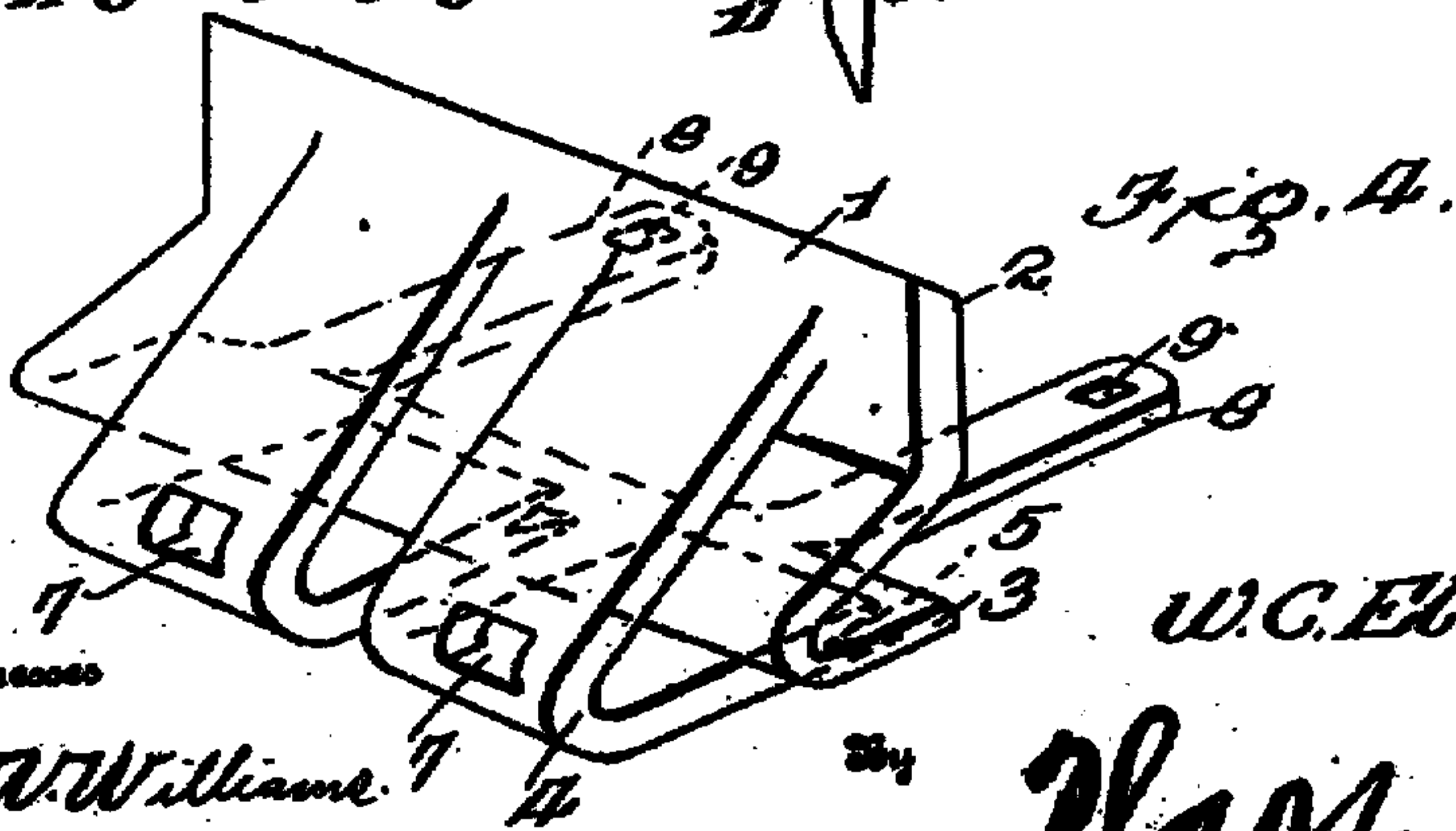
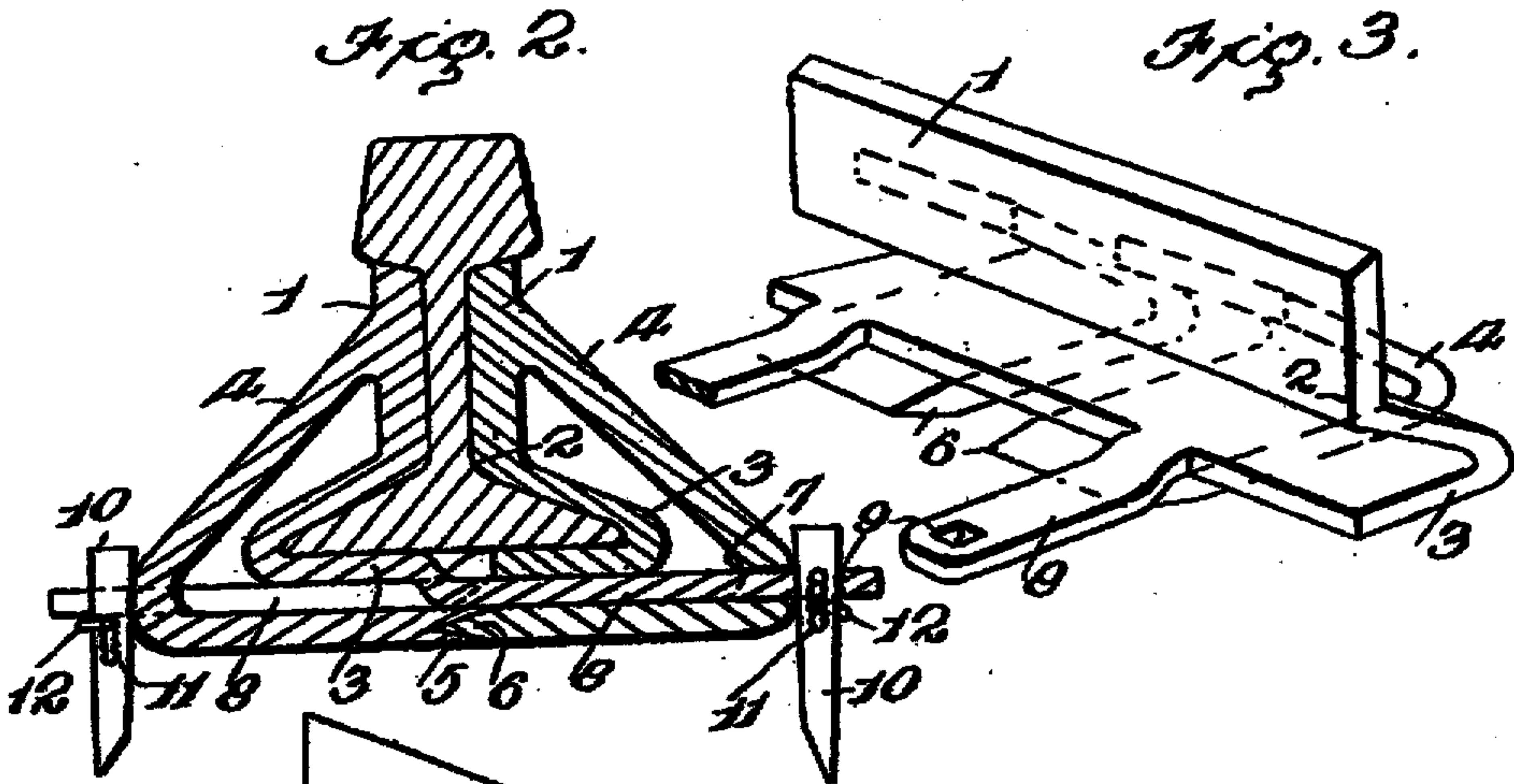
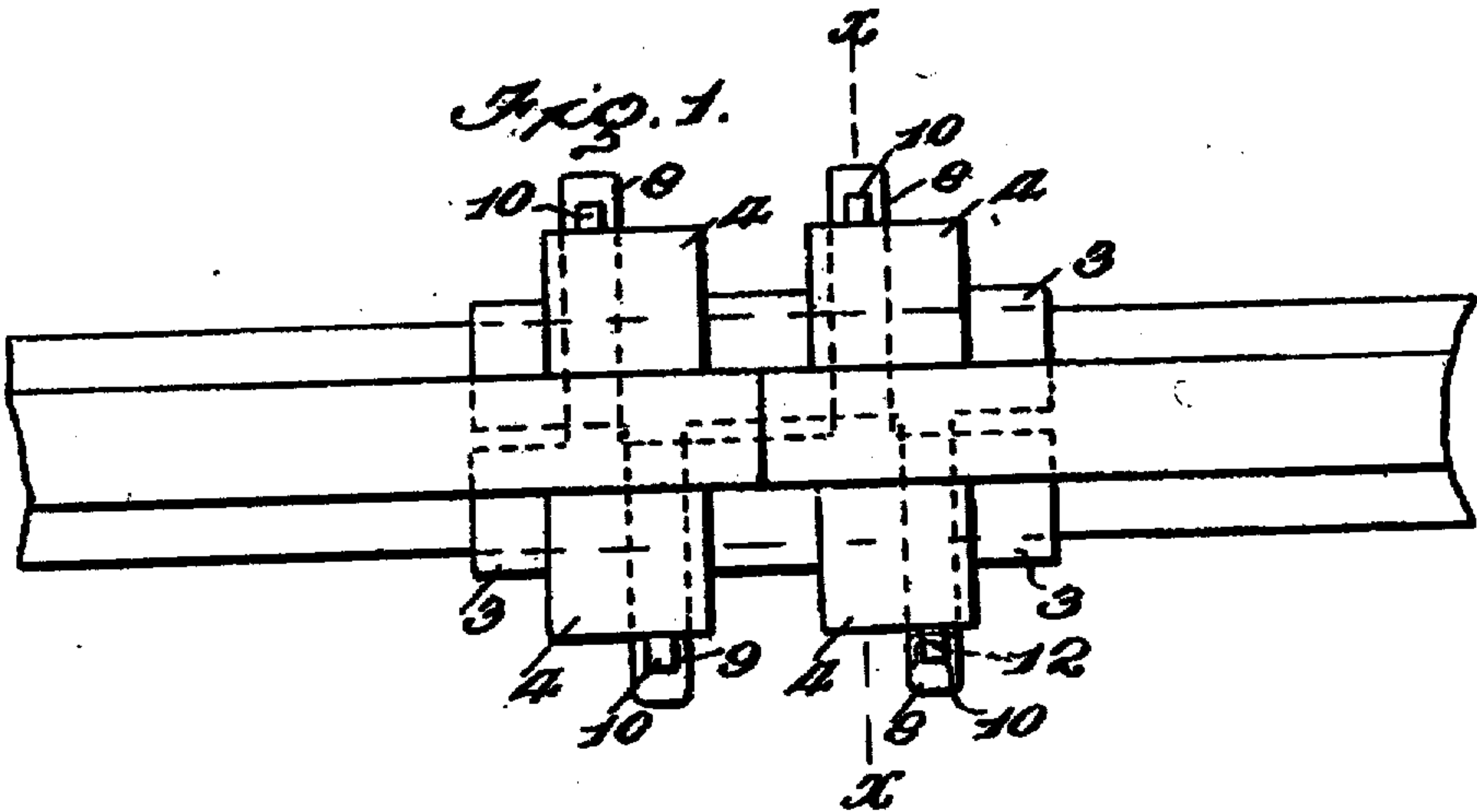


**APPLICATION FILED MAY 20, 1908.**

**Patented May 18, 1909.**

**921,965.**



## Inventory

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**Witness**

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# UNITED STATES PATENT OFFICE.

WILLIAM C. ELLIS, OF HOBART, OKLAHOMA.

## RAIL-END ANGLE-BAR.

No. 921,965.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed May 20, 1908. Serial No. 433,970.

*To all whom it may concern:*

Be it known that I, WILLIAM C. ELLIS, a citizen of the United States, residing at Hobart, in the county of Kiowa and State of Oklahoma, have invented certain new and useful Improvements in Rail-End Angle-Bars, of which the following is a specification.

This invention has for its object an improved construction of rail end angle bar or fastening device designed particularly for the abutting ends or joints of railway rails, and the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and to the accompanying drawing, in which latter:

Figure 1 is a top plan view of a rail fastener constructed in accordance with the principles of my invention; Fig. 2 is a transverse sectional view thereof on the line  $x-x$  of Fig. 1; Fig. 3 is a detail inner perspective view of one angle bar, a portion of one tongue being broken away; and, Fig. 4 is an outside perspective view of one of the angle bars.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out my invention, I provide a pair of my improved angle bars for each joint of the rails, said bars being designed to be applied to the opposite sides of the rails and securely clamped together by means hereinafter described so as to tightly hold the rails, and each of said angle bars is preferably an integral structure of cast or forged steel, or similar metal, the two bars of each pair being preferably formed in rights and lefts, for reasons that will hereinafter be made obvious.

Each angle bar comprises a preferably solid web engaging member 1 designed to fit against the web of the rails and preferably provided with beveled upper and lower faces 2 so that as the web engaging members are compressed against the side of the rails, they will enter with a wedge-like action between the head and base flange thereof. Each angle bar also embodies a base flange engaging member 3 which extends out from the web engaging member 1 and over and upon the upper surface of the base flange of the rail

and thence extends downwardly over the outer edge of said flange and inwardly underneath the rail, as clearly illustrated in the drawing.

In order to securely clamp these two angle bars together and to hold them compressed tightly against opposite sides of the rail ends and in order to also secure a very tight joint and a relatively broad bearing surface for the compressing members, I form each angle bar in the present instance with a pair of spaced jaws 4 that project outwardly and downwardly from the outer face of the web engaging member 1, and thence inwardly underneath the rails, to meet corresponding jaws of the opposite angle bar. The extremities of one pair of jaws are formed with grooves as indicated at 5, while the extremities of the opposite jaws are formed with tongues 6 to enter said grooves. Each jaw is also formed with a slot 7 and each angle bar is provided with a pair of spaced and inwardly extending tongues 8 that preferably project in substantial alinement with the jaws 4 and that project out from the edge of the base flange engaging member 3, the tongues of one angle bar being designed to project through the slots 7 that are formed in the jaws of the opposite bar. Each tongue 8 is formed with an opening 9 and the parts are so proportioned and arranged that when the inner extremities of the jaws 4 meet and abut against each other underneath the rails, the tongues 8 will project far enough through the slots 7 to admit of the partial insertion of locking wedges 10.

In the practical application of my improved angle bars, it will be understood that two of them are applied, a right and a left, at the abutting ends of the rails, with the web engaging members 1 fitting against the webs of the rails, and the members 3 engaging the flanges and extending underneath the rails. The parts are moved toward each other in this relation until the inner ends of the jaws 4 abut underneath the rails, whereupon it will be understood that the ends of the tongues 8 will project through the slots 7 far enough to expose a portion of the openings 9. The locking wedges 10 are then driven firmly into the openings 9, by a spike driving maul, or other tool, until the desired compression is obtained, it being understood that the jaws 4 are sufficiently yielding to permit the inward compression of the members 1 against the sides of the rails. After the de-



sired compression has been effected, the wedges 10 are securely locked in position by means of headed keys 12 that are driven through any one of a series of openings 11 5 formed in the wedges and are then bent or otherwise clenched in the wedges to prevent the accidental loosening or displacement thereof.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided a very simple, strong and light construction of rail end angle bar that may be easily applied to the 10 ends of railway rails and quickly secured in position to effect a forcible impression against the sides of the rails to hold them securely in place and in alinement with each other.

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

20 1. A rail fastener comprising a pair of angle bars, each angle bar embodying a web, a wedge engaging member, a pair of spaced jaws projecting first outwardly and thence inwardly and designed to extend under- 25 neath the rails, the extremities of one pair of jaws being designed for abutting engagement with the corresponding extremities of the opposite jaws, said jaws being formed

with slots, and a pair of inwardly extending spaced tongues formed on each angle bar and 30 designed to extend under the rails and to project through the slots in the opposite jaws, and means for holding said tongues in said slots.

2. A rail fastener comprising a pair of 35 angle bars, each of which embodies a wedge engaging member, a base flange engaging member, a pair of spaced jaws extending outwardly and thence inwardly, the extremities of said jaws being adapted to project 40 underneath the rails and designed to abut against the corresponding extremities of the jaws on the opposite angle bar, each of said jaws being provided with a slot, and a pair of spaced tongues projecting inwardly from the 45 inner edge of each base flange engaging member and designed to project through the slots in the opposite jaws, and means for holding said tongues in said slots.

In testimony whereof I affix my signature 50 in presence of two witnesses.

WILLIAM C. ELLIS. [L. S.]

Witnesses:

HENRY N. ELLIS,  
C. C. HOTCHKISS.