

No. 841,009.

PATENTED JAN. 8, 1907.

T. A. GALT.
RAILWAY TIE.

APPLICATION FILED JAN. 15, 1906.

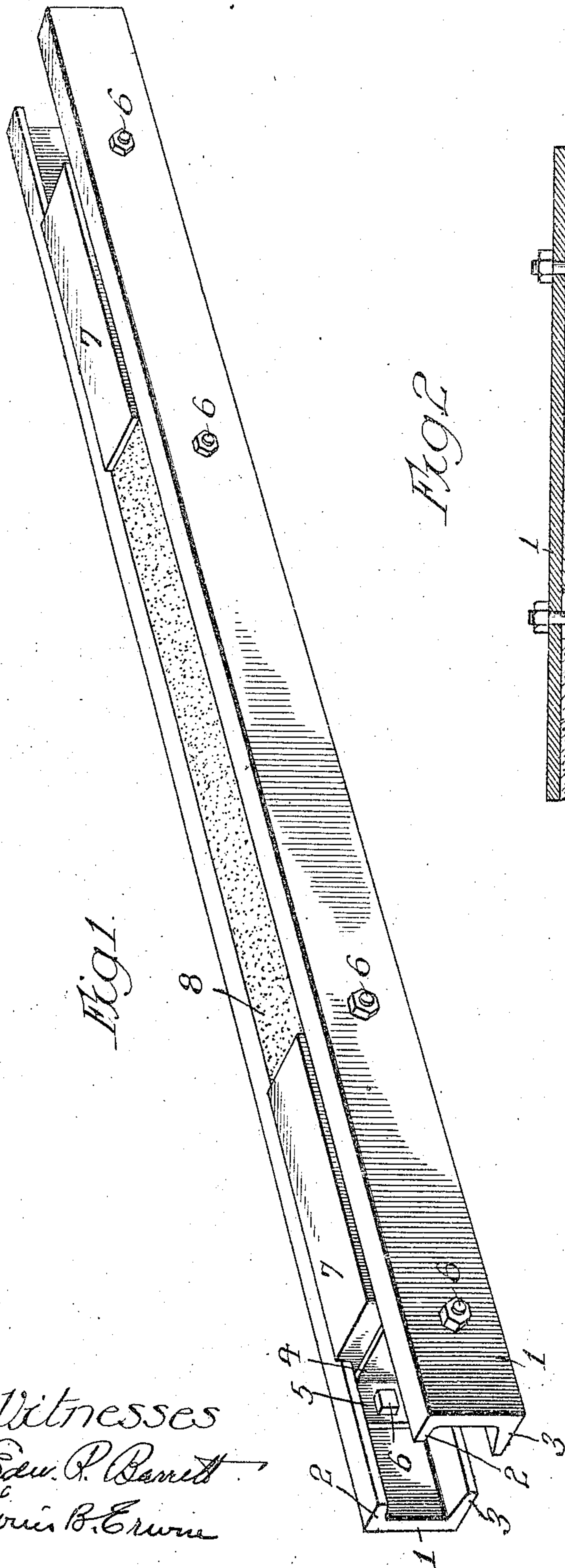


Fig. 1.

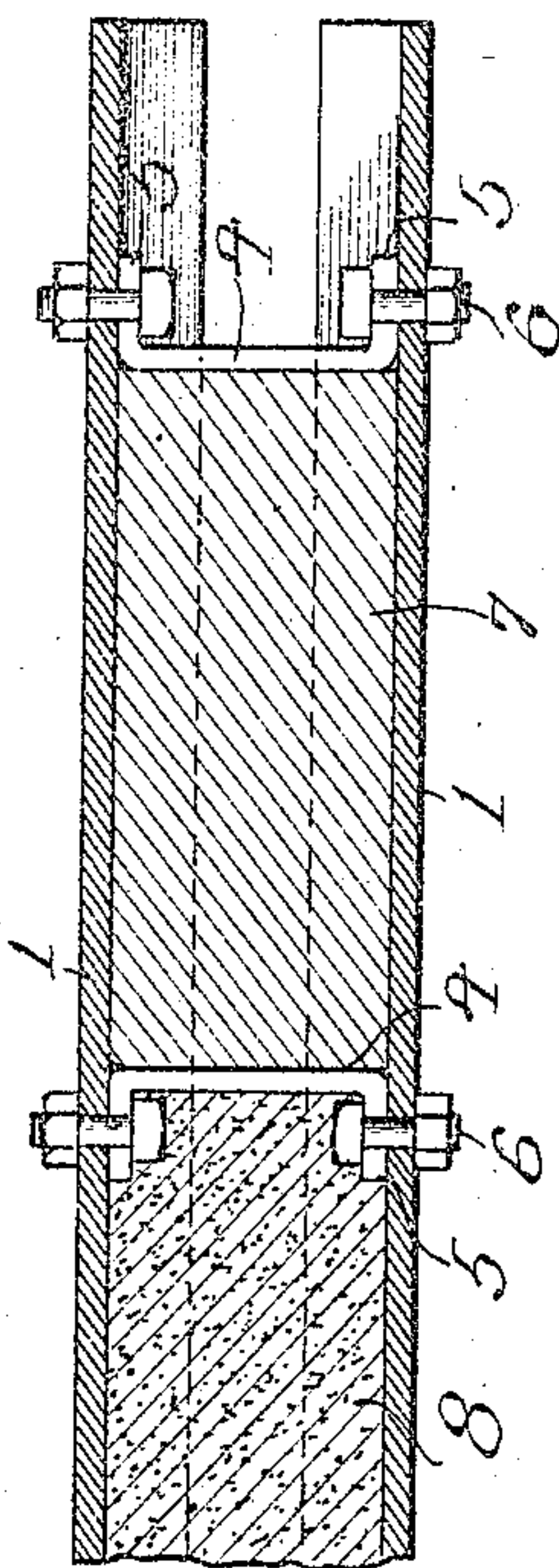


Fig. 2.

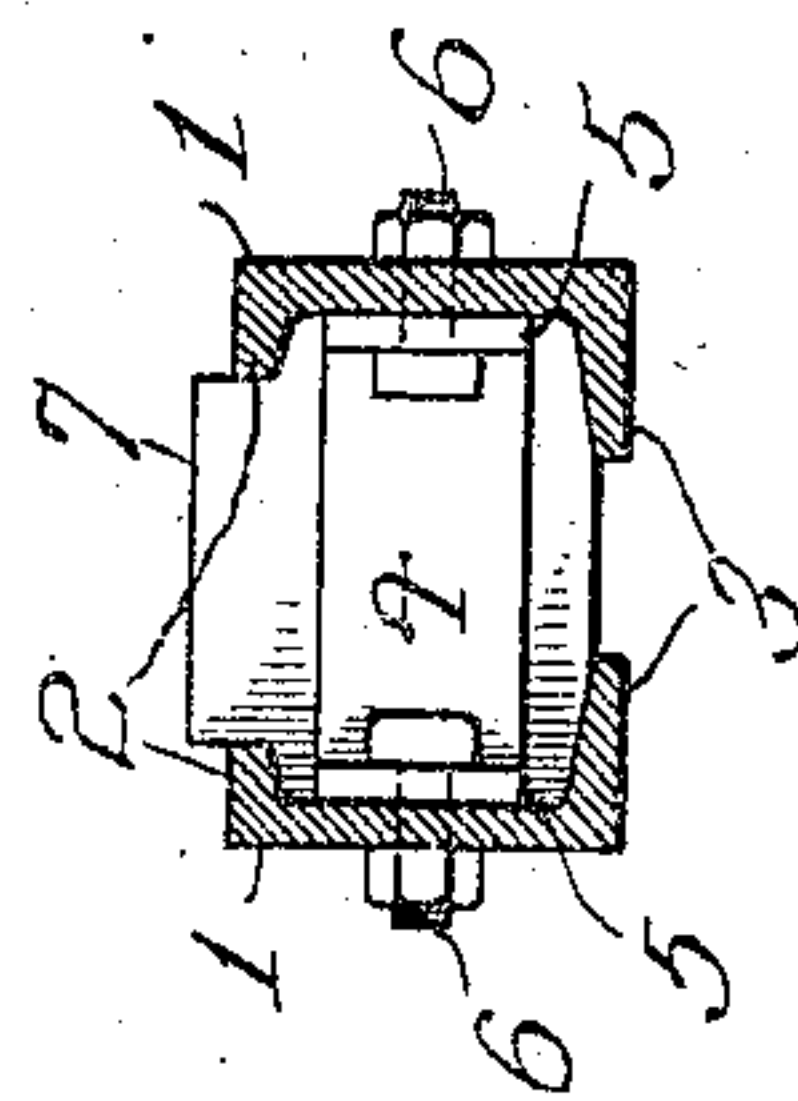


Fig. 3.

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UNITED STATES PATENT OFFICE,

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RAILWAY-TIE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS A. GALT, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Railway-Ties, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a railway-tie having a frame or shell structure of channel or flanged iron and wooden bearing members for supporting the rails maintained in fixed position in the frame by the flanges thereof and removable retaining members in such manner that they may be readily taken out and replaced whenever they have deteriorated by decay or wear without taking up the frame portion of the tie.

It has for its object the production of a tie which shall afford a firm yet elastic support to the rails like the ordinary wooden tie, but in which the wooden bearing part may be readily replaced in the manner mentioned whenever it becomes necessary. Inasmuch as a comparatively short length of wood is sufficient for the bearing portion of my improved tie and as short lengths of wood useless for ordinary wooden ties can be utilized in my construction it is evident that I attain great economy of wood—the perishable portion of the tie and a material which is steadily becoming more scarce and costly.

In the drawings, Figure 1 is a perspective of a tie embodying my invention; Fig. 2, a horizontal section of one end of the tie on a plane through the axes of the short connecting-bolts; and Fig. 3 an end view of the tie.

The same numerals of reference indicate the same parts in all the views.

Referring to the drawings, the metal frame or shell portion of the tie consists of two pieces of channel-iron 1 1, having vertical web portions, and top flanges 2 and bottom flanges 3, disposed inwardly toward each other, the top flanges being preferably narrower than the bottom ones in order to provide for a broad projecting bearing-surface upon the wooden portion of the tie, hereinafter described. These pieces of channel or flanged iron are spaced apart by two pairs of flat bars or strips 4, having their ends bent at right angles to form lugs or flanges 5 the pairs of spacing-bars being so disposed that the rails of the railway will respectively lie directly over the points midway between the

members of the respective pairs. The lugs 5 of each pair are turned away from each other, as illustrated in Fig. 2, in order that the space between them may present a plane surface at the end, and the parts are secured together by short bolts 6 through said lugs and the adjacent pieces of channel-iron. The spacing-bars 4 also serve as stops or retaining members for the bearing portions of my tie, which consist of wooden sections 7, of such shape as to be received and fit snugly between said stops within the channels formed by the flanges of the frame members 1 1, but which project a short distance above the top thereof between the flanges 2 2, so that the rails will be supported entirely upon such wooden sections. The wooden portion of the tie does not, however, project downward between the lower flanges 3 3 of the frame, and the lower edges of the flanges tend to restrain the tie from lateral displacement. The size and proportions of the wooden portion of my tie, as illustrated, are such that the rails may be secured thereto by ordinary iron spikes, such as are used in putting down rails upon common wooden ties, although, of course, the rails may be fastened to the tie in any other suitable manner, if desired. The space between the wooden portions of the tie may be filled flush with the top of the flanges 2 with concrete 8, as illustrated in the drawings, or it may be left open in the process of constructing the tie and filled in with sand or other ballast when the tie is laid in the road-bed.

From the construction described it will be readily understood that when any wooden bearing portion of a tie has deteriorated and it is desired to replace it it may be readily removed by taking out the spikes which fasten the rail to it and removing the adjacent outer spacing and stop member 4, when it can be driven out of the end of the frame structure of the tie and a new wooden section inserted and secured in place without in any way disturbing or tearing up the bed of the railway-track.

Having thus fully described my invention, I claim—

1. In a railway-tie, a frame or shell composed of two members having vertical portions and inwardly-disposed top and bottom flanges forming ways, spacing members securing the frame members together and forming stops, and bearing members fitting the space between said stops within the ways.

2. In a railway-tie, a frame or shell of flanged iron forming ways for the insertion of bearing members, stops intermediate the center of the tie and the bearing members, elastic bearing members in said ways abutting against said stops, and removable stops abutting against the opposite and outer ends of said bearing members to hold them in place.
3. In a railway-tie, a frame or shell of flanged iron forming ways for the insertion of bearing members, spacing members intermediate the center of the tie and the bearing members secured to the frame members to secure them together and also serving as stops, bearing members in said ways abutting against said stops, and removable stops abutting against the outer ends of said bearing members to hold them in place.
4. In a railway-tie, a frame or shell composed of two members having vertical portions and inwardly-disposed top and bottom flanges forming ways, two pairs of spacing members forming stops consisting of flat strips having their ends bent at right angles to form lugs, the lugs of each pair being disposed away from each other and secured to the frame members by bolts, and bearing members consisting of wooden sections disposed between said spacing and stop members within said ways.
5. In a railway-tie, a frame or shell composed of two members having vertical portions and inwardly-disposed top and bottom flanges forming ways, the upper flanges being narrower than the lower, bearing members consisting of wooden sections fitting within said ways, and means for securing the frame members together and the bearing members in place without perforating the latter.
6. In a railway-tie, a frame or shell composed of two members having vertical portions and inwardly-disposed top and bottom flanges forming ways, the upper flanges being narrower than the lower, bearing members consisting of wooden sections fitting within said ways and having their upper surfaces projecting above the upper surface of the frame members, and means for securing the frame members together and the bearing members in place between them.

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