

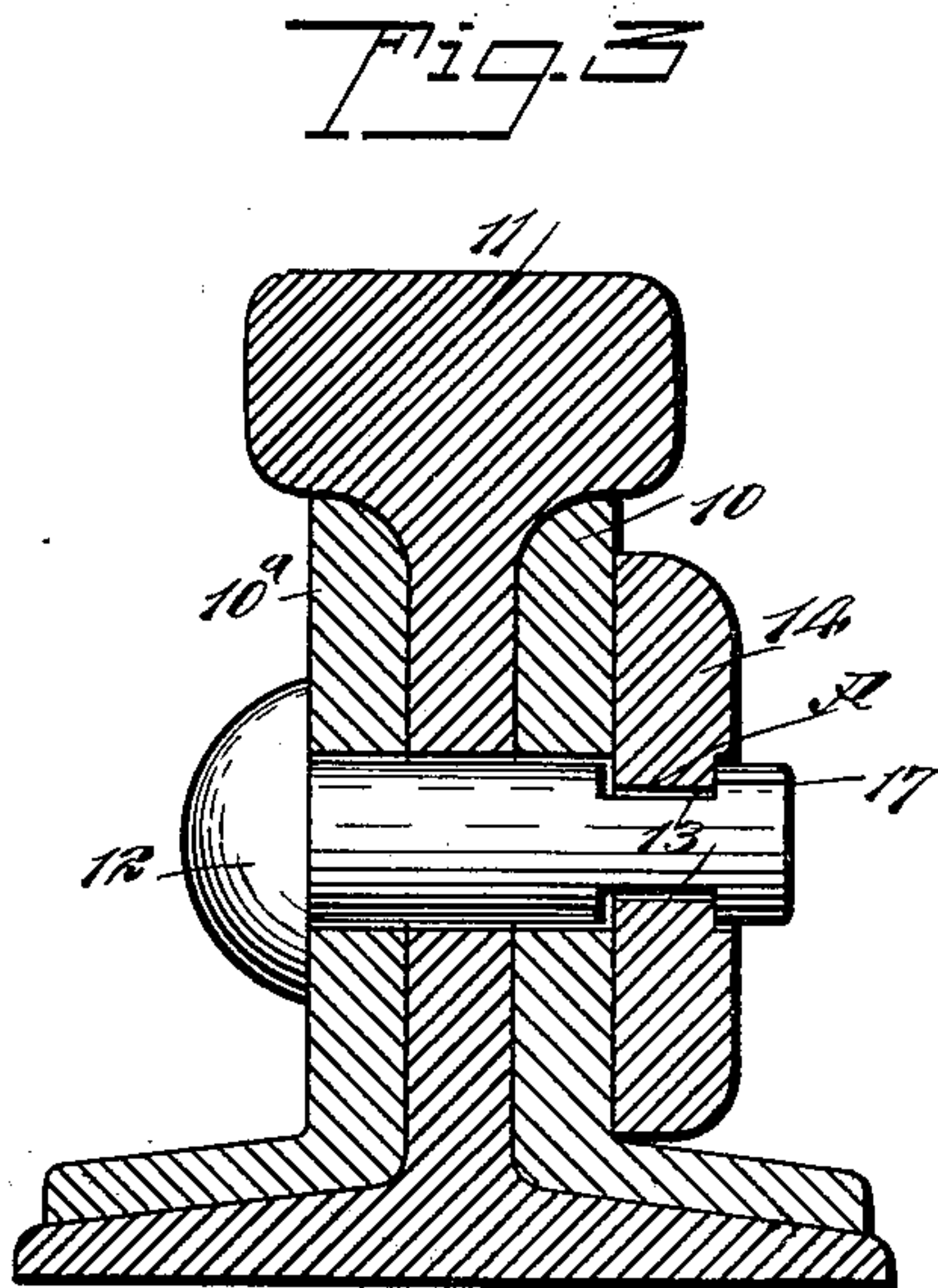
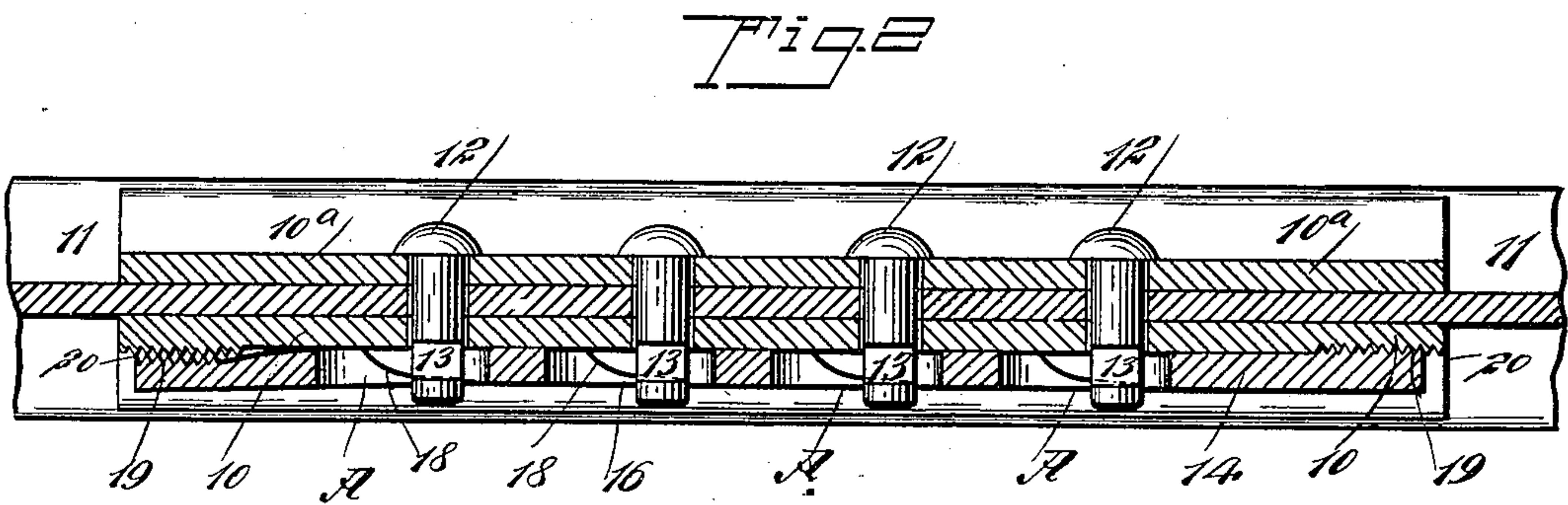
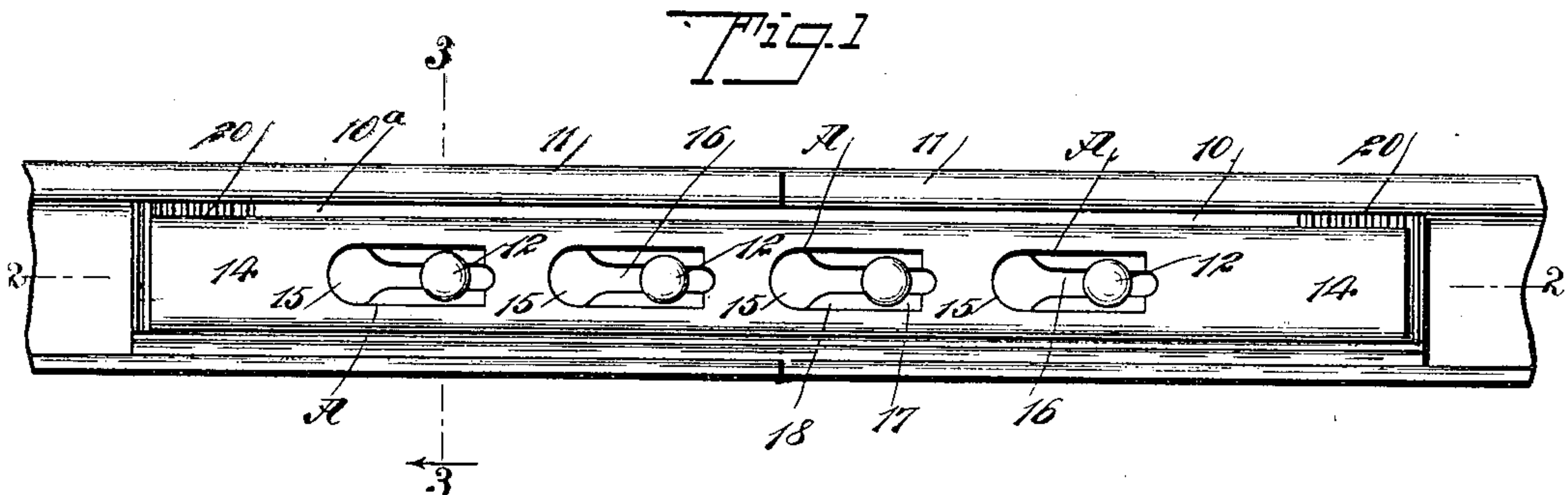
No. 653,532.

Patented July 10, 1900.

F. W. SCHIMMEL, Dec'd.
A. B. SCHIMMEL, Administratrix.
FASTENING FOR RAIL JOINTS.

(Application filed Dec. 12, 1899.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

ANNIE B. SCHIMMEL, OF PORTLAND, OREGON, ADMINISTRATRIX OF
FREDERICK W. SCHIMMEL, DECEASED, ASSIGNOR TO MAURICE S.
DEAN, OF PARKERSBURG, WEST VIRGINIA.

FASTENING FOR RAIL-JOINTS.

SPECIFICATION forming part of Letters Patent No. 653,532, dated July 10, 1900.

Application filed December 12, 1899, Serial No. 740,060. (No model.)

To all whom it may concern:

Be it known that I, ANNIE B. SCHIMMEL, a citizen of the United States, and a resident of Portland, in the county of Multnomah and State of Oregon, administratrix of the estate of FREDERICK W. SCHIMMEL, deceased, late a citizen of the United States, and a resident of St. Peter, in the county of Nicollet and State of Minnesota, who did in his lifetime
10 invent certain new and useful Improvements in Fastenings for Rail-Joints, do hereby declare the following to be a full, clear, and exact specification of the invention.

The invention relates to an improved fastening for railway-joints, and has for one object to provide a means whereby angle-bars may be securely held in connection with the rail-sections without employing nuts or nut-locks upon the track-bolts.

20 A further object of the invention is to provide a plate capable of accomplishing this result and of simple and economic construction which may be readily and expeditiously applied and as readily detached when occasion may demand.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

30 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of sections of a rail connected by the improved device. Fig. 2 is a horizontal section, taken practically on the line 2 2 of Fig. 1; and Fig. 3 is a transverse section through a portion of a rail and the fastener, the section being drawn on an
40 enlarged scale and on the line 3 3 in Fig. 1.

Angle clamping-bars 10 and 10^a are placed in contact with each side face of the web-section of the rails 11 to be connected, and the said rails and angle clamping bars or plates
45 are provided with apertures through which bolts 12 are passed. The said bolts are provided near the extremity upon which the nut-lock is usually secured with a transverse recess 13 upon opposite sides, which recesses
50 are located one above the other, producing a

reduced section. (Illustrated best in Fig. 3.) When the angle clamping bars or plates are in position at opposite sides of the rail-sections to be connected, they are entirely concealed when viewed from above by the head 55 or tread of the rails.

A locking-plate 14 is used in connection with the angle clamping bars or plates, and the said locking-plate 14 consists of a strip, preferably of malleable metal and usually of 60 a length corresponding to the length of the angle plates or bars 10 and 10^a, and in said locking-plate 14 a series of longitudinal openings A is produced, the major portion of each of which openings is in the form of a slot, as 65 shown in Figs. 1 and 2, one end of the opening having circular walls, as illustrated at 15 in Fig. 1, whereby the openings partake substantially of the contour of a buttonhole. The outer surface of the locking-plate 14 at 70 each longitudinal side of the slot-sections 16 of the openings A is chamfered or recessed in such manner that an end of the shoulder 17 thus formed will descend rapidly from a point at or near the slot-section 16 to the intersection 75 of said section with the circular portion 15 of the opening A, so that inclined planes are produced at the top and bottom of the openings A, as is best shown in Fig. 1.

From the commencement of the rapid decline (designated as 18 in the drawings) the shoulders bordering the slotted sections 15 are gradually carried upward in direction of the end walls of the openings, as indicated in Fig. 2, which slight incline loses itself in the 85 body of the plate. The end walls of the openings A, where the shoulders 17 meet the outer face of the locking-plate, may be given any desired contour.

Each extremity of the plate is provided with 90 teeth or serrations 19 upon its inner face, as is best illustrated in Fig. 2, and these teeth or serrations are adapted to have meshing engagement with the teeth or serrations 20, formed upon the outer face of each extremity 95 of the angle-bar 10, engaged by the locking-plate in forming the joint; but the serrations or teeth on the locking-plate are so inclined at each end that when the teeth or serrations at one end of the locking-plate are in locking 100

engagement with corresponding teeth or serrations on the angle clamping-plate 10 the teeth or serrations 19 at the opposite ends of the locking-plate will be out of mesh with the corresponding teeth 20 on the angle-plate 10, as shown in Fig. 2. Consequently when the locking-plate is in locking position should a car be derailed and the wheels strike an end of the locking-plate 14 and force the meshing teeth out of engagement the teeth at the opposite end of the locking-plate will be immediately brought in mesh with the teeth or serrations on the angle-bar 10, thus preventing the locking-plate from becoming disengaged from the bolts 12.

In operation, the angle-bars having been placed in position upon the rail-sections, the bolts are passed through the angle-bars and rails, with one recess 13 uppermost and the other facing downward. The locking-plate is then placed in engagement at its ends with the angle-bar 10 in such manner that the recessed end of each bolt will pass through one of the circular portions in the openings A in the said locking-plate. I will here state that when forming the locking-plate 14 the inner face may be arched, so that when the said plate is placed in contact with the angle-bar 10 and is to be driven to the locked position the extremities of the locking-plate only will contact with the said angle-bar 10, the intermediate portion being bowed outward therefrom; but usually the locking-plate is straight, as illustrated. When the locking-plate is thus placed in its initial or first position, the lower end of the rabbeted surfaces 18 of the openings A will enter the recesses 13 of the bolts. When the locking-plate is forced to its locked position by driving one end—the end opposite the inclined surfaces 18—with a spike-maul or other suitable tool, the inclined surfaces 18 of the locking-plate are forced through the recesses 13 in the bolts, and as the upper surface of the inclined plane is reached the locking-plate will have been forced to a rigid contact at every point in its length with the contiguous angle-bar 10, as shown in Fig. 2, and the toothed surfaces 19 of the locking-plate will have contact with

the toothed surfaces of the angle-bar 10 in the manner heretofore described. By this construction it will be readily observed that the use of a nut and nut-lock is dispensed with and that the angle-bars at the points of the rail-sections are effectually and positively tied thereto. It will be further observed that the locking-plate cannot be loosened by any vibration or wave in the rails and can only be detached by violently and repeatedly striking one of its extremities and driving the said plate to its initial or first position.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A locking device for railway-rails, comprising an angle-bar having two sets of teeth, and a locking-plate having means for engaging bolts and also having two sets of teeth, the teeth of the plate being so related to the teeth of the bar that when adjacent sets of teeth of the plate and bar are in mesh the other sets of teeth will be out of mesh, substantially as shown and described.

2. The combination, with a railway locking-plate constructed of metal, having its inner face at its extremities provided with a series of teeth or serrations, said plate being also provided with a series of longitudinal openings between its ends, each of which openings comprises an elongated section and a circular section, the outer surface of the plate adjacent to the elongated sections of the openings being downwardly beveled in direction of the circular sections, of bolts adapted to pass through the said openings and provided with alining recesses formed in opposite faces, and an angle-bar recessed to receive the bolts and provided with teeth adapted for engagement with the toothed surfaces of the locking-plate, all combined for operation substantially as and for the purpose specified.

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Witnesses:

JULIA MAXWELL,
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