

No. 877,567.

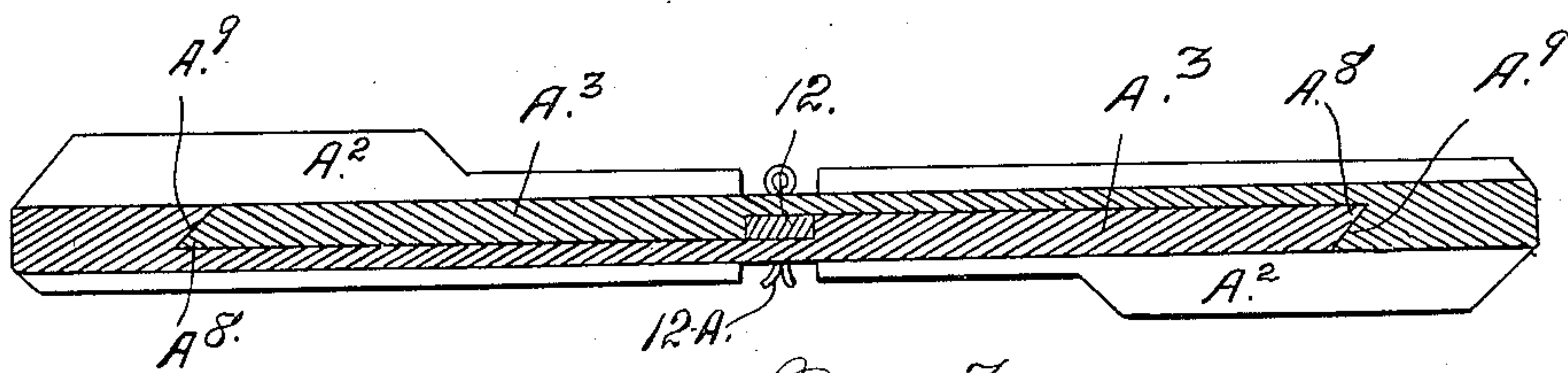
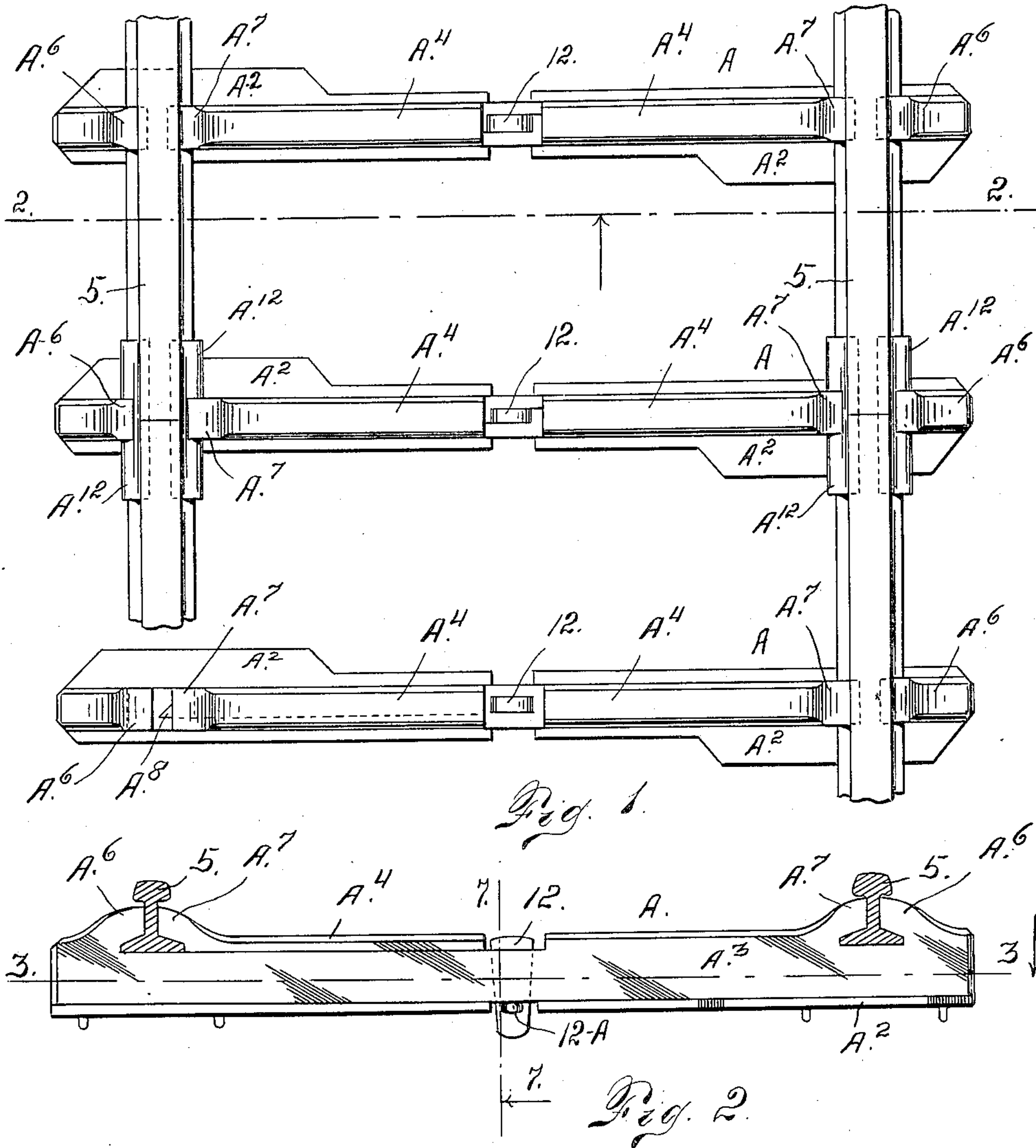
PATENTED JAN. 28, 1908.

J. M. HUNNEL.

METAL RAILWAY TIE.

APPLICATION FILED DEC. 3, 1906.

2 SHEETS—SHEET 1.



Witnesses

Otto E. Hoddick.
Dena Nelson.

Fig. 3.

J. M. Hunnel
Inventor

By, *[Signature]*

Attorney

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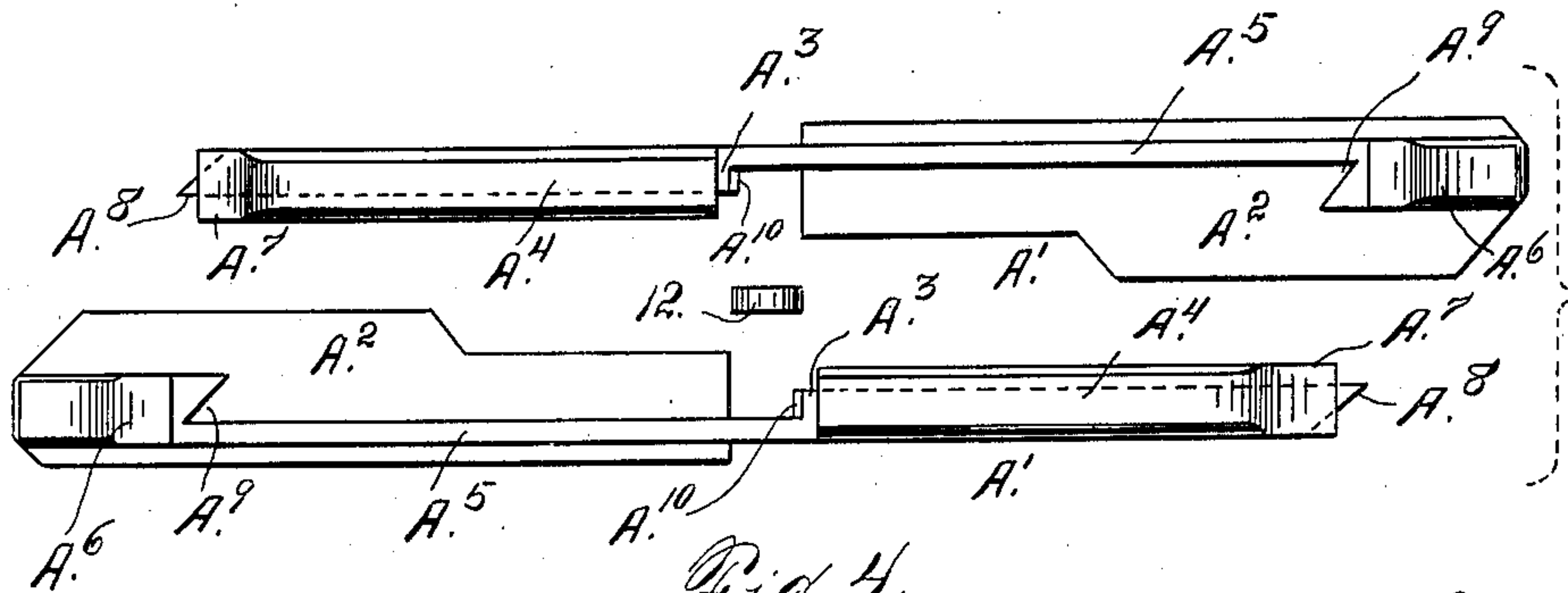


Fig. 4.

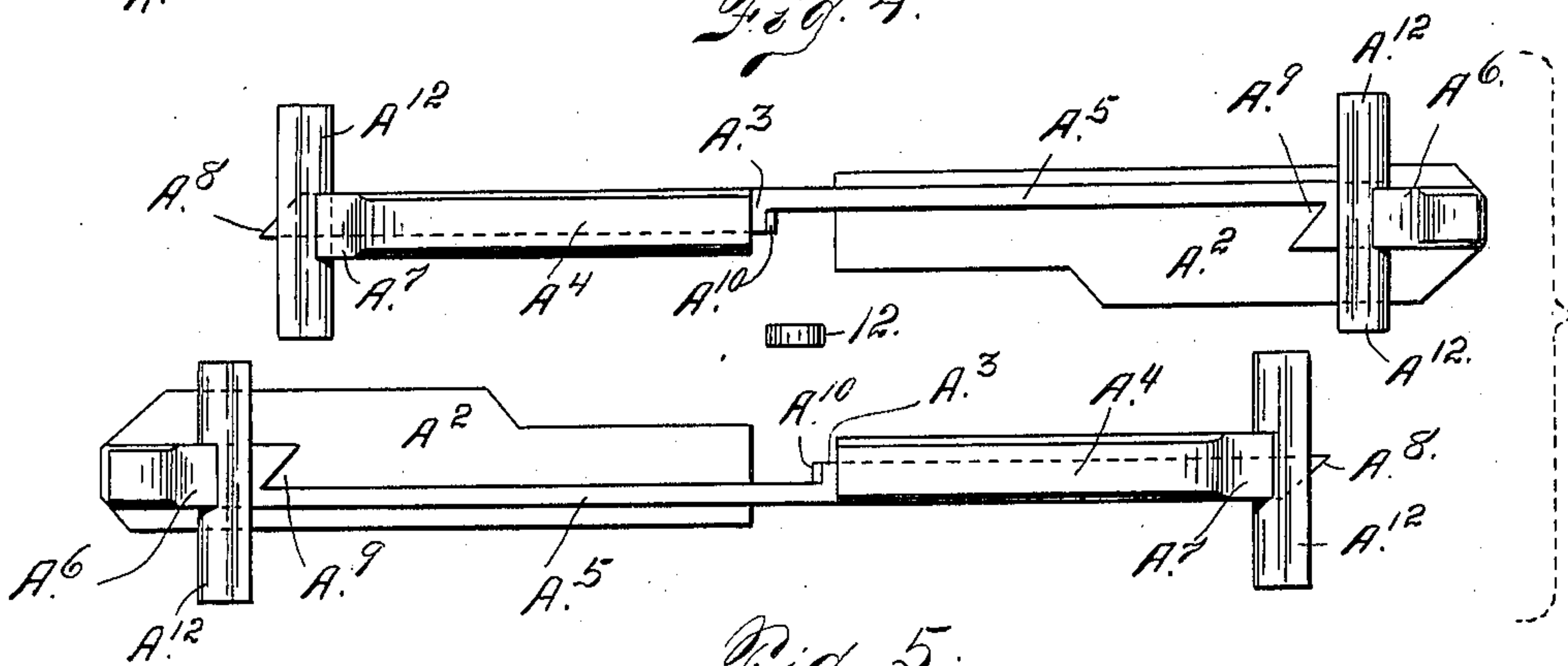


Fig. 5.

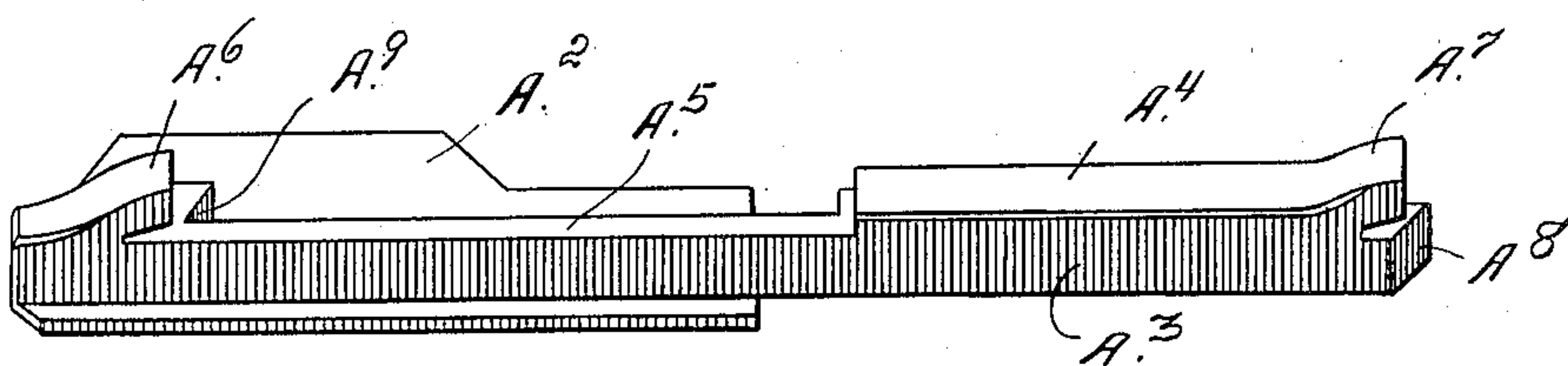


Fig. 6.

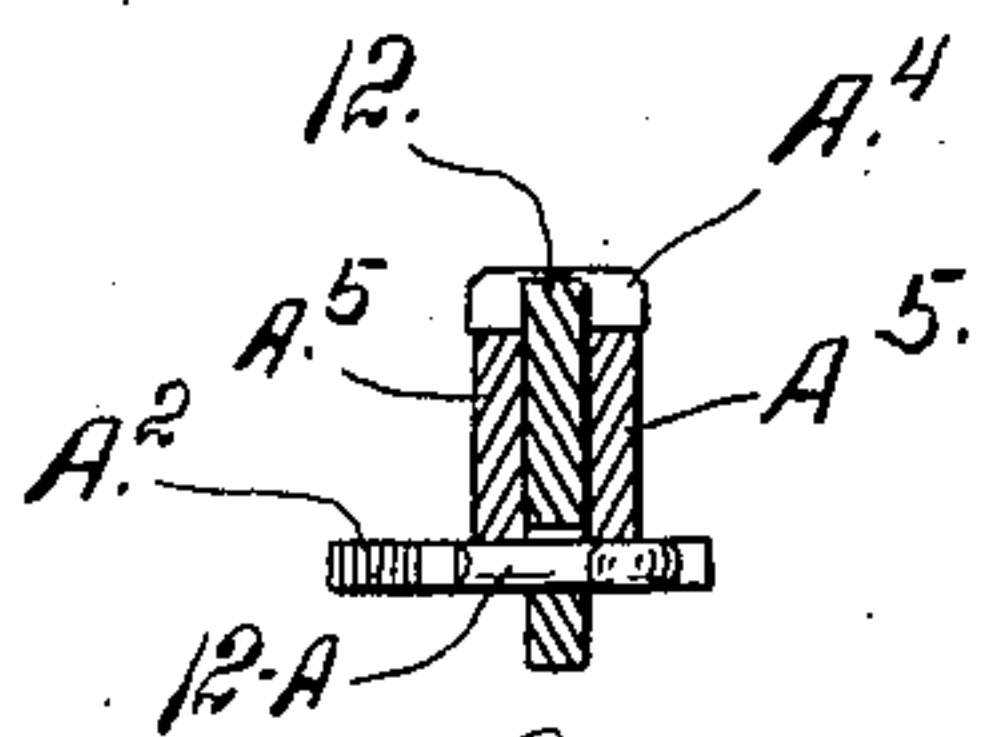


Fig. 7.

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UNITED STATES PATENT OFFICE.

JONATHAN M. HUNNEL, OF COLORADO SPRINGS, COLORADO.

METAL RAILWAY-TIE.

No. 877,567.

Specification of Letters Patent.

Patented Jan. 28, 1908.

Application filed December 3, 1906. Serial No. 346,185.

To all whom it may concern:

Be it known that I, JONATHAN M. HUNNEL, a citizen of the United States, residing at Colorado Springs, in the county of El Paso and State of Colorado, have invented certain new and useful Improvements in Metal Railway-Ties; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in metal railway ties, the said construction being adapted to hold the rails securely in position thus preventing them from spreading. Moreover my improved construction of tie, makes it practicable to entirely do away with bolts in connecting the abutting rail ends and also to entirely do away with detachable fastening devices in connecting the rails with the ties.

Each of my improved metal ties is composed of two substantially similar members adapted to interlock and grip the two rails of the track whereby the latter are properly spaced and securely held in suitable relation. The tie at the rail joints, is provided with longitudinal extensions which embrace the rail ends on opposite sides and serve as fish plates which, however, are formed integral with the tie members. The two members of each tie are securely interlocked by means of a centrally located wedge-shaped key.

Having briefly outlined my improved construction, I will proceed to describe the same in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 is a top plan view illustrating a number of my improved metal ties, showing the same connected in operative relation with the track rails. Fig. 2 is a section taken on the line 2—2 Fig. 1 looking in the direction of the arrow. Fig. 3 is a horizontal section taken through one of the ties on the line 3—3 Fig. 2. Fig. 4 illustrates in top plan view the several elements of my improved tie shown detached. Fig. 5 is a similar view showing the form of tie used at the rail joints. Fig. 6 is a

perspective view of one of the members of my improved tie. Fig. 7 is a cross section taken on the line 7—7 Fig. 2.

The same reference characters indicate the same parts in all the views.

Let A' designate each of the two members composing my improved metal tie which in its entirety may be designated by the letter A. As heretofore stated the two members of each tie, are practically identical. They are oppositely arranged, however, as best indicated in Figs. 4 and 5. Each of the members A' has a bed plate A² extending about half its length and adapted to form a support for the part A³ of the opposite member. This part A³ is provided at the top with a flange A⁴, adapted to overlap the bar A⁵ extending upwardly from the bed plate A², the said bar A⁵ of one member being overlapped by the flange or cap plate A⁴ of the opposite member. Each member A' is provided near the outer extremity of the bed plate A², with a lug A⁷, which overlaps the base and embraces the web of the rail 5 and coöperates with a similar lug A⁶ formed on the opposite end of the other member. Each tie member below its overlapping lug A⁷, is provided with a projection A⁸ having a beveled face, and adapted to enter a recess A⁹ of counterpart shape. When the projection A⁸ is in engagement with the recess A⁹, the two members are prevented from separating, since the recess A⁹ is so shaped as to prevent lateral displacement. Located at the inner extremity of each member A', is an offset or shoulder A¹⁰ whose walls are inclined to cause them to extend inwardly as they extend downwardly. When the two members are assembled, one of these offsets A¹⁰ is on each side of an opening which is surrounded at the two ends by these offsets, and at the sides by the parts A⁵ of the two members. When the two members are put together and their projections A⁸ have been forced into their corresponding recesses A⁹, a key or wedge-shaped locking device 12, is inserted and passes entirely through the tie members, the lower extremity being provided with an opening, through which the extremity of the key protrudes. This key extremity is provided with an opening into which a cotter pin or other suitable device

may be passed, to prevent the key from jumping out of position.

In the form of construction shown in Fig. 5, each extremity of each metal tie member, is provided on opposite sides of its lugs A^6 and A^7 , with extensions A^{12} which embrace the rail on opposite sides when the two members are assembled and form a rail joint in connection with the abutting extremities of the rails.

From the foregoing description the use of my improved metal tie will be readily understood. The rails and ties are laid simultaneously so that when the ties are assembled and secured by the fastening key 12, they are interlocked with the rails which completes the track laying as the workmen proceed. Wherever the abutting ends of two rails are located, the form of tie provided with the fish plate extensions is employed. With this exception the rail joint ties are the same as those located intermediate the rail ends.

While I have called this invention a metal tie, it is evident that it may be manufactured out of any other suitable material. It is believed to be thoroughly practicable to make it from metal, artificial stone or other suitable substance of sufficient durability for the purpose. It is evident; however, that the substance or material of which the tie is composed is not the essence of the invention, which lies in the special formation or structure of the tie whereby

it is adapted to perform the aforesaid functions.

Having thus described my invention, what I claim is:

1. A railway tie member, provided with a bed plate extending a portion of its length, an upwardly projecting bar portion extending its entire length, the said member being provided at each extremity with a rail-engaging lug, the said member having also a recess formed near one extremity, and a counter-part projection formed at the other extremity, the bar of the said member being provided with a centrally located offset and an overlapping cap.

2. A tie of the class described composed of two interlocking members, the extremities of the members being provided with lugs adapted to embrace the rails of the track on opposite sides when the members are in the assembled relation, and suitable means for securing the tie members in the assembled relation comprising recesses formed near their opposite extremities, counterpart projections formed at the extremities opposite the recesses, and centrally located offsets and overlapping caps for the purpose set forth.

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

JONATHAN M. HUNNEL.

Witnesses:

DENA NELSON

A. J. O'BRIEN.