

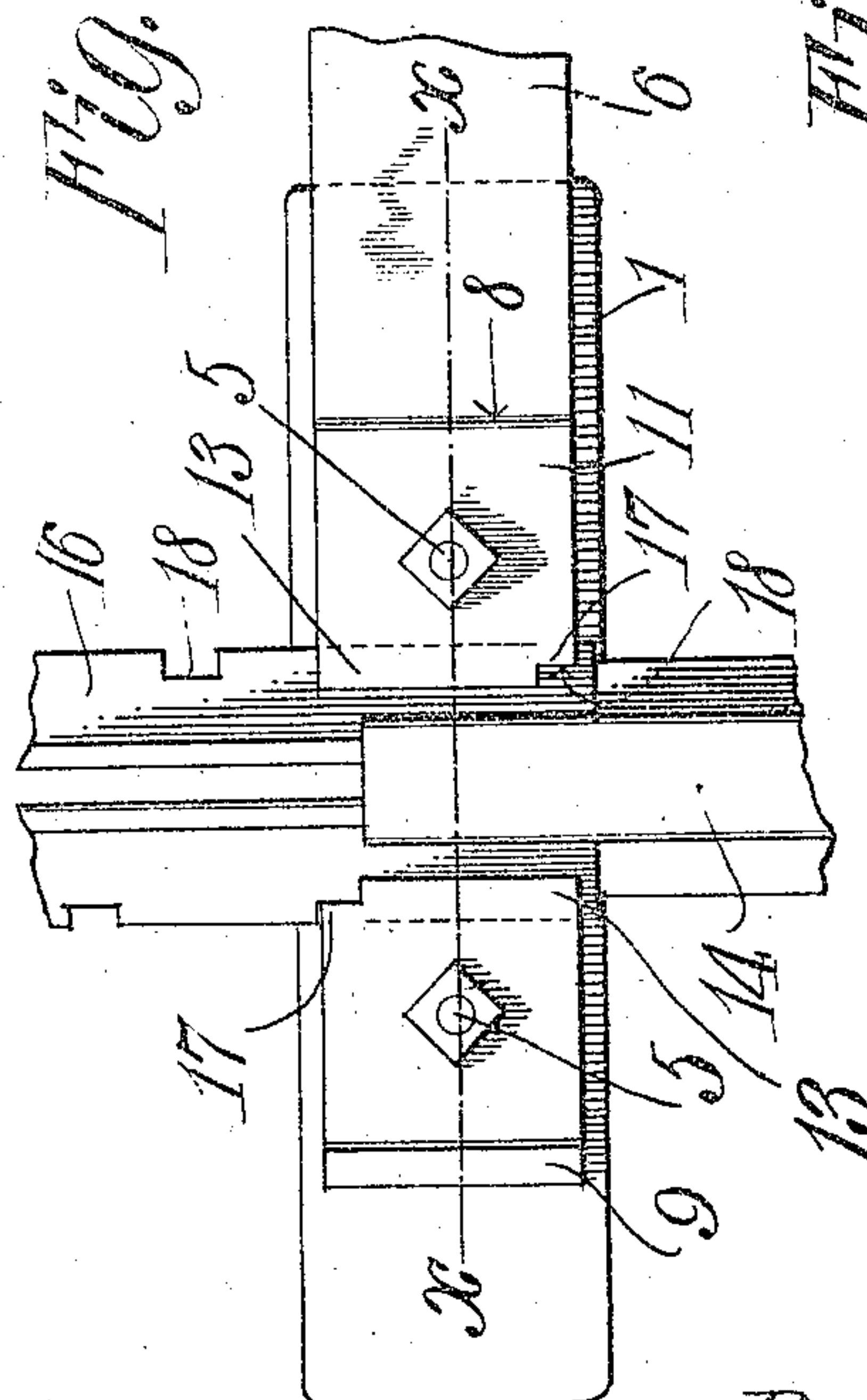
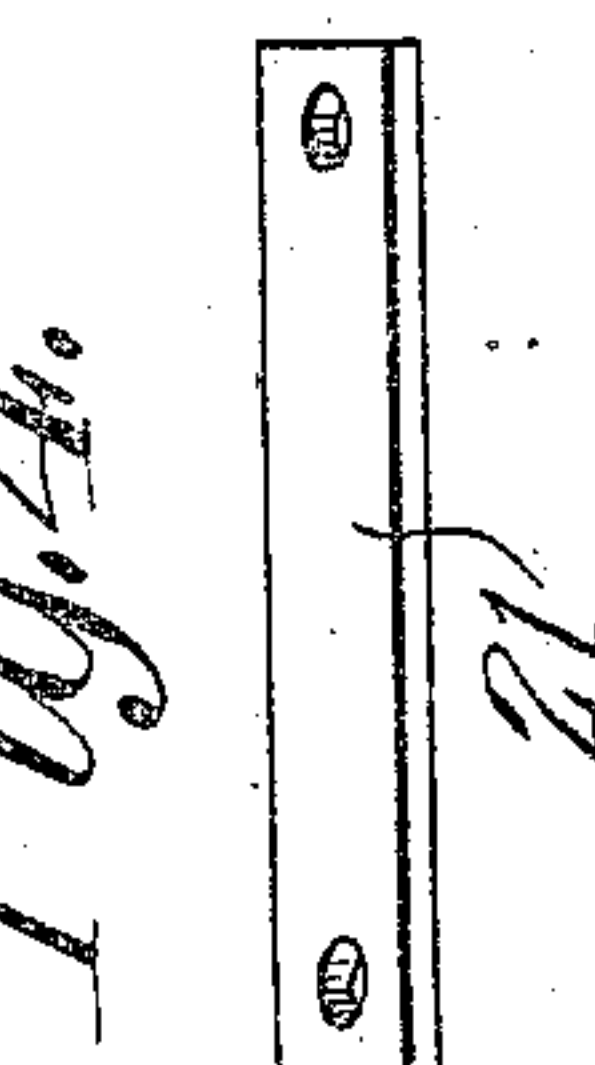
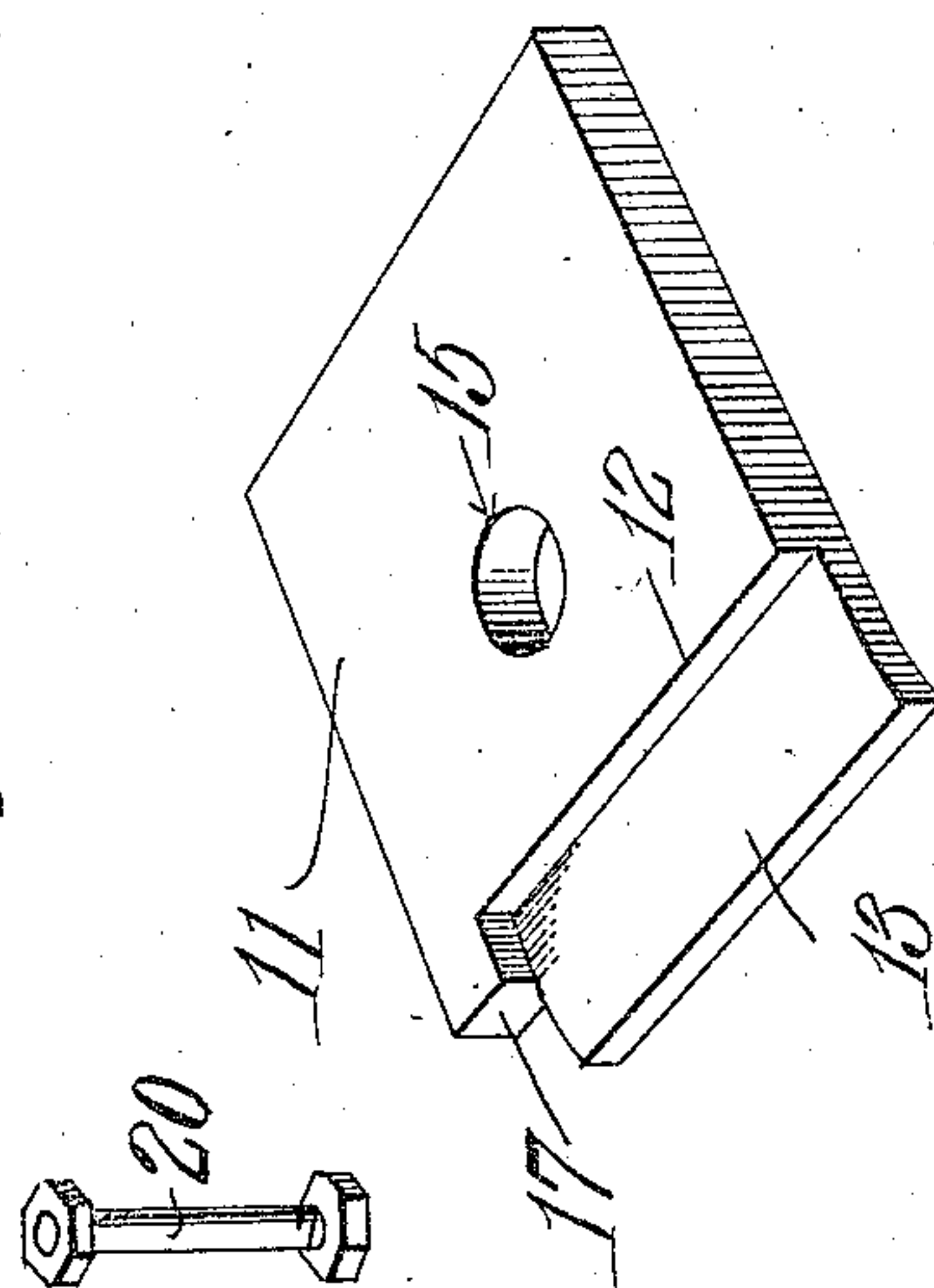
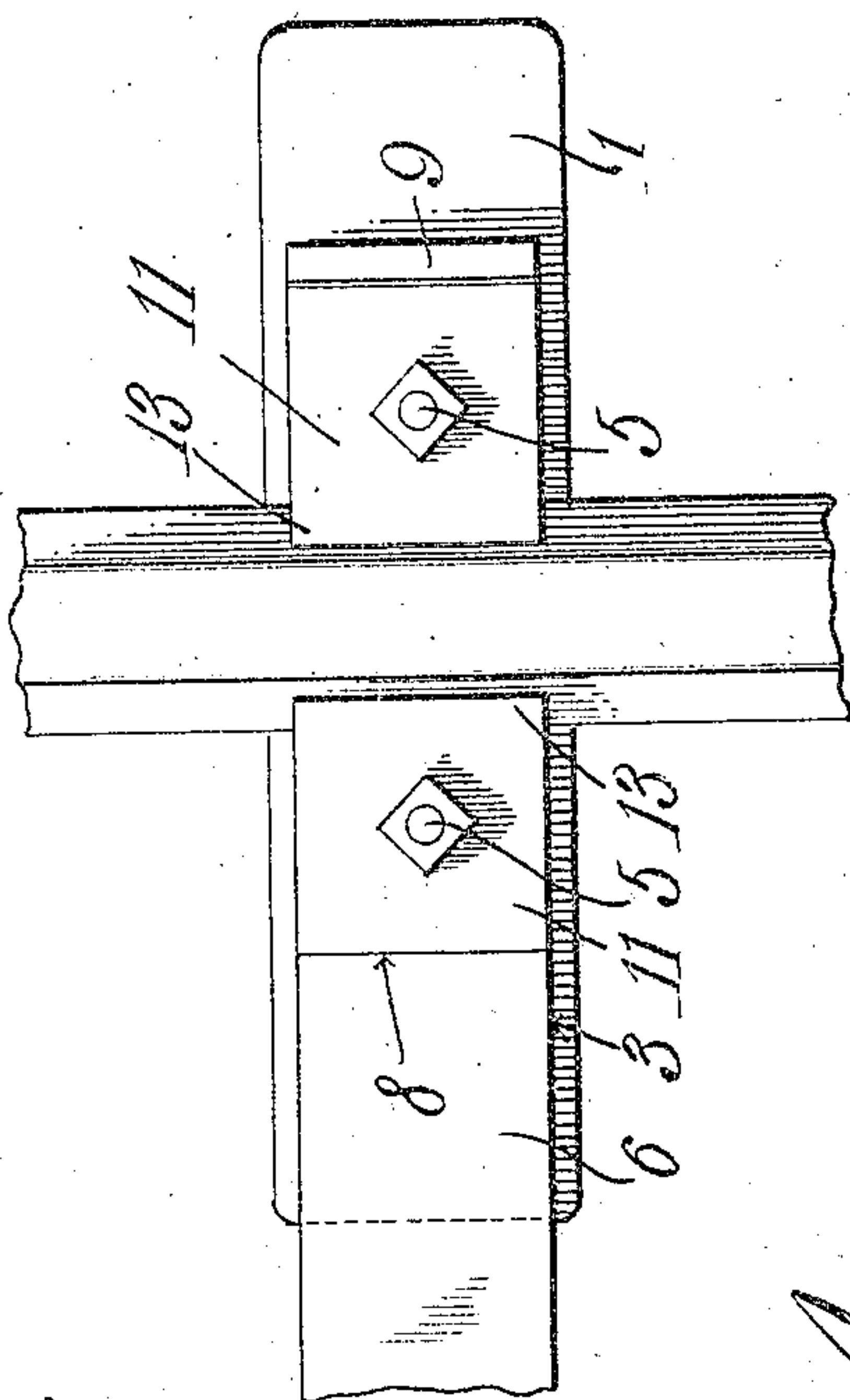
No. 889,777.

PATENTED JUNE 2, 1908.

J. EBINGER & B. A. STEINKE.

RAILROAD TIE.

APPLICATION FILED NOV. 5, 1907.



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Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN EBINGER AND BERNARD A. STEINKE, OF BOTKINS, OHIO.

## RAILROAD-TIE.

No. 889,777.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed November 5, 1907. Serial No. 400,826.

*To all whom it may concern:*

Be it known that we, JOHN EBINGER and BERNARD A. STEINKE, citizens of the United States, residing at Botkins, in the county of Shelby and State of Ohio, have invented a new and useful Railroad-Tie, of which the following is a specification.

This invention relates to railroad ties and its object is to provide a durable device of this character having simple and efficient means whereby rails may be fastened to it, said means also serving to prevent the rails from creeping.

Another object is to provide a composite tie made up of a metal connecting strap and supporting end blocks, said blocks being molded.

A still further object is to provide means permanently connected with the blocks for engaging and holding the fastening devices in position.

Another object is to provide a tie, the parts of which are so disposed that the rails will rest upon both the connecting strap and the molded supporting blocks, the same thus presenting a firm support for the rails.

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 claims.

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

In said drawings: Figure 1 is a plan view of a tie embodying the present improvements, the middle portion of the strap being removed. Fig. 2 is a section on line  $x-x$ , Fig. 1. Fig. 3 is an inverted perspective view of one of the rail engaging devices. Fig. 4 is a detail view of a modified means for securing the parts together.

Referring to the figures by characters of reference, 1 designates a supporting block which may be formed of cement, compressed paper, or any other preferred material and the bottom of the block is preferably hollowed or recessed as indicated at 2 so that when the block is in position on a roadbed there will be no danger of its creeping. Formed longitudinally within the upper face of the block is a rectangular recess 3 and embedded within the block is a U-shaped bolt 4 the terminals of which are screw threaded as indicated at 5 and extend upward from the recess 3 and above the upper surface of the block. Two of these blocks

are used in connection with each tie and both blocks are designed to be connected by means of a metal strap 6 which is preferably galvanized or otherwise protected from the action of the elements. The end portions of this strap are designed to rest on the blocks 1 and each end portion is depressed longitudinally as indicated at 7 so as to fit snugly within one of the grooves or recesses 3, each bend in the strap forming a square shoulder 8 while the ends of the strap are bent upward at right angles as indicated at 9 so as to form abutments. The depressed portions of the straps have openings 10 for the reception of the end portions of the bolts 4 and when the straps are in position upon the blocks the upper faces of the depressed portions 7 are disposed flush with the upper faces of the blocks 1. In connection with each bolt 4 two fastening devices are employed, each consisting of a plate 11 reduced longitudinally along one edge to form a shoulder 12 and a tongue 13. Shoulder 12 is designed to abut against the base flange of a rail 14 while the tongue 13 is designed to lap the base flange. These plates are designed to be oppositely disposed upon the depressed portions 7 of the strap and abut against the shoulder 8 and the extension 9 respectively. Openings 15 are formed within the plates for the reception of the bolt ends and by screwing nuts upon the bolt ends the plates 11 are firmly clamped upon the straps and rails.

Where fish plates are arranged above the tie as indicated at 16 the tongues 13 of the plates 11 do not extend the full width of the plates but terminate short of one edge thereof and a retaining block or enlargement 17 is located at the end of the tongue and is so proportioned as to fit snugly within one of the notches 18 of a fish plate. It will thus be apparent that when the plates 11 are secured in place and in engagement with the fish plates said fish plates will be held against longitudinal displacement.

In order that the rails may be properly cushioned and noise reduced to the minimum a layer 19 of resilient material such as asbestos is preferably interposed between the base of each rail and the depressed portion 7 of the strap.

Importance is attached to the fact that the groove 3 does not extend throughout the length of block 1 because the depressed portion of the strap thus positively engages the



block and the two parts are absolutely held against independent longitudinal movement and bolt 10 is relieved of all transverse strain.

It is to be understood that if desired instead of providing a U-shaped bolt such as shown in Fig. 2 bolts 20 of the ordinary or any preferred construction may be used in connection with an apertured plate 21, said plate being designed to rest within the bottom portion of the block with the bolts in engagement therewith and extending upwardly through the block.

What is claimed is:

1. A railroad tie comprising supporting blocks, a connecting strap having depressed portions seated within one face of each block, each of the depressed portions terminating in upstanding means for preventing lateral displacement of rails upon the depressed portion, and means for securing a rail upon each depressed portion of the strap and between said upstanding means.

2. In a railroad tie the combination with supporting blocks having recesses in the upper faces thereof, said recesses terminating short of the ends of the blocks; of a connecting strap having depressed portions seated within the recesses, said portions having retaining shoulders at the ends thereof, rail engaging devices interposed between and disposed to bear against the shoulders, and means within each block for securing said devices and the strap to the block.

3. In a railroad tie the combination with supporting blocks having recesses in the upper faces thereof and terminating short of

the ends of the blocks; of a connecting strap having depressed portions seated within the recesses and provided at their ends with shoulders constituting abutments, bolts embedded within the blocks and extending through the depressed portions of the strap, and rail engaging devices upon the depressed portions of the strap and engaged by the straps, said devices abutting against the shoulders.

4. In a railroad tie the combination with supporting blocks and a connecting strap secured thereon; of rail engaging devices each constituting a plate, a rail flange engaging tongue, and an enlargement at one end of the tongue for engagement with the notch of a fish plate.

5. In a railroad tie the combination with supporting blocks having recesses in their upper faces; of a connecting strap having depressed portions seated within the recesses, a U-bolt embedded within each block and extending through the depressed portion of the strap upon the block, oppositely disposed rail engaging devices upon each depressed portion and engaged by the bolt, and a cushioning material upon each depressed portion and between the devices thereon.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

JOHN EBINGER.

BERNARD A. STEINKE.

Witnesses:

JACOB C. ELSASS,

GEORGE STEINKE.