

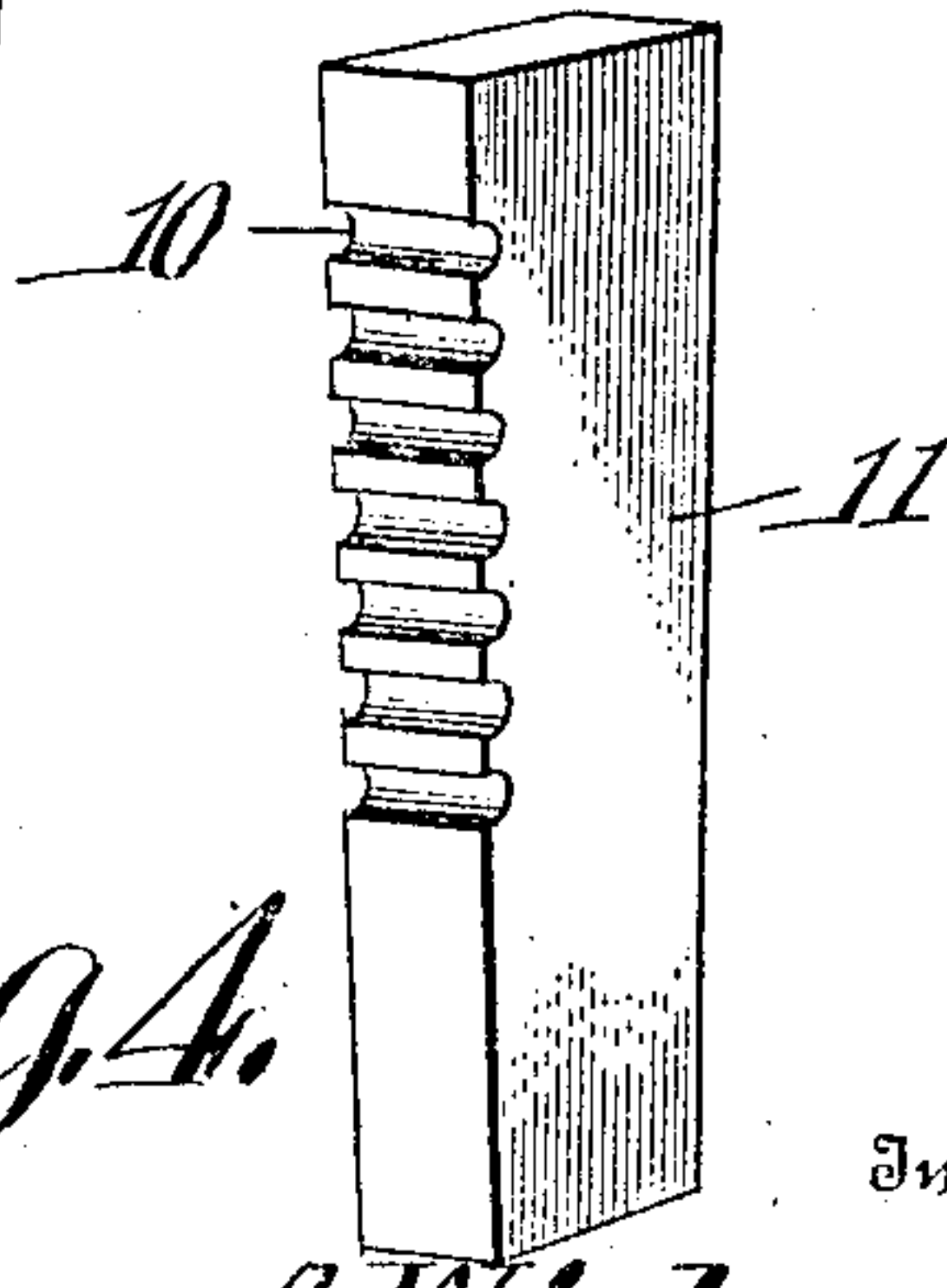
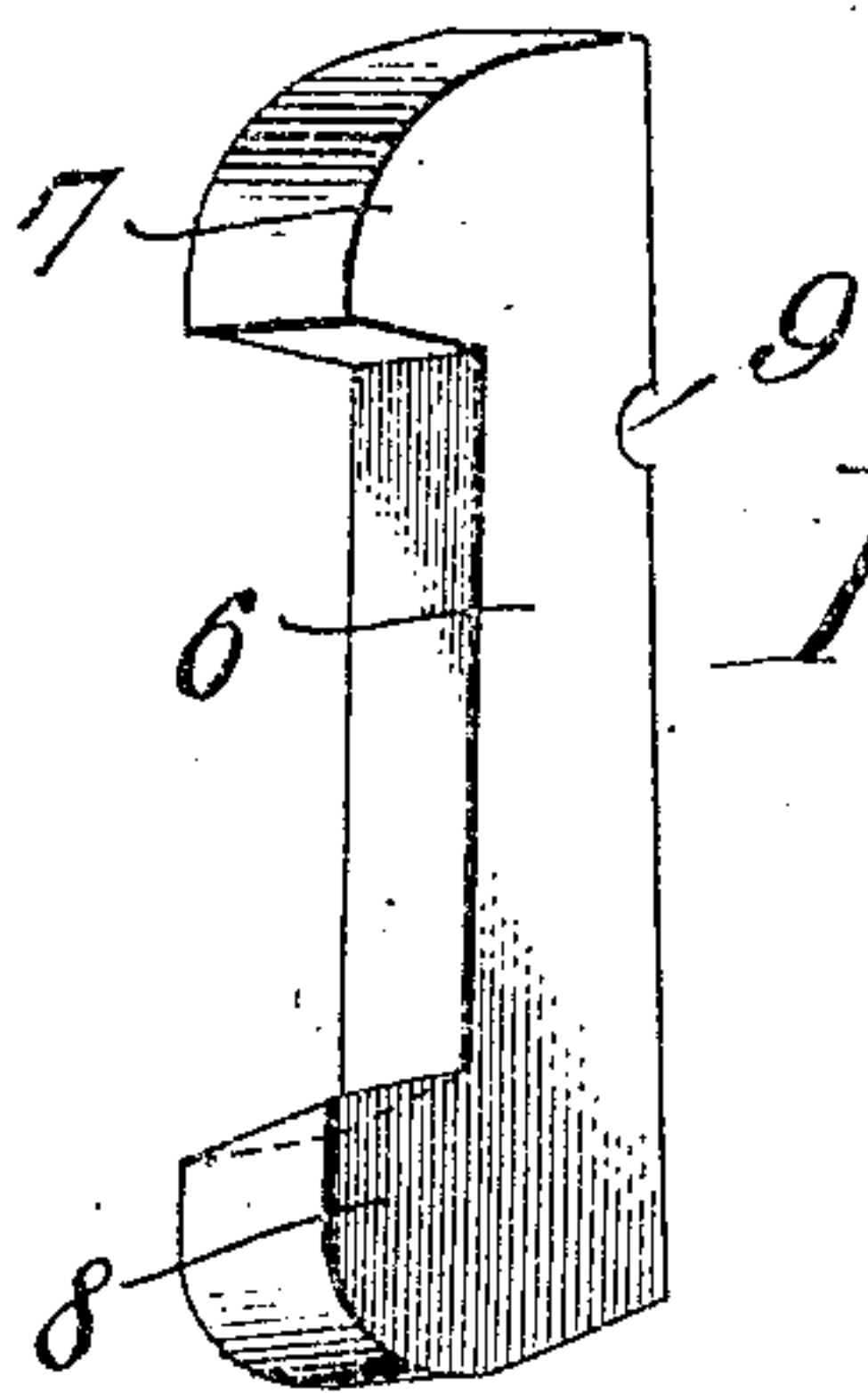
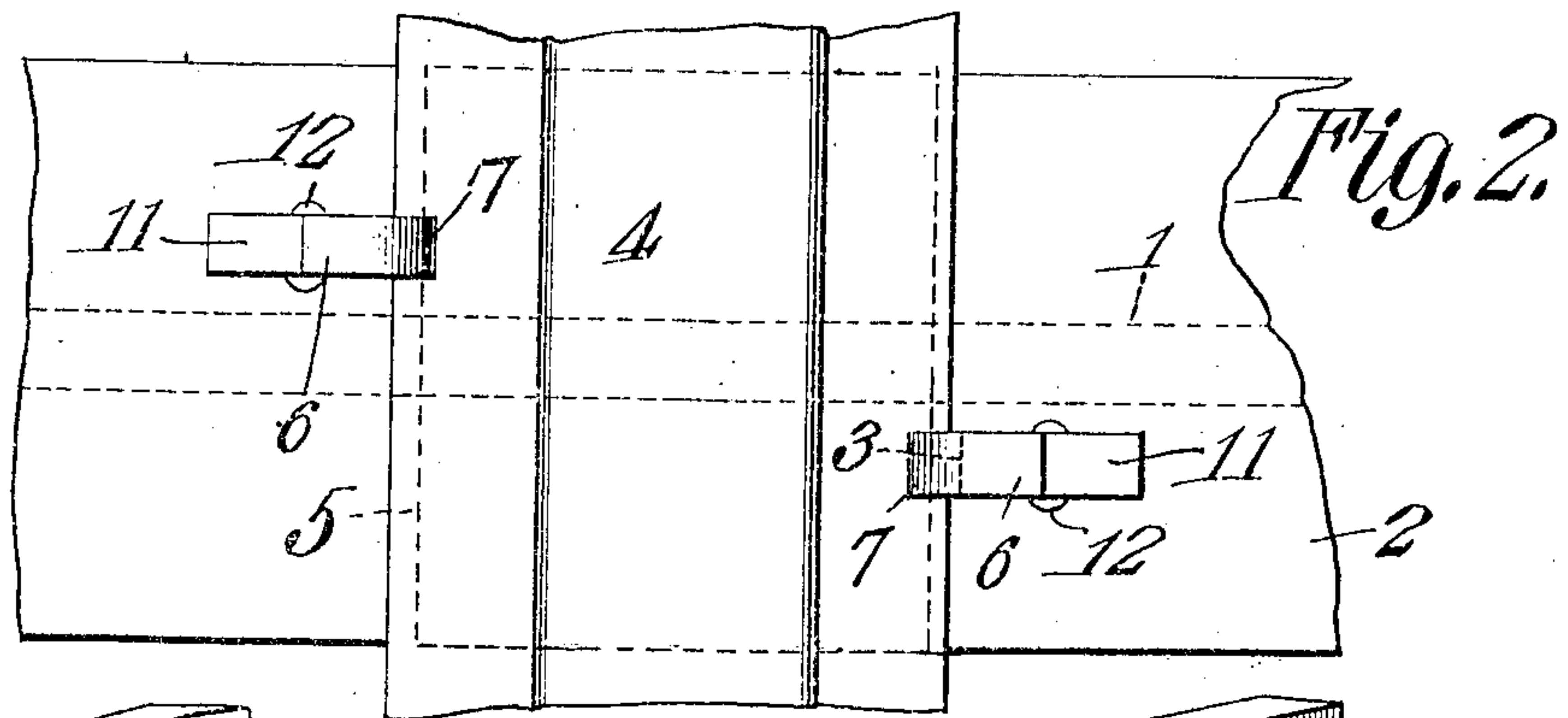
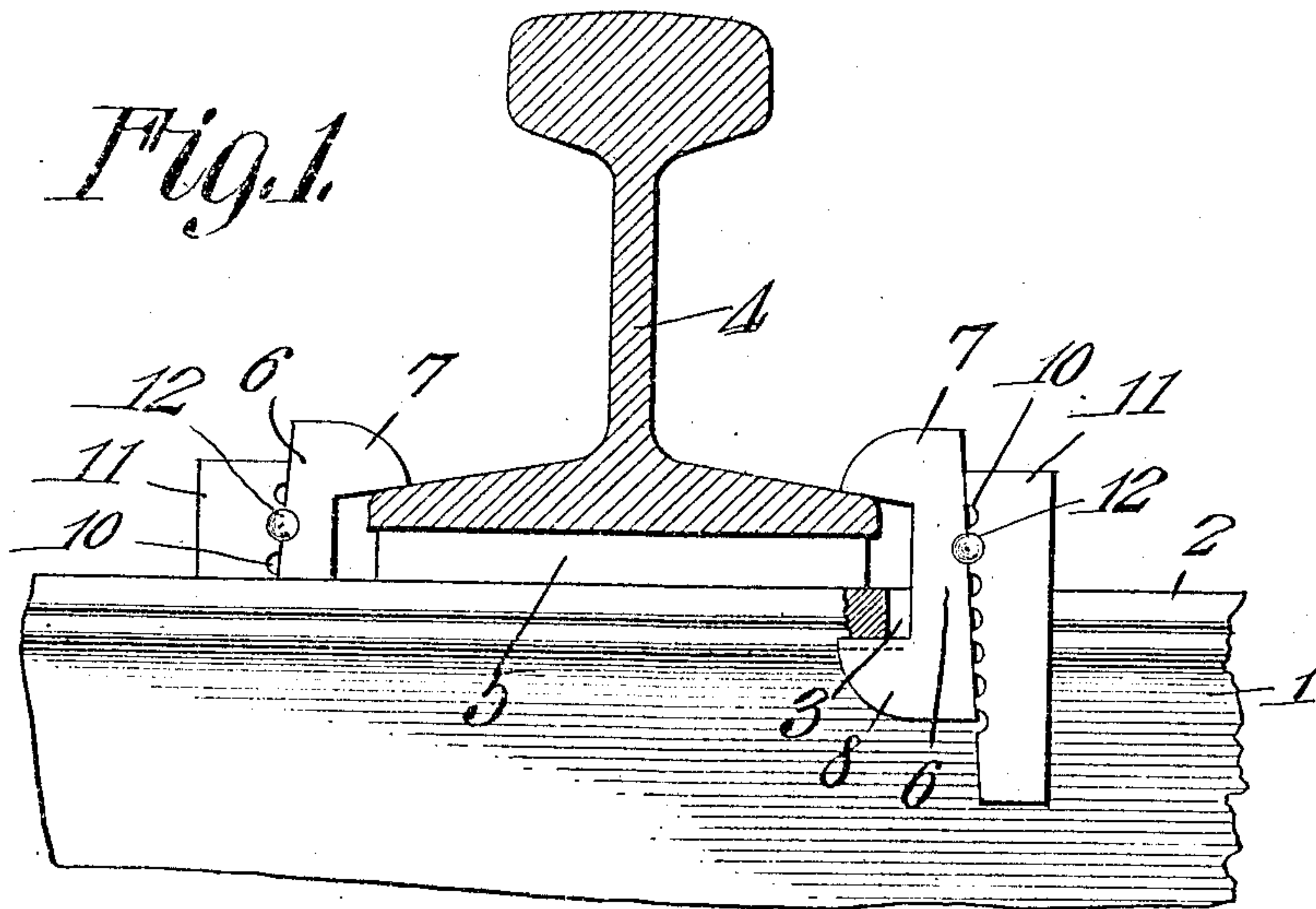
J. A. WIDNER.

RAIL FASTENER.

APPLICATION FILED MAR. 26, 1908.

904,824.

Patented Nov. 24, 1908.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. WIDNER, OF ALPENA, MICHIGAN.

RAIL-FASTENER.

No. 904,824.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed March 26, 1908. Serial No. 423,425.

To all whom it may concern:

Be it known that I, JOHN A. WIDNER, a citizen of the United States, residing at Alpena, in the county of Alpena and State of Michigan, have invented a new and useful Rail-Fastener, of which the following is a specification.

This invention relates to rail fasteners and is more particularly designed for use upon metallic railway ties such, for example, as shown in my co-pending application.

The object of the invention is to provide a fastener which is simple, durable and efficient, dispenses with the use of spikes, bolts and similar fastening devices, and can be readily adjusted so as to firmly engage a rail, should the rail become loose from any cause as, for example, the wearing of its supporting cushion.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claim.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a side elevation of a portion of a tie and showing a rail secured thereon by means of the fasteners constituting the present invention, a portion of the tie being broken away. Fig. 2 is a plan view of the parts shown in Fig. 1. Figs. 3 and 4 are detail views of the two members of each fastener.

Referring to the figures by characters of reference, 1 designates a metal tie preferably of that character having top flanges 2 extending longitudinally thereof, said flanges being provided with slots 3 for the reception of the fasteners. These slots are spaced apart a distance equal to or a little less than the width of the base of a rail 4 and a cushioning block 5 of wood or other material may be arranged on the tie between these slots so as to constitute a yieldable support for the rail.

Each fastener utilized for securing the rail to the tie consists of a gripping member 6 in the form of an elongated metal plate having jaws 7 and 8 extending from one longitudinal edge thereof at the ends of the plate. The upper jaw 7 is beveled in the direction of its length so as to rest snugly upon one base flange of the rail 4 while the lower jaw 8 is beveled transversely as indicated particularly in Fig. 3 so as to fit snugly upon

the inclined lower surface of the flange 2 of the tie. That face of plate 6 which is opposite the jaw 7 is inclined and has a notch or recess 9 extending transversely therein and designed to register with any one of a series of similar notches 10 formed in one face of a key 11. The notched face of this key is inclined relative to the opposite face thereof so as to bear firmly upon its corresponding inclined face of plate 6.

In using the fasteners herein described the rail is positioned upon the tie and between slots 3, and a cushioning block 5 is preferably interposed between the rail and tie. The plate 6 is then inserted through one of the slots 3 so that jaw 7 will rest upon one of the base flanges of the rail while the jaw 8 will contact with the bottom surface of one of the top flanges 2 of the tie. Key 11 is then inserted into the slot 3 so that the notched faces of the key and plate contact and by driving the key downward into the slot the inclined face thereof will cooperate with the corresponding face of the plate so as to shift the jaws 7 and 8 longitudinally of the tie and cause the beveled or working face of jaw 7 to tightly bind on the base flange of the rail. After fasteners have been placed in slots at both sides of the rail and adjusted in the manner described each key can be secured to its plate 6 by inserting a rivet 12 into the alining notches of the plate and key and upsetting the ends thereof so as to prevent the accidental displacement of the rivet and the consequent displacement of the parts of the fastener. Should the cushion block 5 become packed or worn so as to cause the rail to settle either or both of the fasteners can be readily tightened upon the rail simply by driving the keys further into the slots 3 after the rivets 12 have been removed from engagement therewith. To remove each rivet it is necessary to cut or file off one of its heads so that it can be readily driven out of the registering notches in which it is seated. Importance is attached to the fact that the jaws 7 and 8 can be adjusted in the direction of the rail and cooperate with the inclined upper faces of the base flanges and with the lower faces of the tie flanges so as to draw the rail downward toward the tie and take up any play which might occur as the result of wear, etc. The keys 11 constitute efficient means for producing this adjustment and also for locking the jaws in adjusted positions and by utiliz-

ing the rivets 12 it becomes absolutely impossible for the fasteners to become displaced unless the rivet is cut or filed.

What is claimed is:

5 The combination with a metal tie including longitudinal oppositely extending top flanges, the lower faces of said flanges converging downwardly, and each flange having fastener-receiving slots; of a rail-supporting
10 cushion upon the flanges and between the slots, said cushions being spaced from the slots, and rail-fastening means within each slot, and comprising a member having upper and lower rail and tie-engaging jaws respectively
15 extending from one face thereof, the lower tie-engaging jaw being beveled laterally to conform to the angle of the lower face of the tie flange, the rail-engaging jaw

being beveled to conform to the inclination of a rail flange, a wedge key insertible into 20 each slot and cooperating with the fastener member in said slot and with one wall of the slot for shifting said member toward the cushioning block to clamp the cushioning device between the tie and the rail engaged 25 by the fastener member, the adjoining faces of said member and key being notched and disposed to register, and fastening means insertible into the registering notches.

In testimony that I claim the foregoing 30 as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN A. WIDNER.

Witnesses:

JAMES FRANCIS,
HENRY K. GUSTON.