

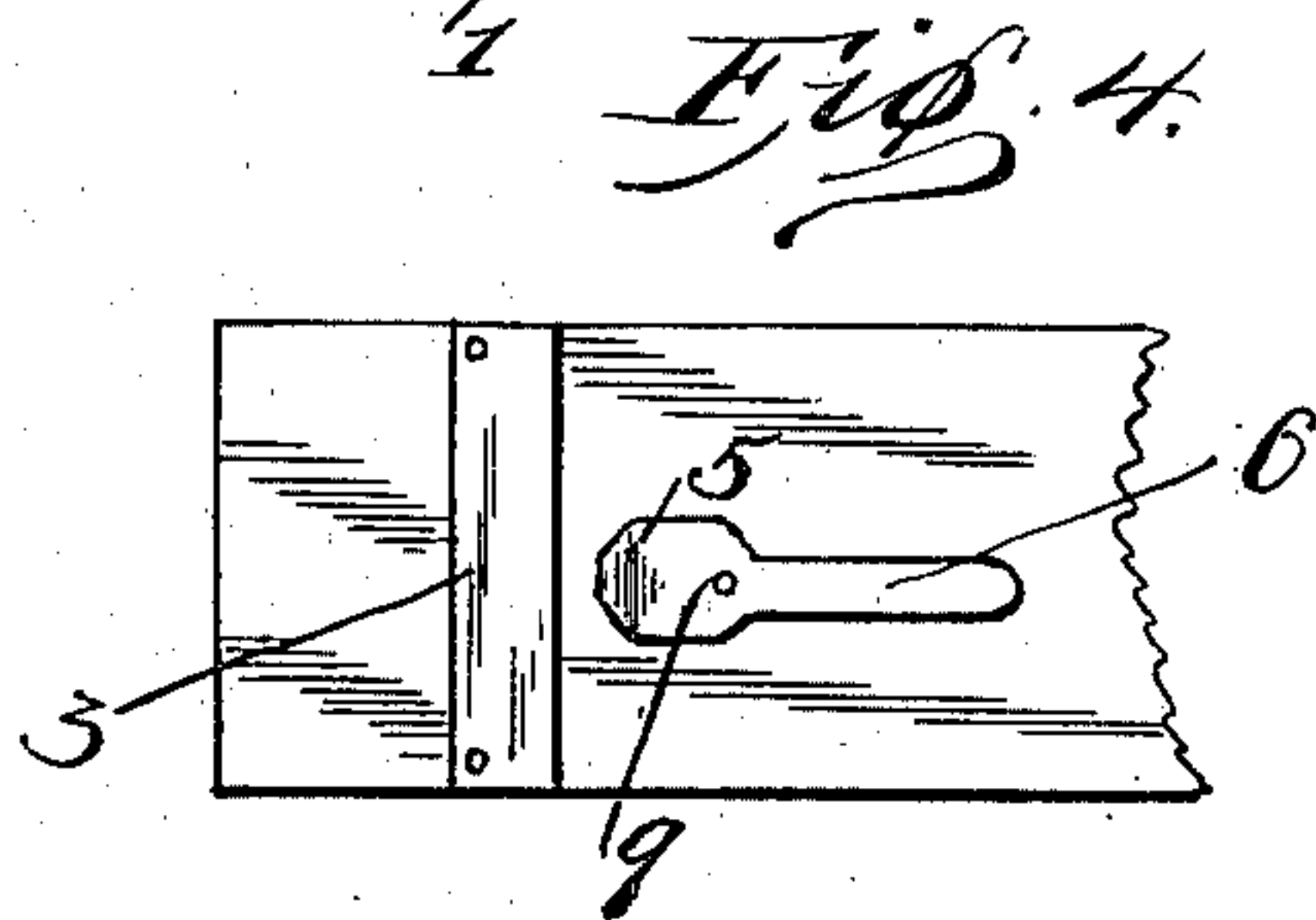
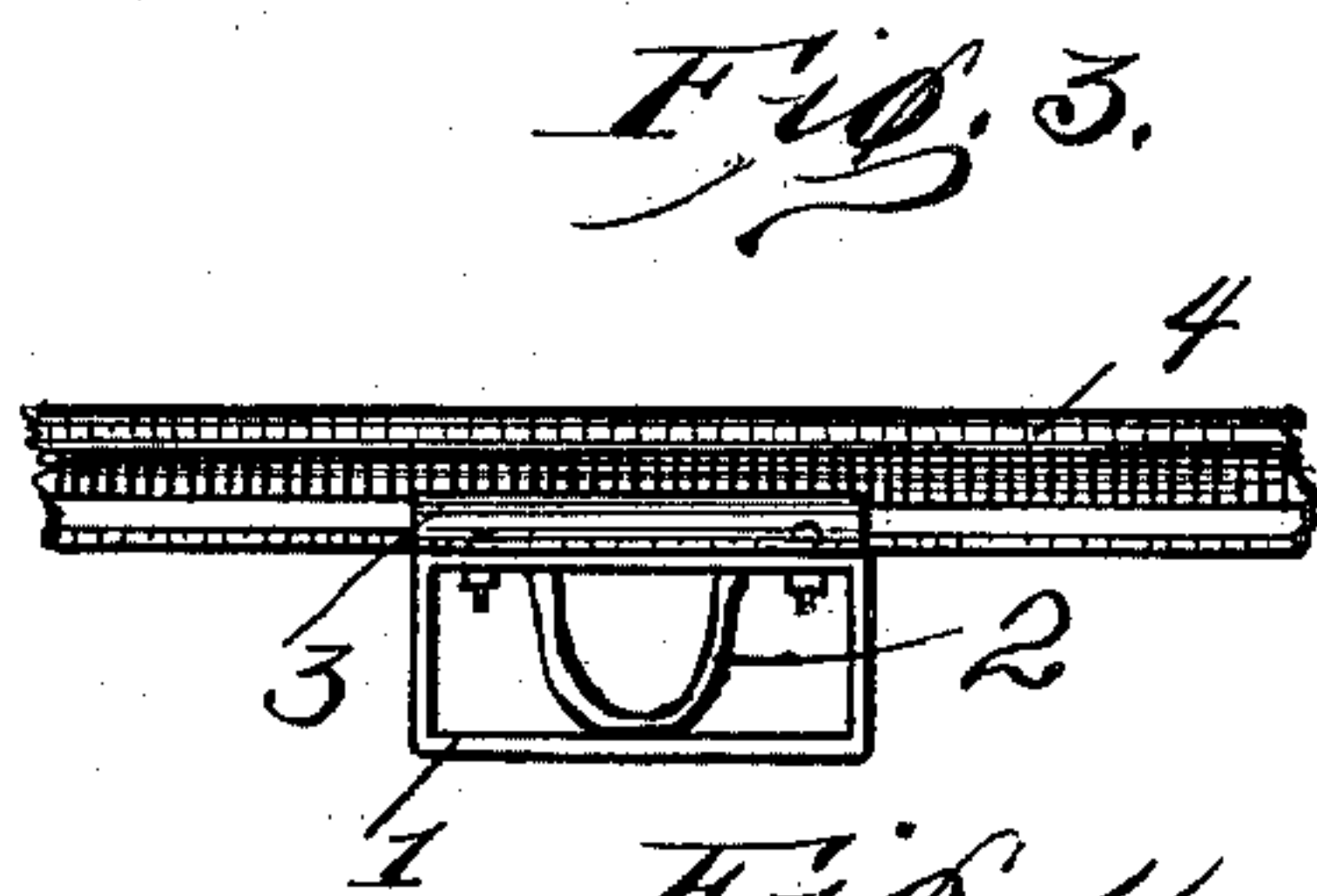
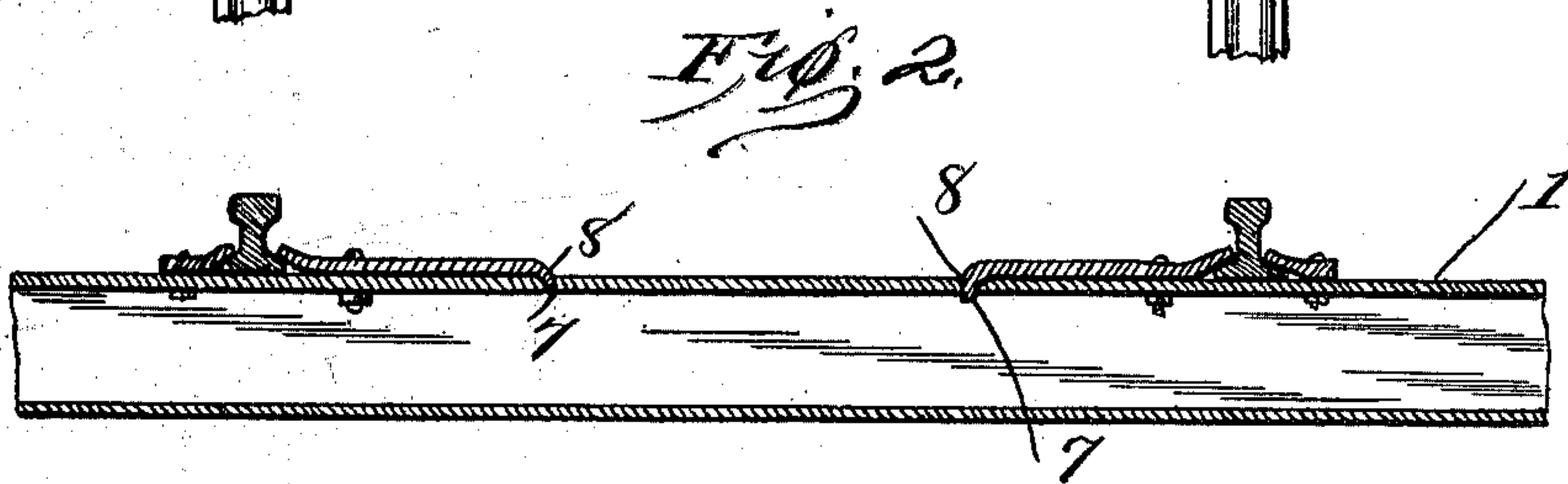
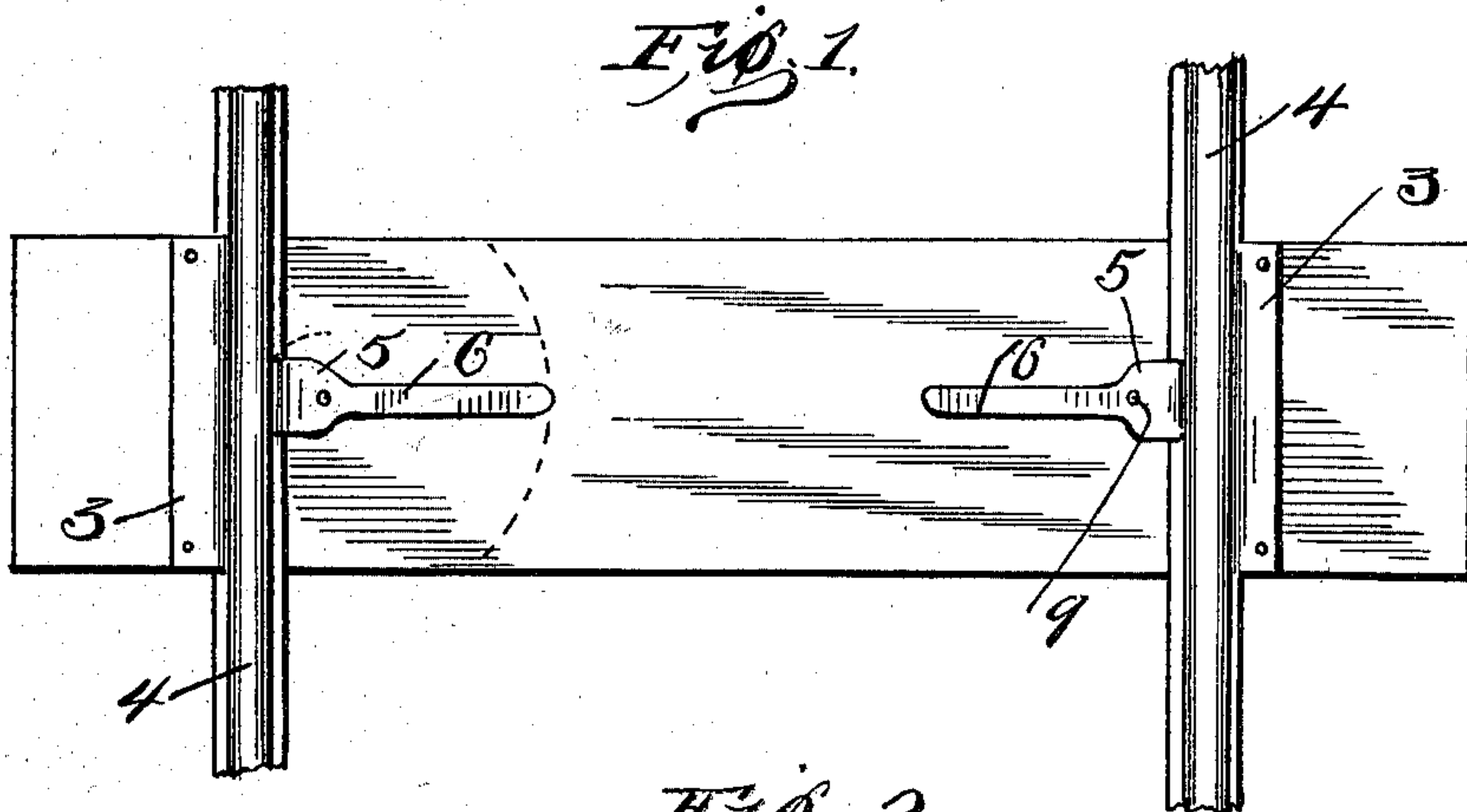
No. 733,104.

PATENTED JULY 7, 1903.

C. A. WILLS.
METALLIC TIE AND RAIL FASTENER.

APPLICATION FILED JAN. 8, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES A. WILLS, OF MCKEES ROCKS, PENNSYLVANIA.

METALLIC TIE AND RAIL-FASTENER.

SPECIFICATION forming part of Letters Patent No. 733,104, dated July 7, 1903.

Application filed January 8, 1903. Serial No. 138,196. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. WILLS, a citizen of the United States of America, residing at McKees Rocks, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in metallic ties and rail-fasteners, and has for its primary object the provision of novel means whereby rails may be easily secured to the ties and readily removed therefrom when desired.

A further object of the invention is to provide a device of the above-described character that will be extremely simple in its construction, strong, durable, and comparatively inexpensive to manufacture.

My invention broadly consists in providing a metallic tie with clamps which are rigidly secured thereto for the purpose of engaging the outer face of the rails; furthermore, to provide pivotally-secured operating-levers having formed integral therewith clamps to engage the inner face of the base of the rails, said levers when placed in proper position forming a locking engagement with the tie.

My invention still further consists in the novel construction, combination, and arrangement of parts, to be hereinafter more particularly described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a plan view of my improved tie and fastener. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a side elevation of one of the rails, showing an end elevation of the tie. Fig. 4 is a fragmentary plan view of a tie with the rail removed.

In the drawings the reference-numeral 1 indicates the metallic tie, which is interiorly provided with a U-shaped strengthening-plate 2, the upper face of the tie carrying clamps 3, which are rigidly secured thereto, these clamps serving to engage the outer face

of the rails 4, the inner faces of the rails being securely retained in position by means of the movable clamps 5, which carry resilient operating-levers 6, the free ends of these levers being bent downwardly, as shown at 7, and when placed in a locked position extend through suitable openings 8, formed in the upper face of the tie. The clamps 5 are pivotally attached to the ties, as shown at 9, and serve to securely fasten the rails.

The operation of my improved tie and fastener is as follows: The resilient operating-levers are placed in a position extending substantially in alinement with the rails. The latter are then inserted in position and the levers operated to a position as shown in Figs. 1 and 2 of the drawings. The free ends of the levers engage in the openings formed in the upper face of the ties, thereby locking the same in position. When it is desired to remove the rails, the ends of the levers are disengaged from the openings and the levers operated as indicated in dotted lines in Fig. 1 of the drawings, thereby releasing the rails.

Particular attention is directed to the fact that various changes may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A rail-fastener comprising a rigid clamp, a pivoted clamp and a resilient locking means carried by the last-named clamp.

2. In combination with the tie having an opening therein, of a pair of clamps, one of said clamps having a resilient end adapted to engage the opening of said tie.

3. The combination with the tie formed with an opening and the rail, of a fixed clamp engaging one face of the rail, a movable clamp engaging the other face of the rail, a resilient lever formed integral with the movable clamp, said lever having its free end bent downward, and normally engaging the opening of the said tie.

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

CHARLES A. WILLS.

Witnesses:

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