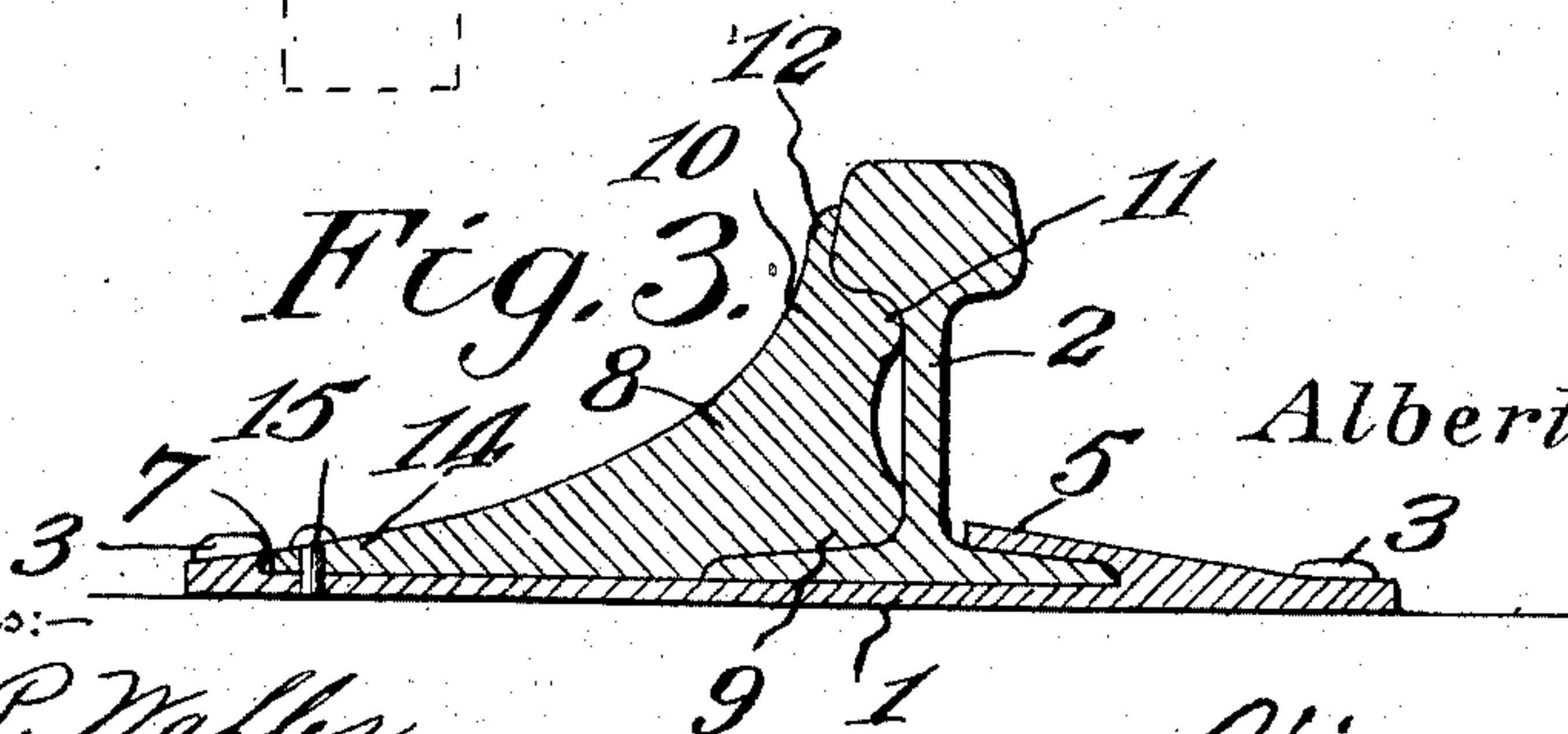
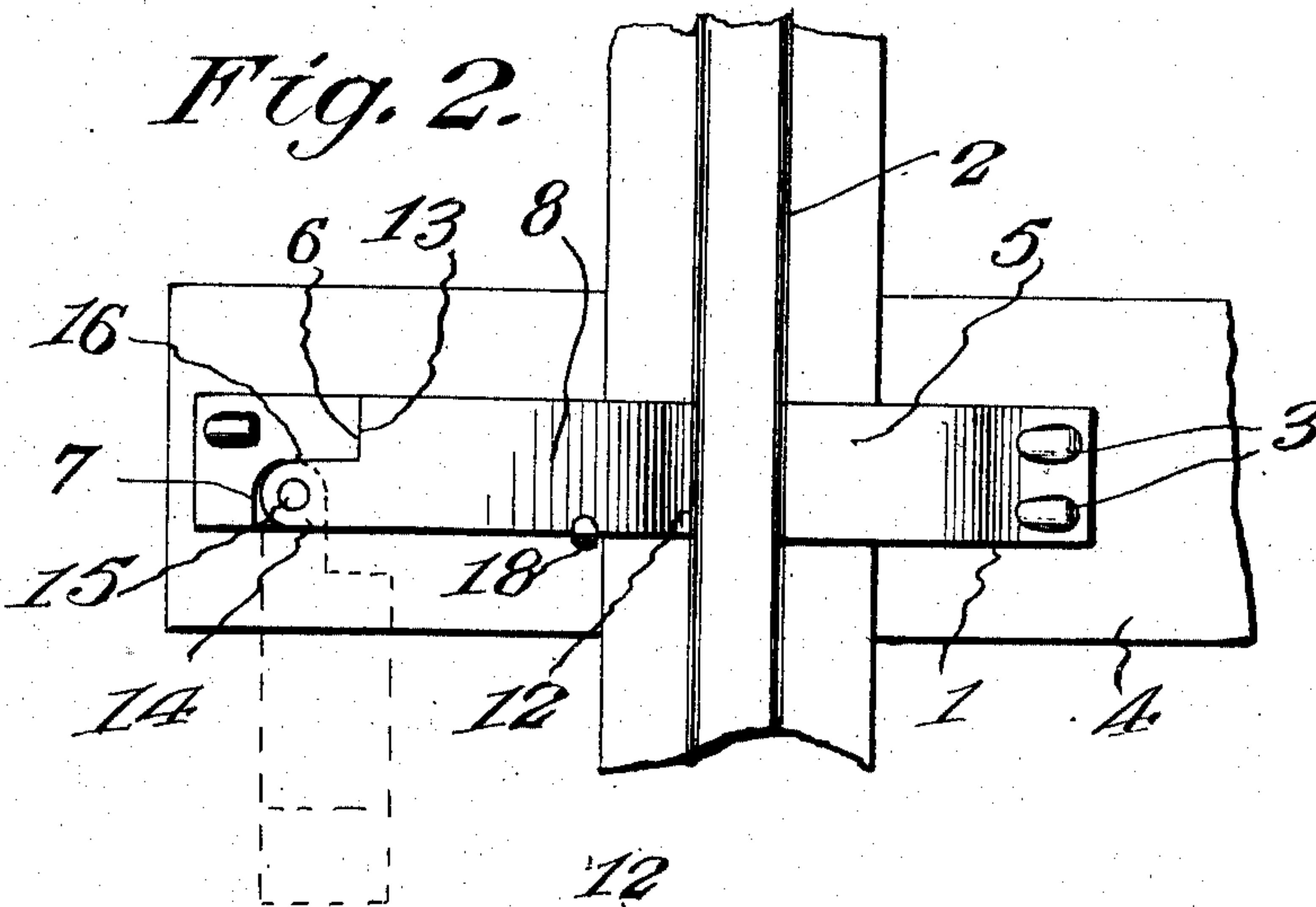
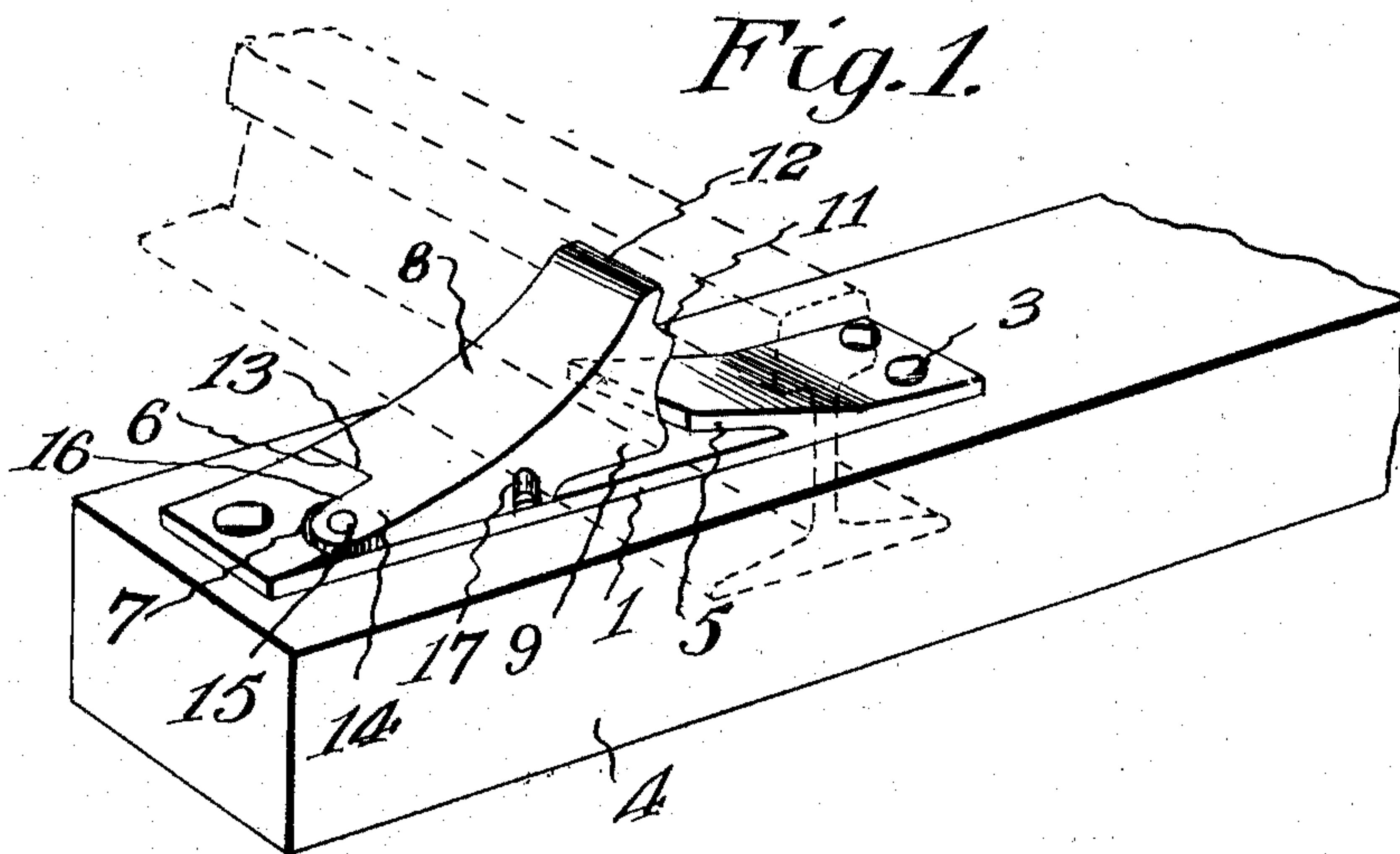


A. F. SHANER.
RAIL CLAMP AND BRACE.
APPLICATION FILED MAR. 4, 1908.

909,032.

Patented Jan. 5, 1909.



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UNITED STATES PATENT OFFICE.

ALBERT F. SHANER, OF MUNCY VALLEY, PENNSYLVANIA.

RAIL CLAMP AND BRACE.

No. 909,032.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed March 4, 1908. Serial No. 419,202.

To all whom it may concern:

Be it known that I, ALBERT F. SHANER, a citizen of the United States, residing at Muncy Valley, in the county of Sullivan and State of Pennsylvania, have invented new and useful Improvements in Rail Clamps and Braces, of which the following is a specification.

This invention relates to improvements in railway rail fasteners of the clamp type, the primary object of the invention being to provide a simple and effective construction of rail securing means embodying relatively fixed and movable clamps, the movable clamp being adapted to bear against the outer side of the rail and to brace the same throughout the greater portion of its vertical extent, thereby preventing outward movement of the rail relative to its companion rail and the consequent tendency of the rails to spread under pressure.

Another object of the invention is to provide clamping means which may be associated with a chair or bed plate forming a support for the rail or with a metallic tie, and in which the outer or movable rail clamp is pivotally mounted to swing laterally into and out of engagement with the rail to permit ready application and removal of the rail, and which when moved into clamping position will be firmly braced by the bed plate.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a perspective view showing a combined rail chair and fastener embodying my invention, a rail being indicated in position to be clamped in dotted lines. Fig. 2 is a top plan view of the same with the rail appearing in full lines. Fig. 3 is a cross-sectional view through the rail and clamp.

Referring to the drawings, the numeral 1 designates a base plate adapted to extend under the base of a rail 2 and form a seat-support therefor, said plate being of sufficient length to extend some distance beyond the opposite sides of the rail and being provided in its end portions with openings for the passage of spikes or other suitable fasteners 3 to secure the plate to an ordinary tie or keeper 4, on which the plate rests, as shown. The rail clamping devices are carried by the plate, which, in connection

therewith, forms a combined chair and fastener, two of which are designed in practice to be applied to each tie for supporting and fastening the two rails of the track, but it will, of course, be understood that the clamping devices may be mounted upon an ordinary metallic tie. In the use of the term "bed plate" I therefore wish it to be understood that such term is to be construed as meaning either a chair plate of the type particularly shown, the top plate of a metallic tie, or any other suitable equivalent base support. One end of the plate is formed with an integral clip 5 to project over upon the inner flange or side of the base of the rail and which is shaped to conform thereto, while the other end of the plate is provided upon one side of its center with an upstanding lug or projection forming a bracing shoulder 6, and is formed on the opposite side of the center with a recess 7.

A movable clamp or clip 8 is employed to bear against the outer side of the rail. The lower portion 9 of this clip or clamp corresponds in general shape to the clip 5 and is adapted to bear upon the opposite or outer side or flange of the base of the rail. The base of the clip 8 beyond the portion 9 is flat to rest upon the upper surface of the plate 1, while the inner end of the plate projects upwardly above the portion 9 in the form of an extension 10 having a shoulder 11 to bear against the outer side of the web of the rail and the underside of the head of the rail at their point of junction and to thus securely brace such parts of the rail as well as to brace and hold the rail against outward movement. The extreme upper end of the inner portion of the clamp is in the form of a bracing rib or lip 12 which bears against the outer face of the head of the rail and supplements the bracing action of the shoulder 11. The upper face of the clamp inclines or slopes downwardly toward the outer end of the clamp, which terminates in the form of a transverse shoulder 13 to engage the shoulder 6 and an outwardly extending tongue 14 adapted to fit and swing within the recess 7, the clamp being pivotally connected to the plate 1 by a pivot pin 15 carried by the plate so as to permit outward lateral movement of the clamp in one direction. The formation of the recess at one side of the lug or shoulder 6 provides a supplemental shoulder 16 arranged at right angles

to the shoulder 6 and in the direction of length of the plate 1. When the clamp 8 is in position to bear against the rail, the outer face of the shoulder 13 bears against the shoulder 6, while the inner face of the tongue 14 bears against the shoulder 16, thus bracing the clamp against outward movement and also against lateral movement in one direction. The outer side of the body of the clamp is formed with a recess 17 to receive the head of a spike or analogous fastening 18 driven into the tie, which head of the spike engages the upper surface of the plate 1 and assists in securing the same in position.

It will be understood from the foregoing description that after the plate 1 is fastened to the tie, the clamping member 8 is swung outward to permit the rail to be placed upon the plate 1 and engaged at one side with the clip 5, after which the clamp 8 is swung to closed position and secured by the spike 18, whereupon the rail will be firmly clamped to the bed plate and tie. When it is desired to remove the rail for the substitution of a new rail, the spike 18 is withdrawn and the clamp 8 swung outward, whereupon the old rail may be readily removed and the new one applied in its place. When the parts are in clamping position, it will be apparent that the rail will be held from movement both longitudinally and laterally in either direction and that the clamp 8 will hold the rail from outward movement against the pressures and strains

falling thereon, so that lateral displacement and spreading of the rails of the track will be prevented.

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

A rail support and fastener embodying a bed plate having at one end bracing shoulders arranged longitudinally and transversely of the plate and at right angles to each other and having a recess alongside said longitudinal shoulder, a clip upon said plate to engage one side of the base of the rail, a pivot pin on the plate projecting into the recess, a laterally swinging clip to engage the other side of the base of the rail, said swinging clip being adapted to rest upon the plate and provided with a shoulder to engage said transverse shoulders on the plate, and having a tongue pivotally mounted on said pin within said recess and adapted to bear against the other shoulder of the plate, the tongue and walls of the recess being formed to permit the tongue to swing within the recess, and suitable means independent of the pivotal connection for engaging the body of the swinging clip and securing said swinging clip in engaging position.

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

ALBERT F. SHANER.

Witnesses:

W. S. POUST,
WM. F. TAYLOR.