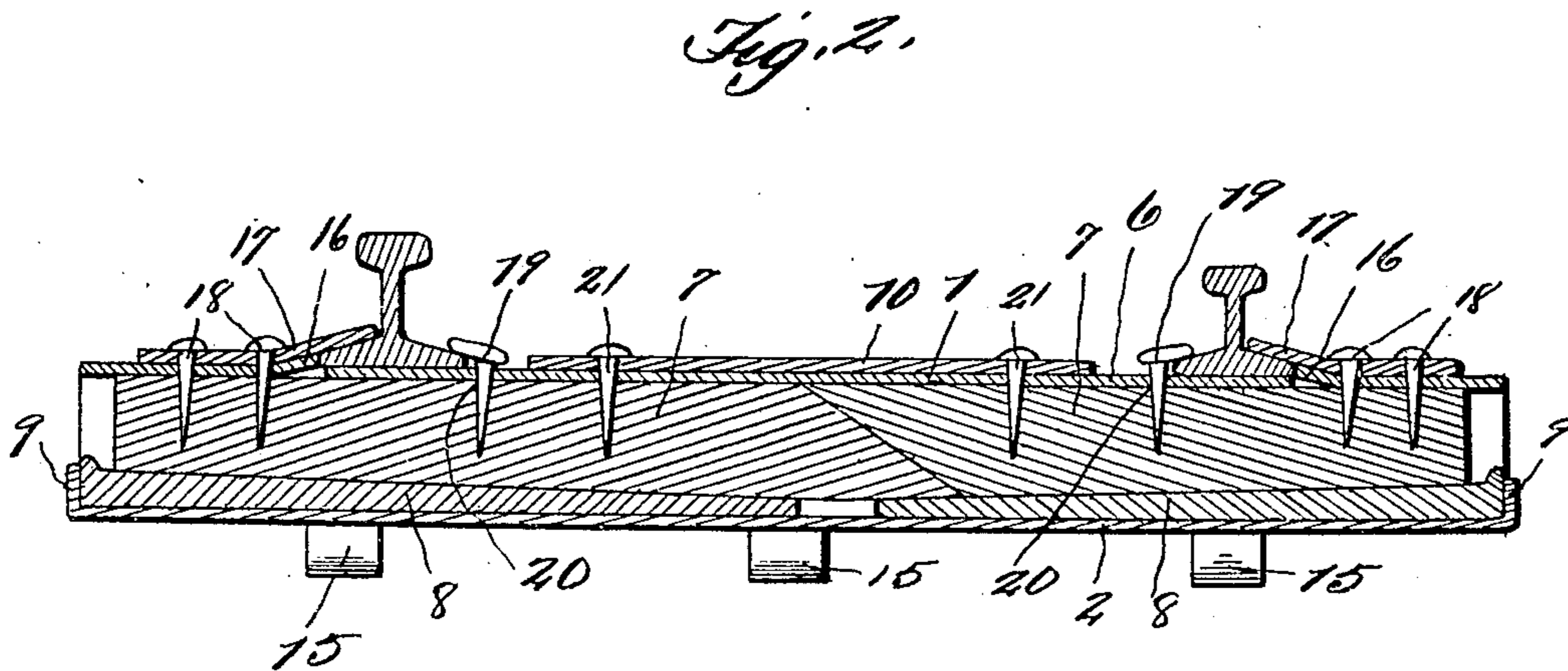
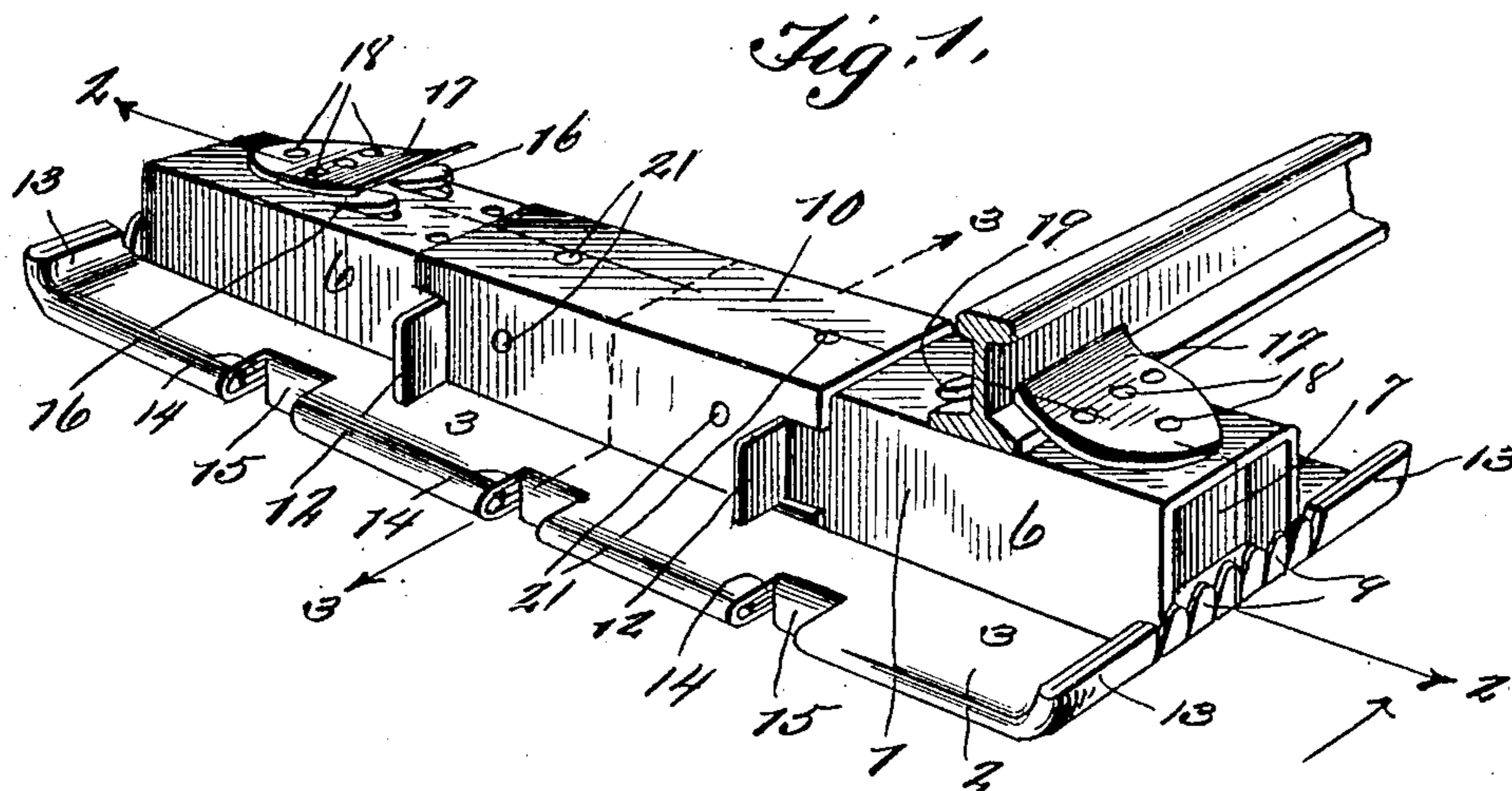


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RAILWAY TIE.  
APPLICATION FILED DEC. 5, 1907.

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Patented Dec. 15, 1908.

2 SHEETS—SHEET 1.



Witnesses  
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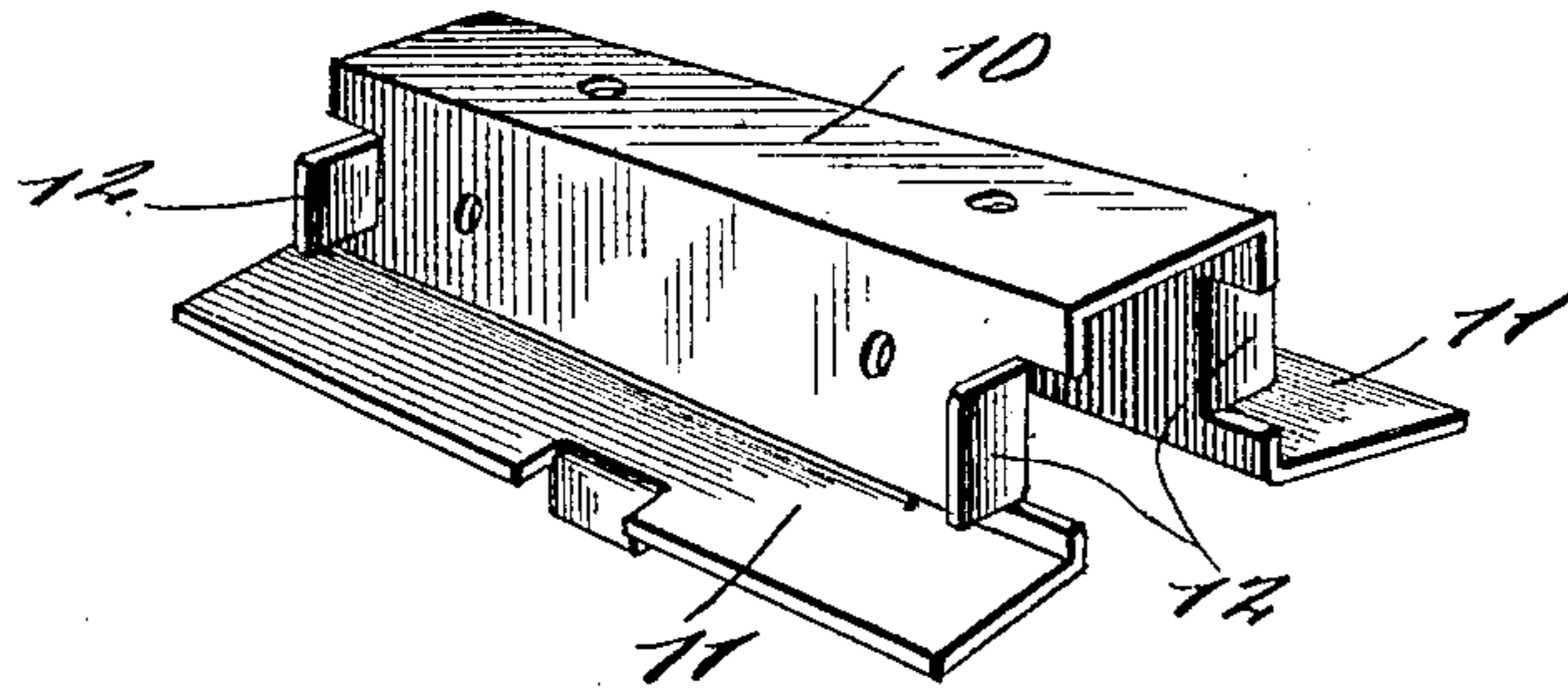
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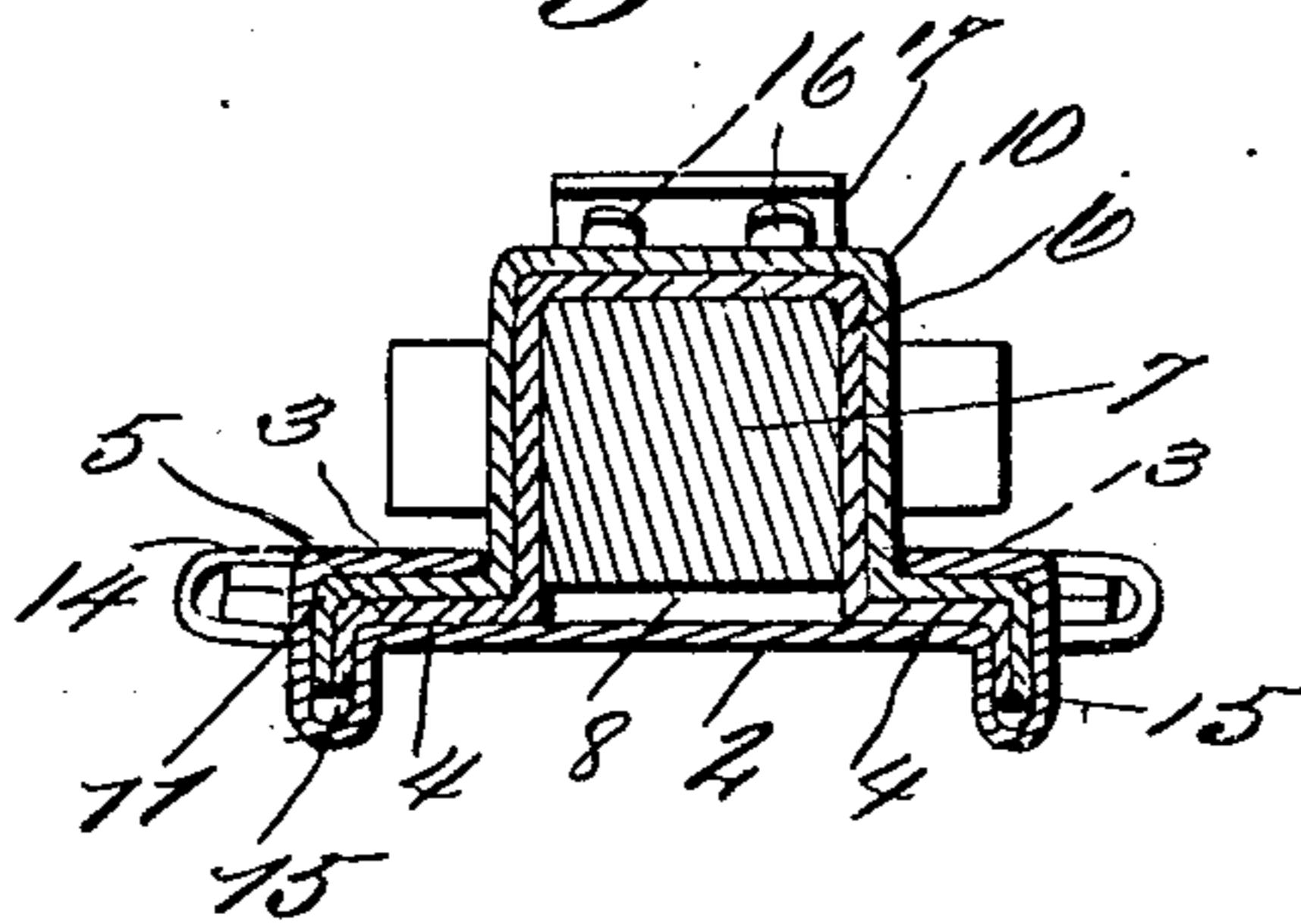
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2 SHEETS—SHEET 2.

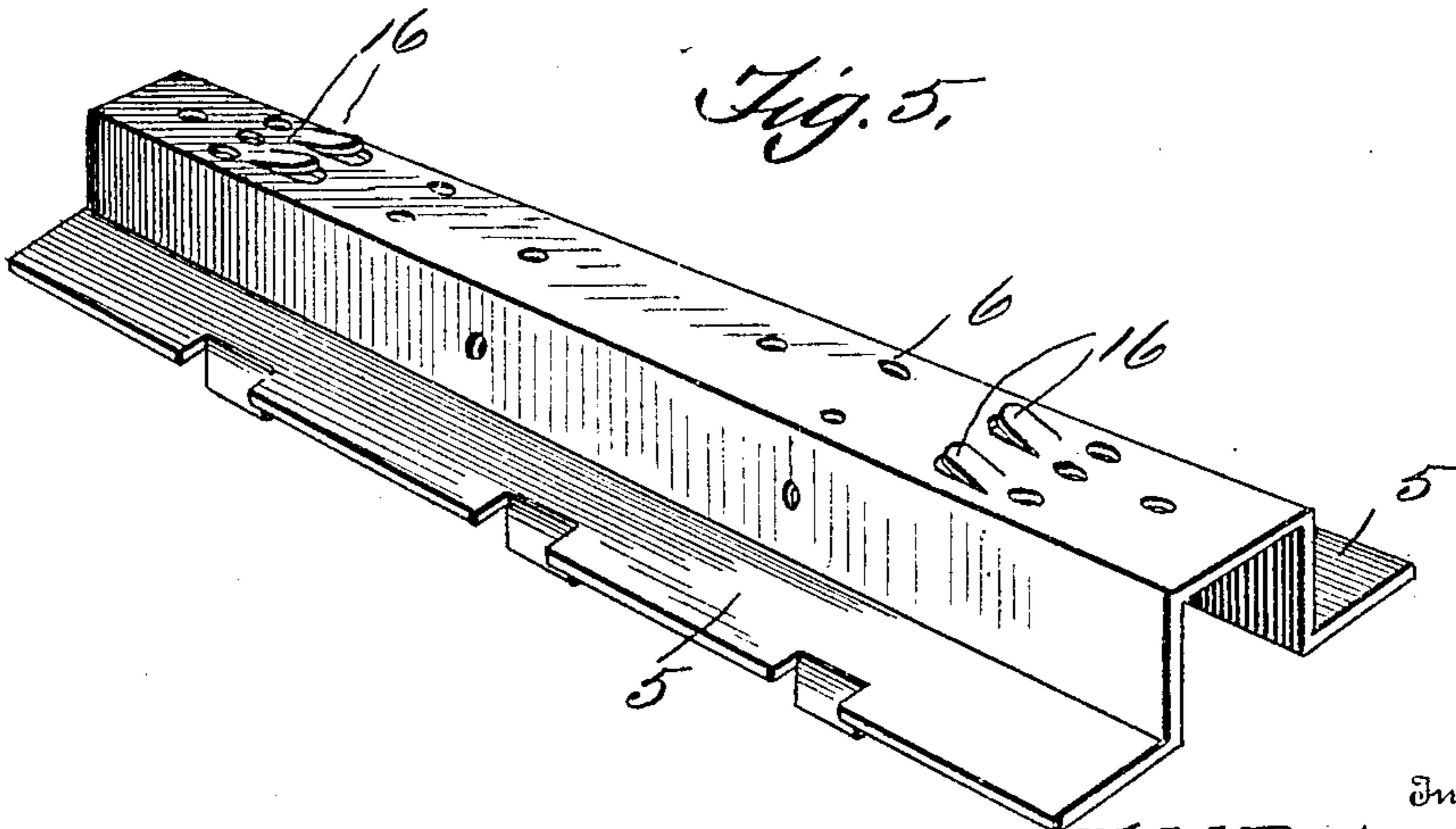
*Fig. 4.*



*Fig. 3.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

ELLIS H. BUTERBAUGH, OF SUMMERVILLE, PENNSYLVANIA.

## RAILWAY-TIE.

No. 906,610.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed December 5, 1907. Serial No. 405,252.

*To all whom it may concern:*

Be it known that I, ELLIS H. BUTERBAUGH, a citizen of the United States, residing at Summerville, in the county of Jefferson and State of Pennsylvania, have invented a new and useful Railway-Tie; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same.

This invention pertains to a new and useful combined metallic and wooden tie, and the invention broadly speaking resides in forming the metallic portion of the tie in such a simple shape and of such a construction, by which short pieces of any quality of timber may be utilized in combination with the metallic portion thereof so as to complete the tie; even many old discarded and condemned wooden ties may be used, by sawing them laterally through the center, and when the two parts thereof are used in conjunction with the metallic portion of the tie, the fresh sawed ends thereof are placed outward, thus providing a tie useful for many years as will be hereinafter apparent.

The invention in its aims, has for a further object to provide a device of this character having a metallic portion, which when manufactured the upward, outward and downward bent portions are only cut, and by only cutting the metallic portion of the tie to form these bent portions, the track layers are privileged to bend them in any direction, as may be desired.

The tie is constructed so as to have proper drainage, and to obviate the shrinkage and to provide a close fit of the core of the tie, wedges are provided, which are held securely in place by means of upwardly bent ears at each end of the tie, as clearly disclosed in the drawings.

This invention comprises further objects and combinations of elements which will be hereinafter more fully described, shown in the accompanying drawings hereto, and the novel features thereof will be pointed out by the appended claim.

The features, elements and the arrangement thereof, which constitute the above entitled invention, may be changed and varied, that is to say, in an actual reduction to practice with the understanding that the

changes and variations accruing from said reduction to practice are limited to the scope of the appended claim.

From the herein set forth description, the essential features, elements and the operation of the device, together with the simplicity thereof, will be clearly apparent.

To obtain a full and correct understanding of the details of construction, combinations of features, elements and advantages, reference is to be had to the hereinafter set forth description and the accompanying drawings in connection therewith, wherein

Figure 1 is a perspective view of a railway tie, embodying the features of the invention. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a cross sectional view on the line 3—3 of Fig. 1. Fig. 4 is a detail perspective view of the reinforcing plate, for the center of the metallic portion of the tie. Fig. 5 is a perspective of a portion of the metallic covering for partly holding the wooden section of the tie together.

Like reference characters are used for indicating similar features and elements, throughout the following description.

In regard to the drawings, wherein similar reference characters indicate corresponding parts in the several illustrations, by figures, 1 designates the railway tie which is provided with a base plate 2, having its longitudinal edges 3 bent over, so as to form guide ways 4, which receive the flanges 5 of the arch metallic covering 6, in the arch of which covering, a core 7 of any suitable material, preferably wood, is disposed; this core in practice, is formed from short pieces of wood spliced, as shown in Fig. 2; and any number of pieces may be employed to form the said core. To cause the core to fit closely within the covering, and to prevent shrinkage thereof, wedges 8 are provided, which are held in their places by means of upwardly bent portions 9 of the base, at each end thereof, as will be clearly observed.

The covering is strengthened by means of a reinforcing plate 10, having longitudinal flanges 11, which are also received by the said guide ways, as clearly shown in Fig. 3; this reinforcement plate is provided with outwardly bent portions 12, which assists the ballast in preventing the tie from creeping laterally, as well as the upwardly bent por-

tions 13, at each end of the tie, which are provided for the same purpose and function, as will be readily understood.

The outside edges of the guide ways are  
5 cut, as at 14, to form downwardly extending bent portions 15, which are for the purpose of preventing creeping of the tie parallel with the rails, as will be clearly manifest. To prevent the rails from spreading  
10 the covering of the tie is provided with struck-up members 16, against which the flanges of the rail abut, as shown in Fig. 2 of the drawings. Plates 17 are provided which assist materially in preventing spreading  
15 of the rails, which plates are fixed to the tie, as shown at 18 in Figs. 1 and 2 of the drawings. To hold the rail against the members 16 spikes 19 of the usual type are driven into the core through holes in the  
20 tie, as at 20. The reinforcement plate and covering plate are fastened to the core by means of spikes 21, as clearly shown.

Having thus described fully the invention, what is claimed as new and useful is;—

25 In a device as set forth, a base plate hav-

ing guide ways, a metallic covering having flanges to be received by said guideways and guided thereby as the said covering is inserted in position, and provided with a reinforcing plate, a core received by said covering, composed of two sections having beveled cooperating ends, wedges inserted through the opposite ends of the metallic covering for forcing the two sections of the core together, said base plate having at each  
30 end thereof upwardly bent portions to hold the wedges in position, thereby causing a close fit of the core within the covering, said tie having means comprising spikes, plates and struck-up portions for fastening rails  
40 thereto, for the purpose substantially specified.

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

ELLIS H. BUTERBAUGH.

Witnesses:

OBADIAH WAMPLER,  
NATHAN A. McLAUGHLIN.