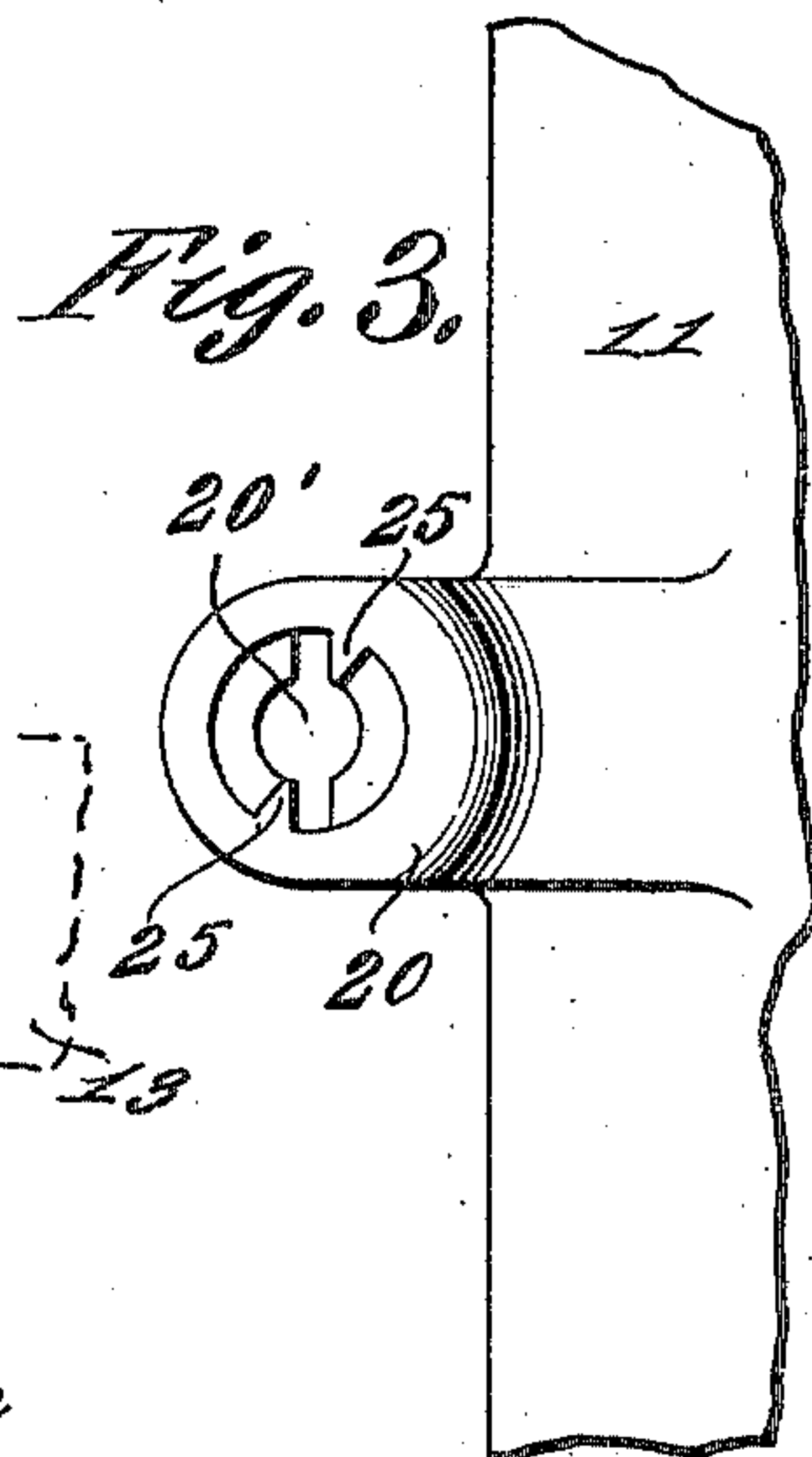
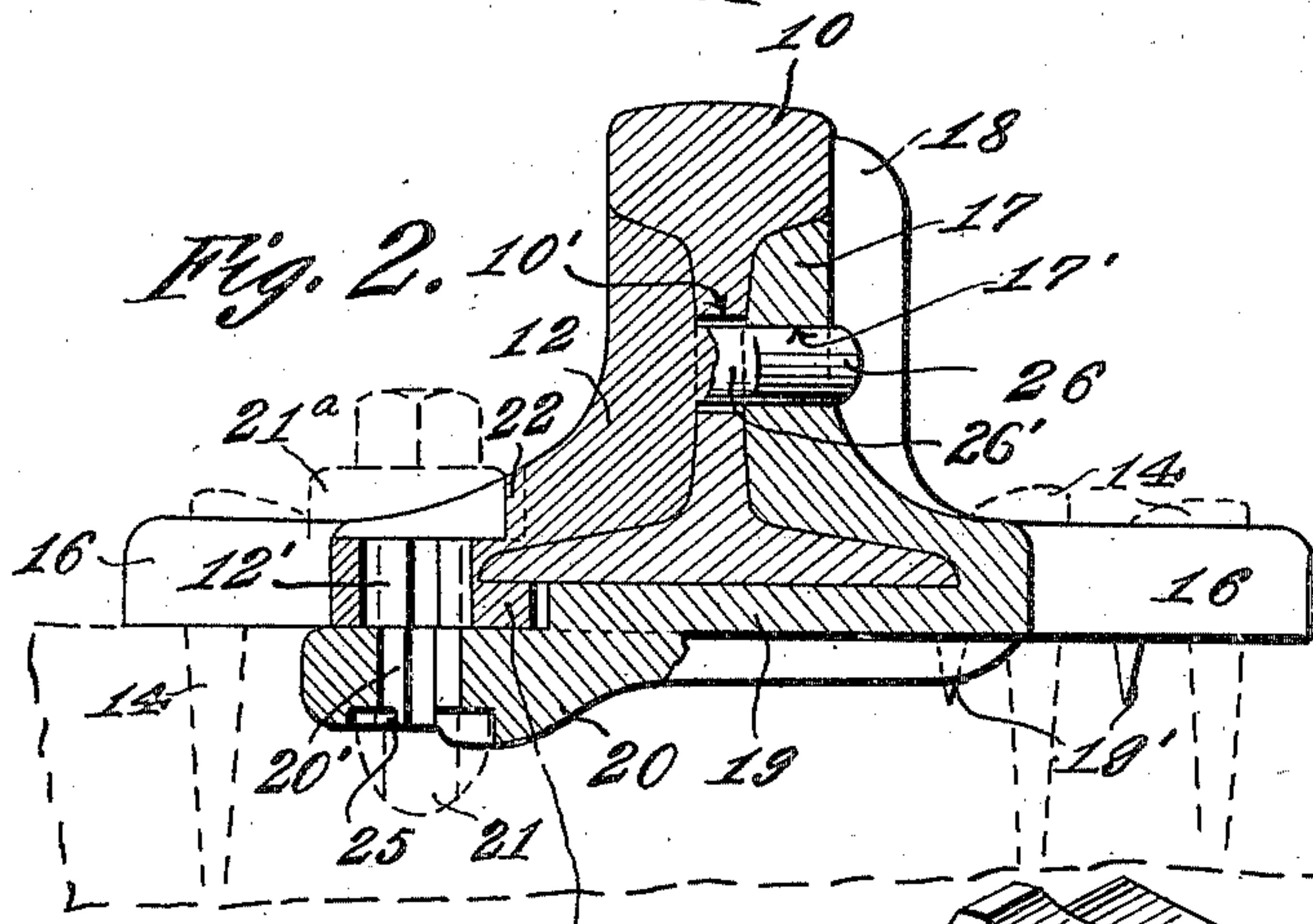
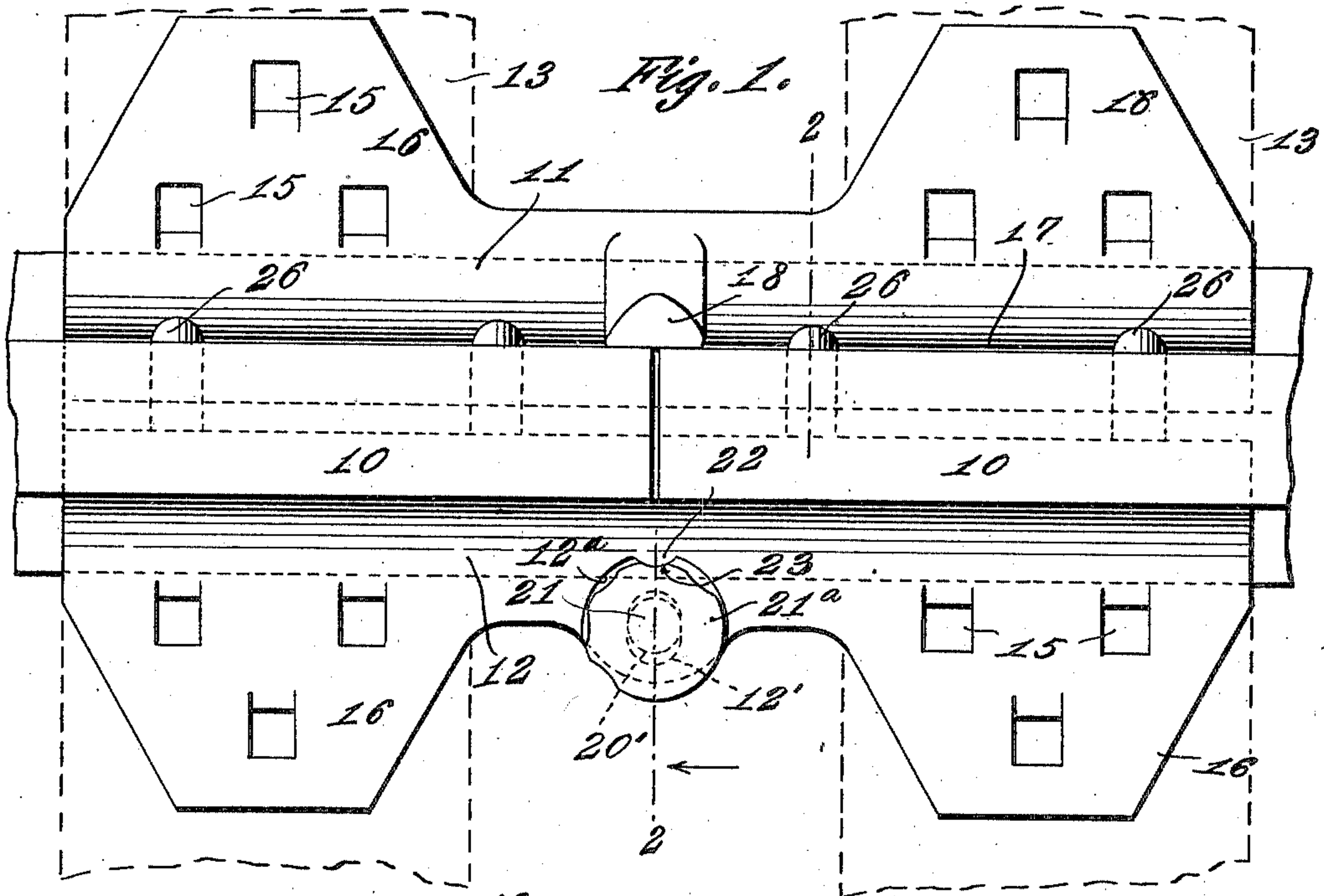


A. A. LIND.
RAIL JOINT.

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948,015.

Patented Feb. 1, 1910.



Witnesses

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ANDREW A. LIND, OF OSHANTER, PENNSYLVANIA.

RAIL-JOINT.

948,015.

Specification of Letters Patent.

Patented Feb. 1, 1910.

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To all whom it may concern:

Be it known that I, ANDREW A. LIND, a citizen of the United States, residing at Oshanter, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to railway appliances, and has particular reference to novel improvements in rail joints, such improvements being hereinafter specifically described and claimed and illustrated in the accompanying drawing, in which—

Figure 1 is a plan view of the invention; Fig. 2 is a vertical transverse section substantially on the broken line 2—2 of Fig. 1; Fig. 3 is a detail in bottom plan of the locking hub hereinafter described; Fig. 4 is a perspective view of the locking pin, and Fig. 5 is a transverse sectional detail showing the form of the fish plate projections where they pass through the web of the rails.

Throughout the following detail description and on the several figures of the drawings similar parts are referred to by like reference characters.

Referring to the drawings the adjacent or meeting ends of rails 10 are received within and upon the main chair member 11 and securely clamped thereto by an auxiliary chair member 12 and peculiar locking means hereinafter described. The chair comprising the members 11 and 12 is adapted to be supported upon a plurality of cross ties 13 and to be secured thereto by the use of spikes 14 passed through holes 15 in the lateral flanges 16 extending outwardly on both sides of the rails. The rails 10 are or may be of conventional form, and the chair members 11 and 12 cooperate to secure the same together in a peculiarly simple and effective manner.

The main chair member 11 preferably is applied on the outside of the rails and is provided with an integral fish plate 17 having horizontal holes 17' and an upstanding integral lug 18 which embraces the rail heads at the point where they are adjacent to each other. The member 11, furthermore, is provided with a broad base flange 19 which receives the rail base and also is preferably provided with a plurality of spurs 19' extending downwardly in the region of the flanges 16 and cooperating with the cross ties 13 to assist in holding the chair in

proper position on the ties. The member 11, furthermore, is provided on its bottom with an inwardly extending hub 20, located substantially in the vertical transverse plane of the lug 18 and lying between the cross ties 13. Said hub 20 extends inwardly beneath the chair member 12 and is provided with a vertical hole 20' which registers with a corresponding hole 12' in the member 12. The hole 12' is elongated transversely so as to permit a slight movement of the said member outwardly against the rails. Such movement of the member 12 is effected by means of a locking pin 21 having a cam shaped head 21^a which cooperates with a cam-shaped recess 12^a of the member 12. The shank of the pin 21 extends through the holes 12' and 20' and is provided on its lower end with a pair of oppositely disposed lugs 21^b.

The cam-shaped recess 12^a is provided centrally and adjacent to the portion closest to the rails with a projection 22 which is received in a corresponding depression 23 in the head 21^a of the pin when the pin is introduced into place. The pin 21 is furthermore provided with an upwardly projecting polygonal portion 24 for the reception of a wrench, whereby the pin may be rotated. The first effect of such rotation is to cause the cam head 21^a of the pin to impinge against the projection 22 and subsequent continued rotation of the pin will cause the main cam portion of the head to force the member 12 snugly against the rails. The lugs 21^b of the pin when the pin is rotated interlock with the lower ends of the walls of the hole 20', preventing withdrawal of the pin. Stop lugs 25 may be employed to limit the rotation of the pin by engagement with said lugs 21^b. In actual practice, however, the cam head 21^a cooperating with the member 12 will cause a positive lock preventing unauthorized movement of the pin.

The rails 10 are usually provided with transverse bolt holes 10', and in this instance, the member 12 is provided with a set of projections 26 which extend outwardly through said holes and the holes 17', thus preventing endwise displacement of the rails. The projections 26 may be flattened if desired, as shown at 26', to permit of the usual contraction and expansion of the rails.

The member 12 is provided with a narrow outwardly extending base flange 12^b which cooperates with the edge of the rail base,

whereby a more stable bracing effect is accomplished.

Having thus described the invention, what is claimed as new is:

5 1. In combination with the meeting ends of railway rails, a pair of chair members, one of said chair members having a base flange on which the rails rest, an upwardly
10 extending integral fish plate, and an inwardly extending integral hub having a vertical hole, the other member having a corresponding fish plate cooperating with the inner faces of the rails and a vertical trans-
15 versely elongated hole registering with said hub hole, the wall adjacent said hole being cam shaped, and a locking pin passed through said registering holes and provided with a
20 cam-shaped head whereby on rotation of the pin the chair members are securely clamped against the rail ends.

2. In combination, a pair of adjacent rail ends, a pair of chair members embracing said ends, one of said chair members hav-

ing an inwardly extending hub with a ver- 25
tical hole, the lower ends of the walls of said hole being provided with stop lugs, and the other chair member having a vertical
transversely elongated hole registering with the aforesaid hub hole, the wall surrounding
30 said elongated hole being cam-shaped and provided with a projection, and a locking pin provided with a cam-shaped head, a por-
tion of said head being provided with a de- 35
pression to receive said projection, the head being further provided with means for ro-
tating the pin, and the lower end of the pin being provided with a pair of lugs cooperating
40 with the lower ends of said hub hole walls and said stop lugs, substantially as set forth.

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

ANDREW A. LIND.

Witnesses:

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