

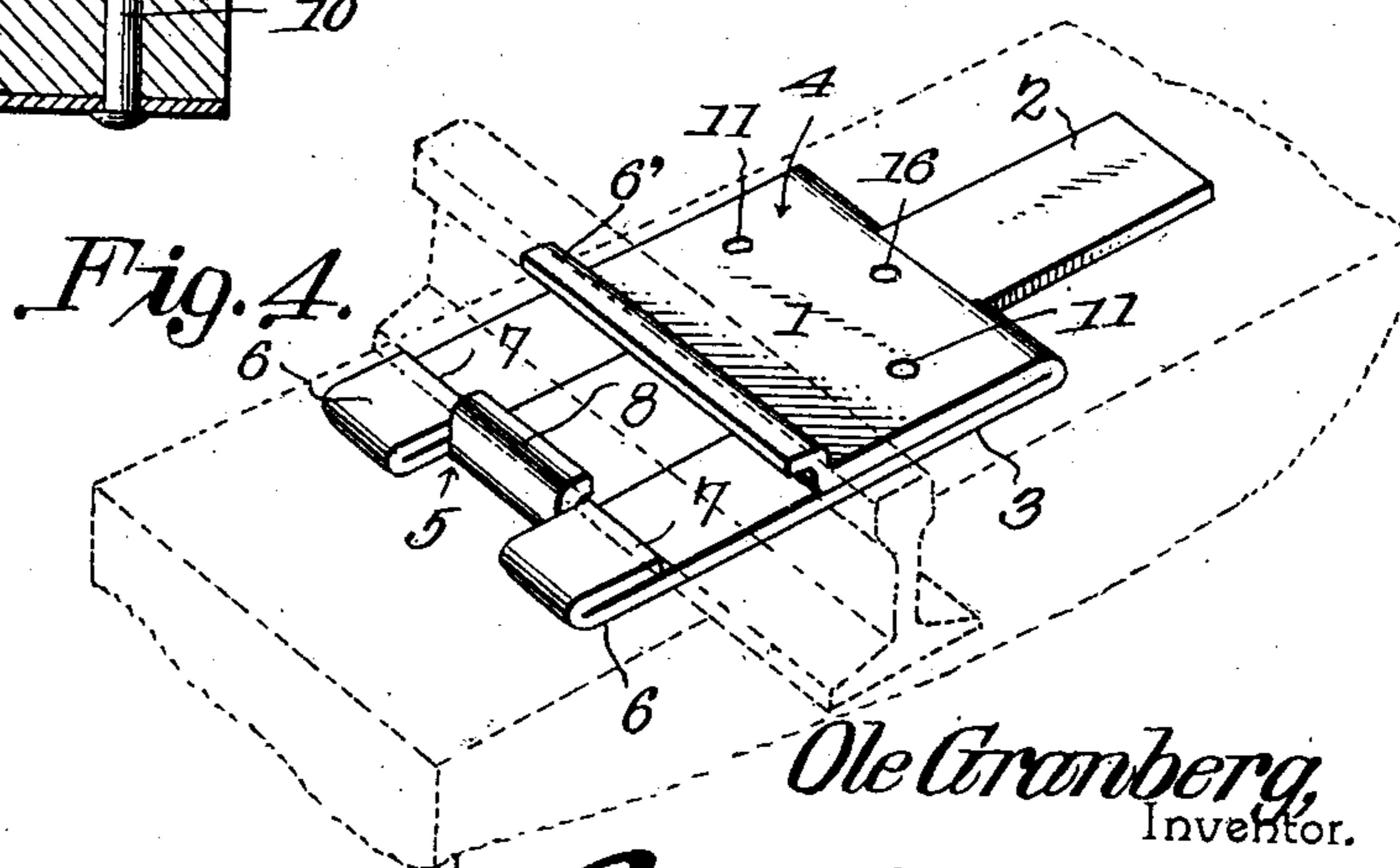
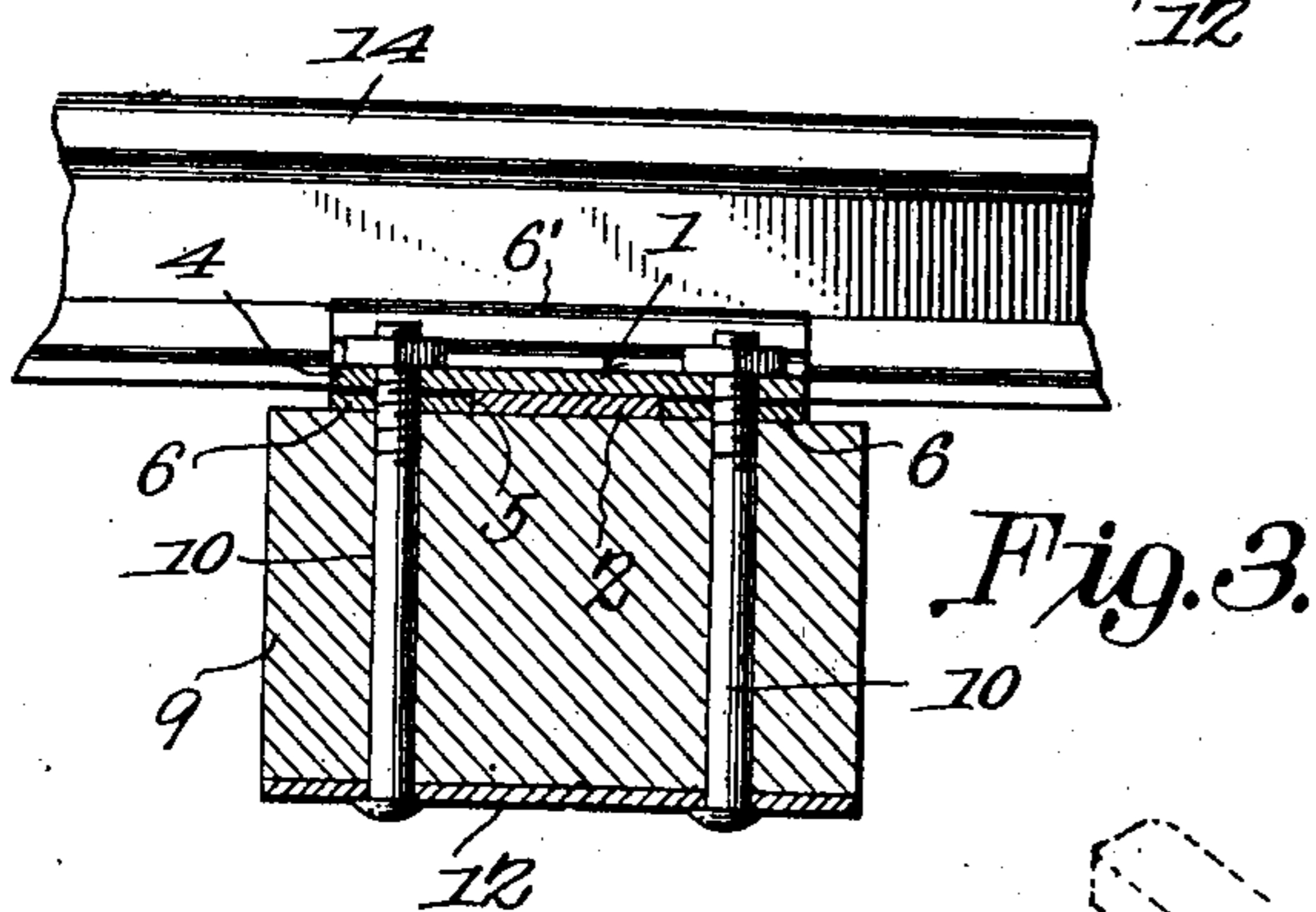
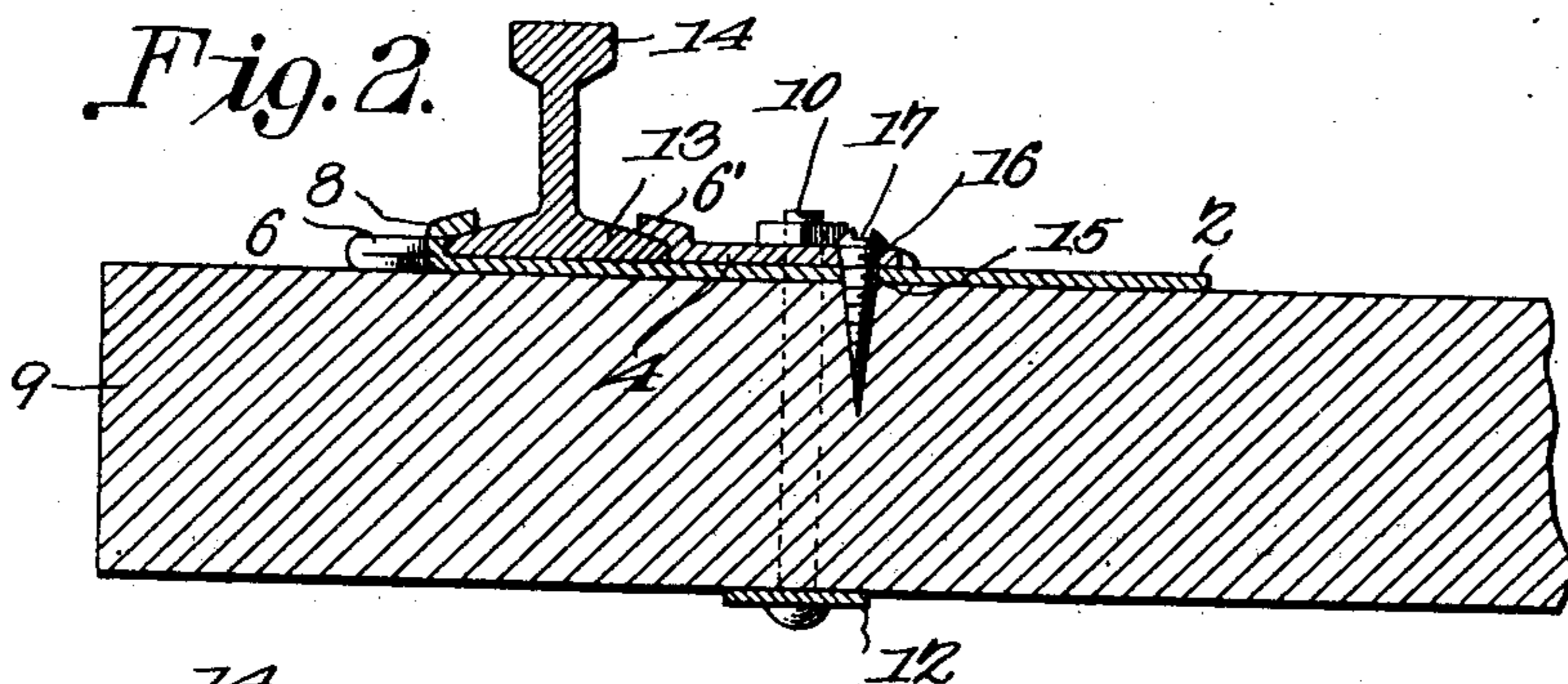
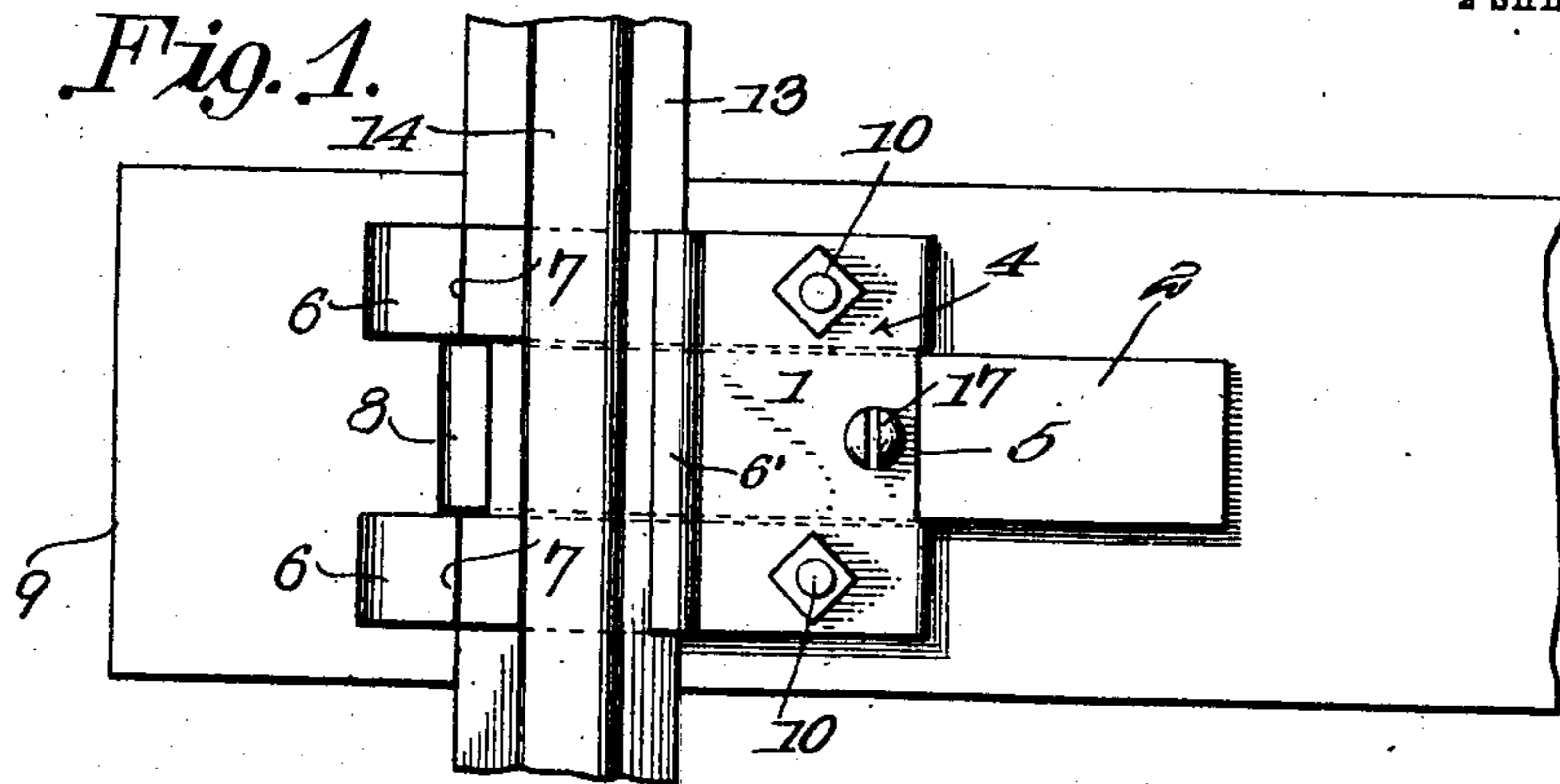
No. 762,703.

PATENTED JUNE 14, 1904.

O. GRANBERG.  
RAIL FASTENING DEVICE.  
APPLICATION FILED MAR. 28, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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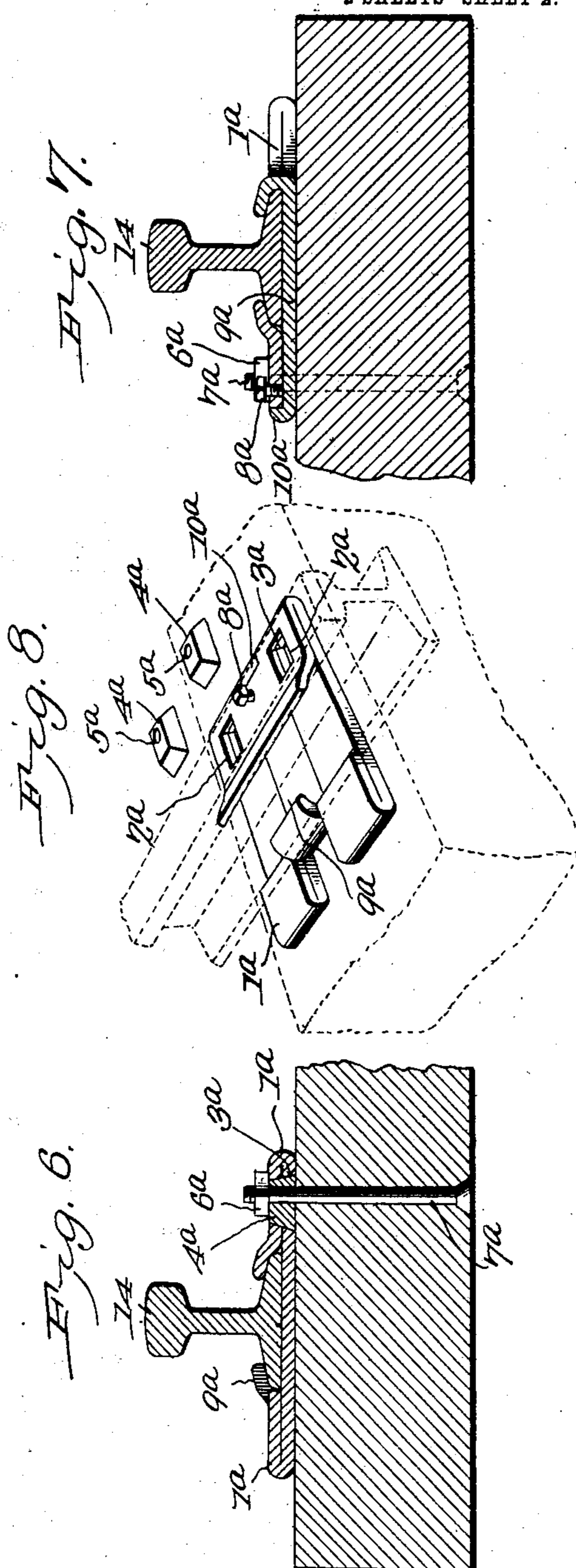
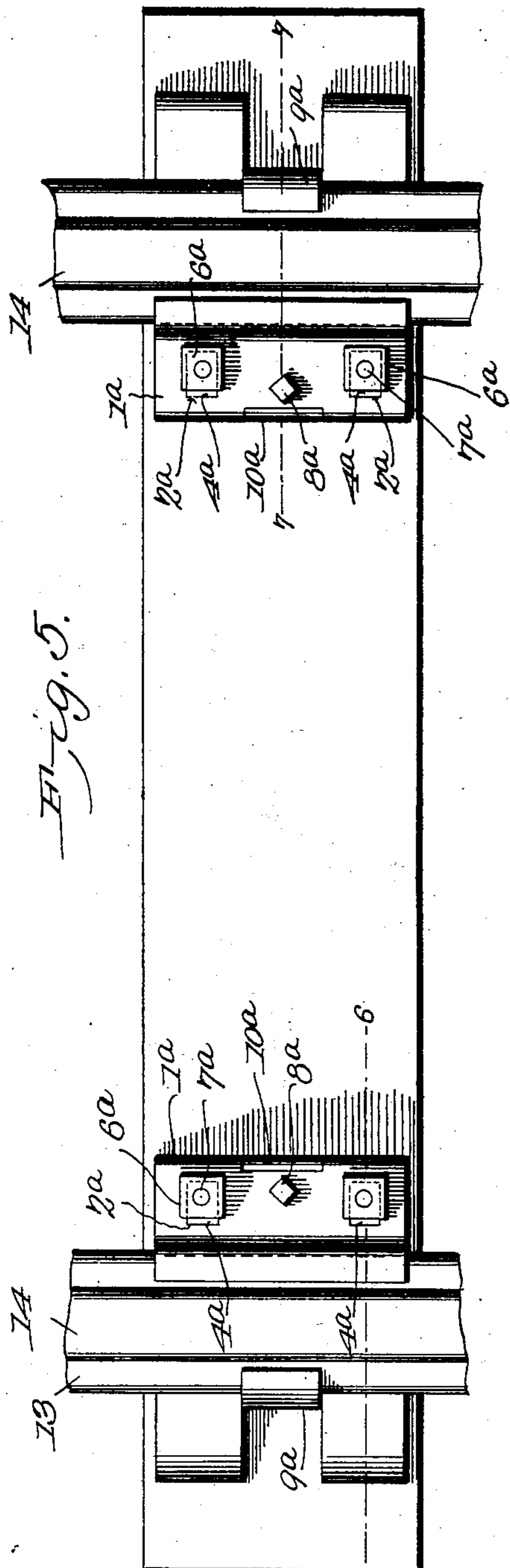
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Jim Ragger

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# UNITED STATES PATENT OFFICE.

OLE GRANBERG, OF BLAIR, WISCONSIN.

## RAIL-FASTENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 762,703, dated June 14, 1904.

Application filed March 28, 1904. Serial No. 200,420. (No model.)

*To all whom it may concern:*

Be it known that I, OLE GRANBERG, a citizen of the United States, residing at Blair, in the county of Trempealeau and State of Wisconsin, have invented a new and useful Rail-Fastening Device, of which the following is a specification.

This invention relates to devices for fastening railroad-rails upon wooden ties without the use of spikes and in such a manner that a connection of perfect security may be established between the rails and the ties in a rapid and convenient manner, the fastening being of such a nature that rails secured thereby may be conveniently detached and replaced without injury to the ties by drawing and replacing the spikes.

The invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being understood, however, that various changes and modifications may be made in the construction thereof within the scope of the invention and without departing from the spirit or sacrificing the advantages of the same.

In said drawings, Figure 1 is a top plan view showing one end of a railroad-tie equipped with my improved rail-fastening device. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a vertical transverse sectional view. Fig. 4 is a perspective view illustrating the members of my improved rail-fastening device. Fig. 5 is a top plan view showing a modified form of my improved rail-fastening device applied to the ends of a tie. Fig. 6 is a vertical sectional view taken on the line 6 6 in Fig. 5. Fig. 7 is a sectional detail view taken on the line 7 7 in Fig. 5. Fig. 8 is a perspective detail view of the parts disassembled.

Corresponding parts in the several figures are indicated by similar numerals of reference.

The improved rail-fastening device may be described as consisting, essentially, of two clamping members, which may be designated as

the "stationary" clamping member 1 and the "movable" clamping member 2. The member 1 consists, essentially, of a plate bent or doubled upon itself, so as to form a bottom part 3 and a top part 4, which former is provided with a slot 5, extending under the top part 4 and the latter being provided at its free edge with an overhanging flange 6', adapted to engage the flange of a rail. The ends of the prongs 6 which are separated by the slot 5 are bent or doubled upon themselves, the extremities of said prongs presenting shoulders 7, adapted to abut upon the outer edge of a rail-flange.

The movable clamping member 2 consists of a metallic plate of a thickness equal to that of the plate of which the stationary clamping member is constructed, said movable clamping member constituting a slide movable in the slot 5 between the prongs 6 6 and provided at its outer end with a hook member 8, adapted to engage and overhang the outer edge of a rail-flange.

In practice the stationary clamping member is secured in position upon the tie 9 by means of bolts 10, which extend through perforations 11 in the doubled portion of said clamping member, said bolts being also extended through a washer-plate 12, which is placed against the under side of the tie. In connecting these stationary clamping members with the railroad-tie care is to be taken to space them apart exactly the proper distance to maintain the gage when the inner side of the flange 13 of a rail 14 is placed in engagement with the overhanging flange 6' of each clamping member. To secure the rail in position, the movable clamping member 2 will be slid under the rail and under the upper part 4 of the stationary clamping member until the hook member 8 engages the outer edge of the rail-flange. A perforation 15 in the movable clamping member will then be in alinement with corresponding perforations 16 in the stationary clamping member, through which a screw or other fastening member 17 may be inserted into the tie. The rail in addition to being held between the flange 6' and the hook member 8 will be braced by the shoulders 7, formed by the doubled

extremities of the prongs 6 of the stationary clamping member.

It is obvious that a tie equipped with my improved rail-fastening device will be far more durable than one into which spikes are driven for the purpose of securing the rails in position thereon, for the reason that when once in position it need not be removed until the tie is no longer fit for use. It will also be obvious that the rails will be held with a much greater degree of security than they could possibly be held by means of spikes and that readjustment or renewal of the rails may be much more easily and accurately effected than where spikes have to be removed and replaced for this purpose.

In Figs. 5 to 8, inclusive, has been illustrated a modified form of the invention whereby the gage of the rails may be conveniently and quickly adjusted. It is well known that owing partly to the pressure of the wheel-flanges of the rolling-stock upon the inner sides of the rails and partly to wear and other causes the rails at times are apt to spread apart or the distance between the inner sides of the rail-heads is apt to be increased, thereby necessitating resetting of the rails, which in order that this may be accomplished require to be loosened and their position shifted upon the ties. In order that this may be accomplished in a simple and convenient manner and without injuriously affecting the ties, I have devised an improvement which consists in providing the stationary member of the fastening device, which in Figs. 5 to 8, inclusive, has been designated 1<sup>a</sup>, with rectangular openings 2<sup>a</sup>, having downwardly-beveled edges 3<sup>a</sup> for the reception of metallic blocks 4<sup>a</sup>, in which perforations 5<sup>a</sup> are formed for the passage of bolts 7<sup>a</sup>. These perforations are formed a little to one side of the longitudinal blocks 4<sup>a</sup>. The latter are inserted into the openings 2<sup>a</sup> from the under side of the plate or stationary member and are therefore not liable to displacement from any cause. When the rails are first laid, the blocks 4<sup>a</sup>, having the perforations 5<sup>a</sup>, which said blocks being inside of the track-rails, are so disposed that the perforations shall be located at the greatest distance from the adjacent rails. The rails will thus be spaced apart exactly sufficient to form the proper gage. When for any reason the rails expand and the gage becomes broadened, it will be only necessary to remove the nuts 6<sup>a</sup> from the bolts 7<sup>a</sup>, by means of which the stationary member 1<sup>a</sup> and the blocks 4<sup>a</sup> are secured. The members 1<sup>a</sup> may then be lifted until the beveled-edged blocks may be reached and reversed, thus bringing the perforations therein closer to the rails. The members 1 may be readily restored to position, owing to the beveled contour of the edges of the blocks 4<sup>a</sup> and the recesses for the reception of said blocks, and the nuts are then replaced upon the bolts and tightened, thus drawing the rails in an inward

direction. This operation may be performed first at one side of the track and later on, if necessary, at the other side of the track, thus enabling inaccuracies in the gage to be corrected. When this modified form is used, it becomes necessary to substitute for the screw 17, which connects the stationary member 1 and the movable member 2 with the tie, a set-screw 8<sup>a</sup>, which works in a threaded perforation in the stationary member and bears upon the movable member, here designated 9<sup>a</sup>. Said movable member may also be formed with an upturned shoulder 10<sup>a</sup>, engaging the edge of the stationary member, in which case the set-screw may be omitted.

As will be seen from the foregoing description, this device in either of its forms is simple, inexpensive, and an important advantage resides in the facility with which the rail-fastenings may be inspected and maintained.

Having thus described my invention, I claim—

1. A rail-fastening device consisting of a stationary member having a longitudinal slot, an upper part provided with an overhanging flange, and prongs adjacent to the slot and doubled upon themselves to form shoulders facing the overhanging flange, a member movable in the slot of the stationary member and having a hooked portion facing the overhanging flange of said stationary member, means for securing the latter with relation to a supporting-tie, and means for securing the movable member with relation to the stationary member and to the tie.

2. A rail-fastening device consisting of a longitudinally-slotted plate having a doubled portion provided with an overhanging flange, a movable member slidable in the slot of the stationary member and having a hook member facing the overhanging flange of the stationary member, a supporting-tie, bolts extending through the latter and through the doubled portion of the stationary member, and means for securing the movable member in operative relation to the stationary clamping member and the supporting-tie.

3. In a rail-fastening device comprising two members having oppositely-faced hooks or clamps to engage the rail-flange, means for securing one of said members with relation to a supporting-tie, said means including blocks, reversible end for end in openings in one of said members, and having perforations forming bolt-passages disposed to one side of the longitudinal center thereof.

4. A rail-fastening device consisting of rail-engaging members, one of said members having rectangular slots, and blocks fitted in said slots and having perforations forming bolt-passages disposed to one side of the longitudinal center of said blocks.

5. A rail-fastening device consisting of rail-engaging members, one of said members being provided with rectangular slots having

downwardly-beveled edges, in combination  
with beveled-edged blocks seated in said slots  
and having perforations forming bolt-pas-  
sages disposed to one side of the longitudinal  
5 center of said blocks, and bolts extending  
through said perforations and through a sup-  
porting-tie.

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in  
the presence of two witnesses.

OLE GRANBERG.

Witnesses:

E. F. HENSEL,

OLE H. GRANBERG.