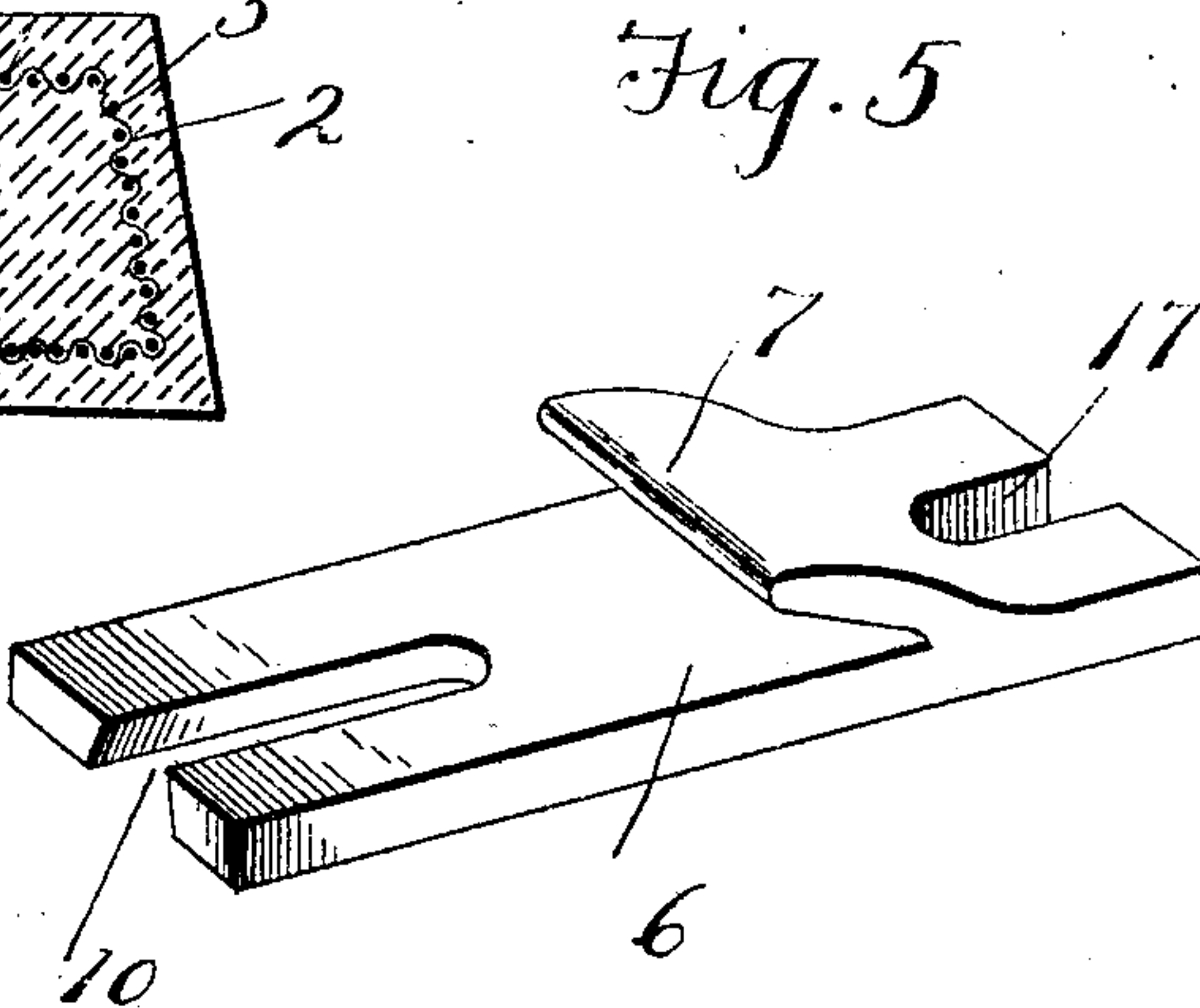
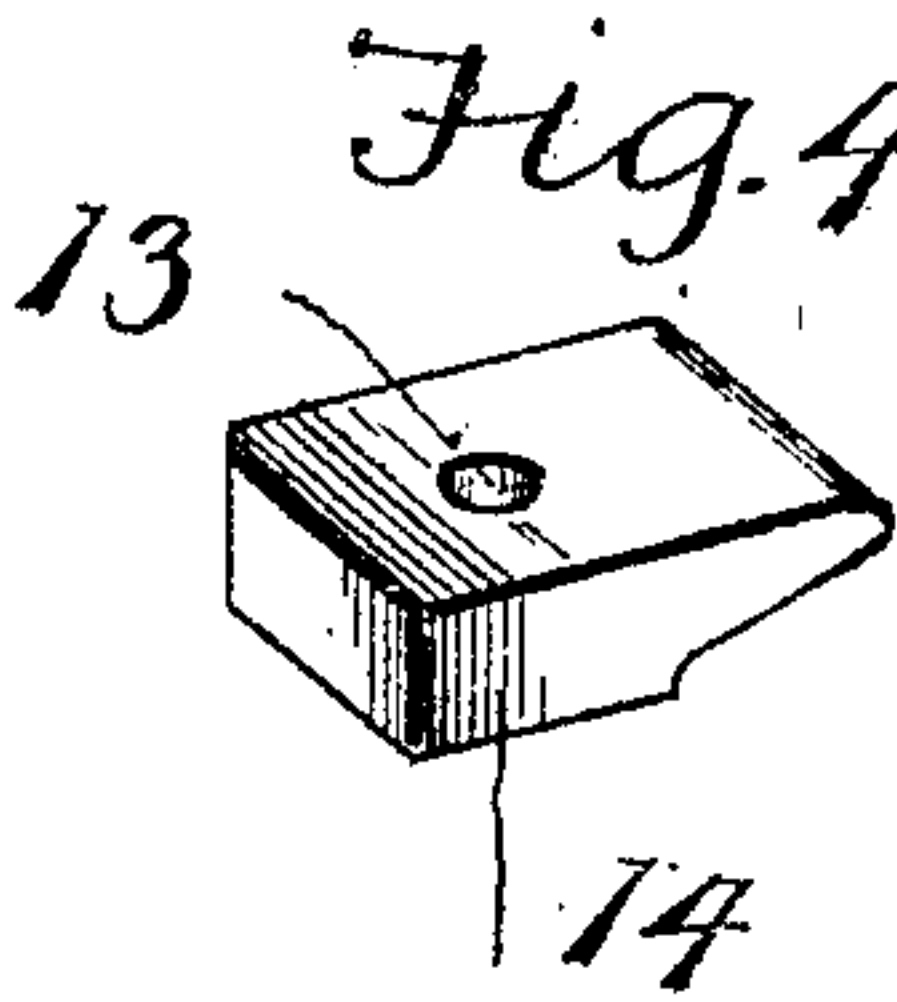
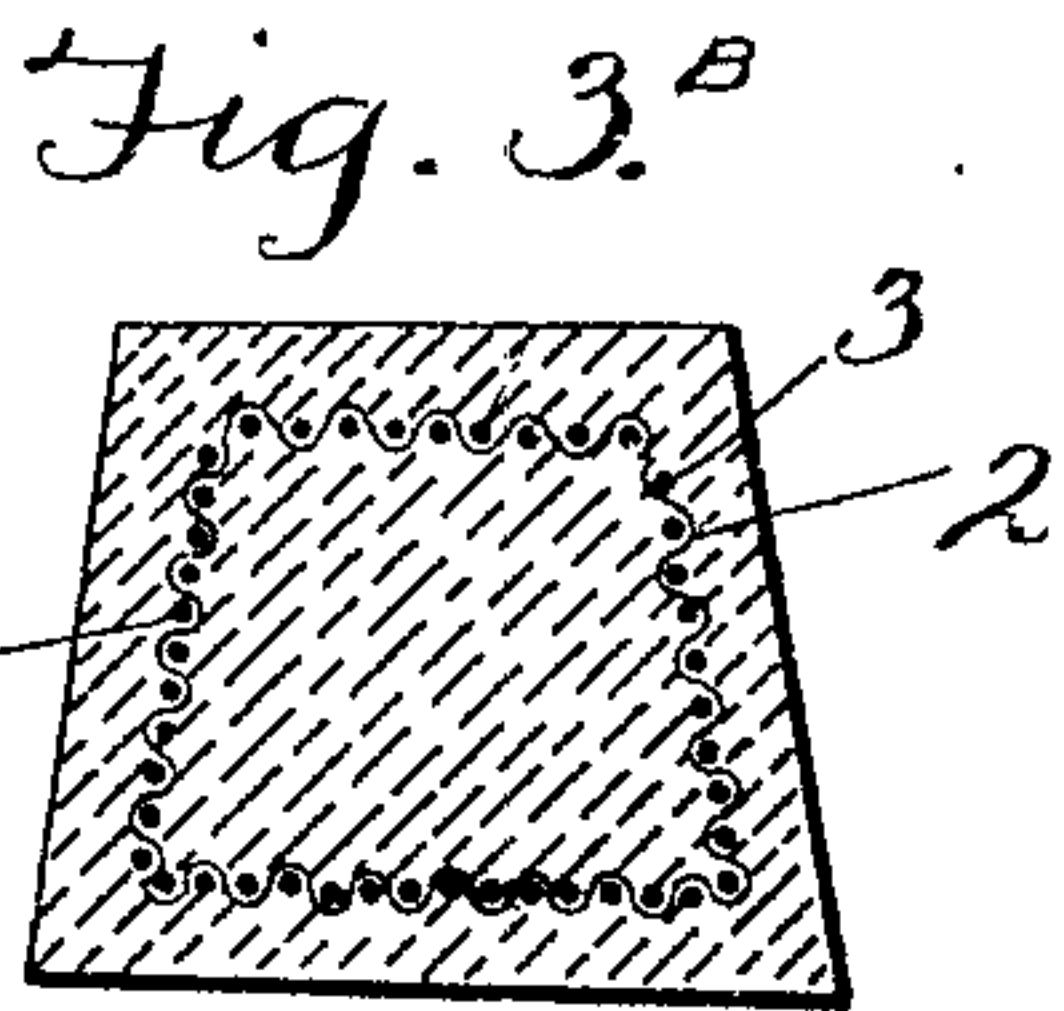
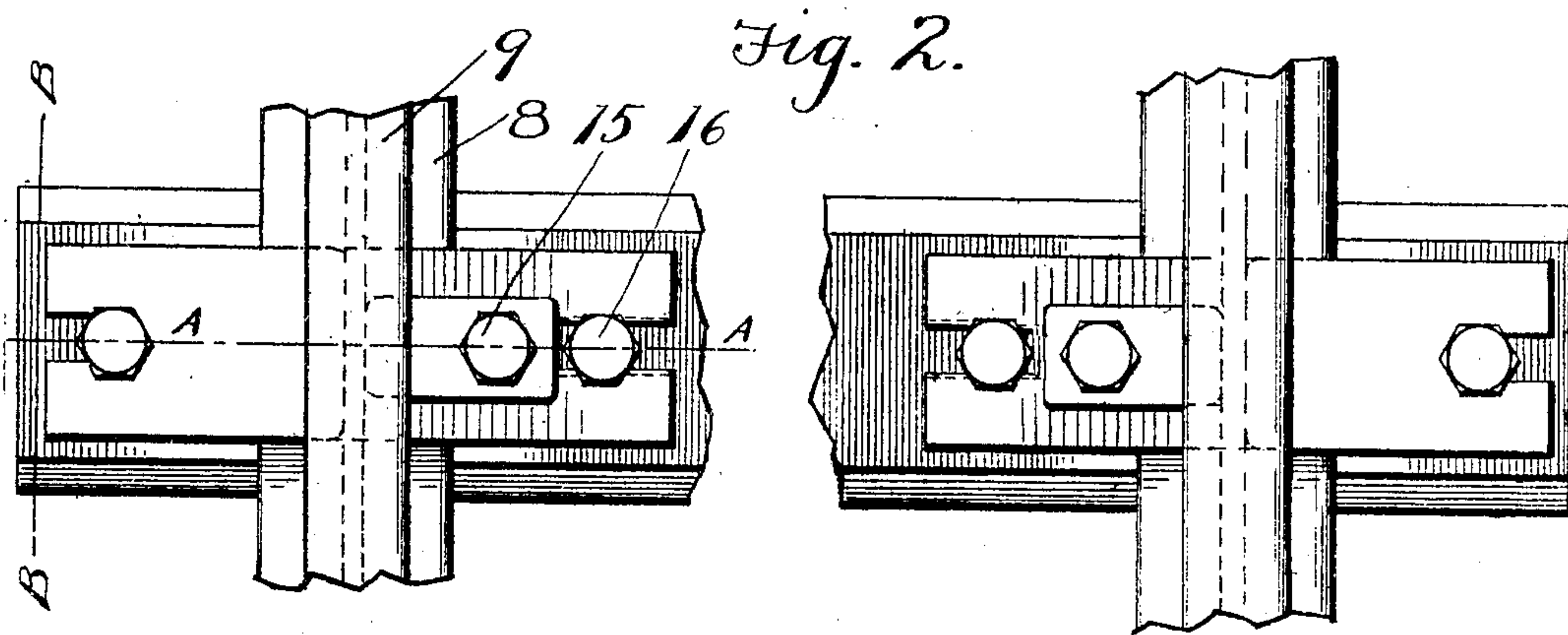
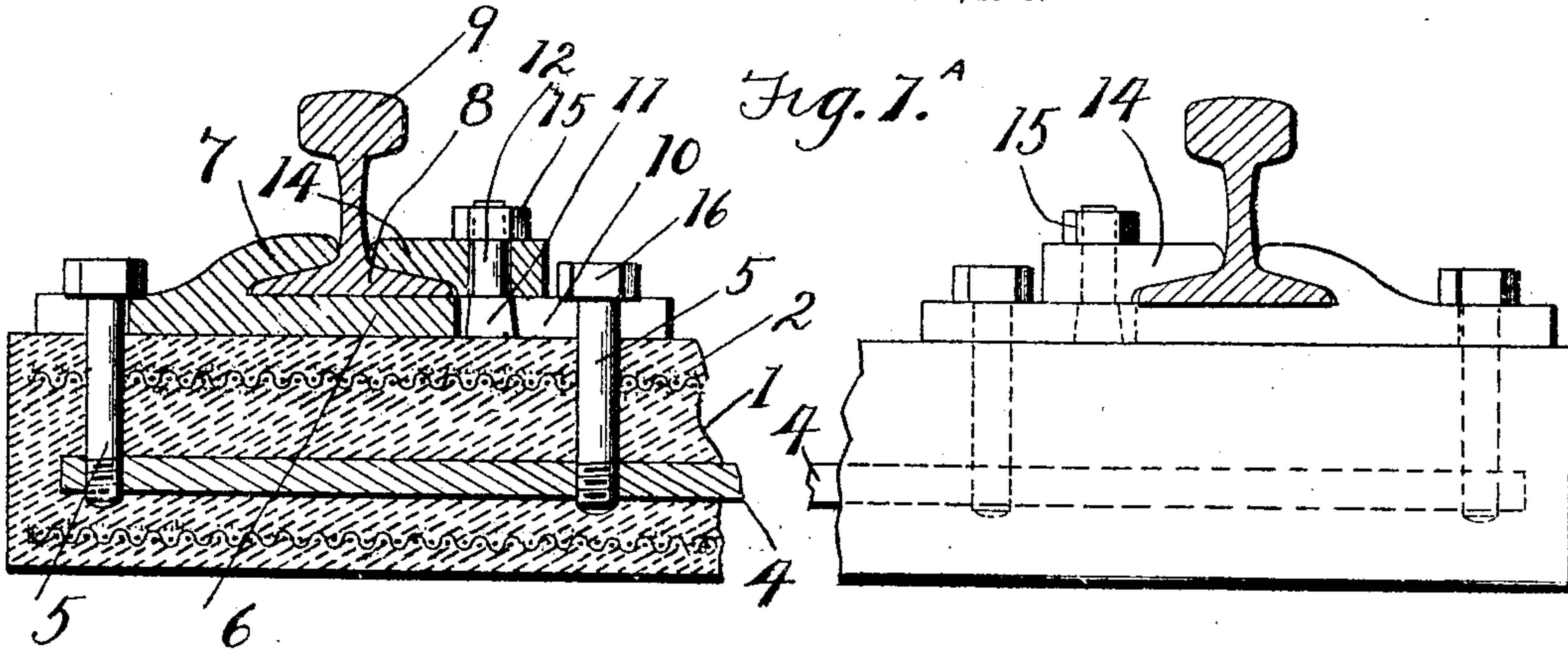


No. 803,766.

PATENTED NOV. 7, 1905.

E. C. LAWTON.
RAILWAY TIE.

APPLICATION FILED FEB. 14, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

ELMER C. LAWTON, OF LAWTONS, NEW YORK.

RAILWAY-TIE.

No. 803,766

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELMER C. LAWTON, a citizen of the United States, residing at Lawtons, in the county of Erie and State of New York, have invented certain new and useful Improvements in Railway-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to railway-track equipment, and more particularly to a permanent form of cross-tie and rail-fastenings; and my invention consists of certain novel features of combination and construction of parts, the preferred form whereof will be hereinafter clearly set forth, and pointed out in the claim.

The prime object of my invention, among others, is to provide a permanent form of cross-tie and suitable means to reliably connect the track-rail to the tie, whereby readjustment may be readily made from time to time to compensate for wear if found necessary.

A further object of my invention is to provide a cross-tie of permanent character which may be made at a minimum cost and which will be found reliably reinforced at the point where greatest strain is disposed.

Other objects and advantages will be hereinafter made clearly apparent, reference being had to the accompanying drawings, which are considered a part of this application, and in which—

Figure 1 shows a transverse section of a track, one portion of my cross-tie being shown in elevation and the other end shown in longitudinal section. Fig. 2 is a top plan view of my improved form of cross-tie and rail-fastening. Fig. 3 is a sectional view of Fig. 2 on line B B. Figs. 4 and 5 show perspective views of two cooperating devices employed to connect the track-rail to the cross-tie when provided with suitable locking-bolts.

For convenience of description the various parts of my invention and cooperating accessories will be designated by numerals, the same numeral applying to a similar part throughout the several views.

Referring to the numerals on the drawings, 1 designates my improved cross-tie, which is molded in any suitable forming box or mold while the material is in a plastic state, and it

is thought that cement will be the best material to employ for this purpose. In order that my improved cross-tie thus or otherwise formed of plastic material may be properly reinforced at suitable intervals, I dispose in the mold or box in which the material is shaped a skeleton or outline made of expanded metal or coarse woven wire, as indicated by the numeral 2, or said reinforcing member 2 may be made of corrugated sheet metal combined with a plurality of longitudinally-disposed rods 3 or the equivalent thereof, it being understood that the reinforcement 2 is wholly embedded in the material forming the cross-tie while such material is still in a plastic condition. I also embed in the body portion of the tie a reinforcing plate or bar 4, which may extend from one end to the other of the tie, or two bars may be employed of proper length to reach beneath both track-rails, and each bar is provided with a threaded aperture whereby the threaded end of the clamping-bolts 5 may be engaged and properly seated in the bar, as clearly shown in Fig. 1. I also provide an additional reinforcement for the upper side of the tie, which consists of a rail-receiving plate having an inwardly-projecting extension or plate proper, 6, and also having the forwardly-extending curved lip 7, the latter designed to fit snugly over the contiguous portion of the base 8 of the track-rail 9. The plate 6 is of sufficient length to extend under the track-rail and reach beyond the same, the extreme extended inner end of the plate being provided with a slot 10, which is wider at its lower side, whereby said slot will receive the conical head 11 of the bolt 12, said bolt being designed to extend upward through the hole 13 in the base-clamping member 14, said base-clamping member being designed to fit on the inner side of a track-rail, as clearly shown in Fig. 1. The upper end of the bolt 12 is threaded to receive the locking-nut 15, and when said locking-nut is turned home upon the clamping member 14 it is obvious that said member will be securely locked in engagement with a contiguous part of the inner side of the base of the track-rail.

The slot 10 in the extension of plate 6 is made dovetail in form, as before explained, to accommodate the conical head 11, and thus permit the clamping member 14 to be moved

snugly in engagement with the base of the track-rail, and said slot 10 also accommodates the bolt 5, whereby the head 16 of the bolt may be forced tightly down upon the plate 6, and thereby secure it against movement. The opposite end of the base member or plate 6 is also provided with a slot 17 to receive the other bolt 5 and permit the plate 6 to be secured in position, and it is obvious that when the base member 6 and the cooperating clamp 14 have been secured in engagement with the track-rail the latter will be firmly anchored in its adjusted operative position, inasmuch as the clamping-bolts 5 are reliably held by means of the embedded bar 4, above referred to.

It will be observed that the parts of my invention are of very simple character and formation and that the same may be cheaply and expeditiously manufactured and easily assembled, each in its respective operative position, and while I have described the preferred combination and construction of elements I desire to comprehend in this application all substantial equivalents and substitutes fairly falling within the scope of my invention.

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

The herein-described track-rail support and clamping appliance comprising the supporting tie or base 1 having suitable metallic reinforcing members, in combination with a rail-base proper or plate 6 having slots in each end substantially as specified, and also having a rail-securing lip or extension 7 and an auxiliary clamping member 14; a clamping-bolt provided with a conical head to fit the contiguous slot in the base-plate and means to lock said base-plate in union with the tie whereby the track-rail will be held against lateral movement, all combined substantially as specified and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELMER C. LAWTON.

Witnesses:

C. F. LAWTON,
J. S. WARNER.