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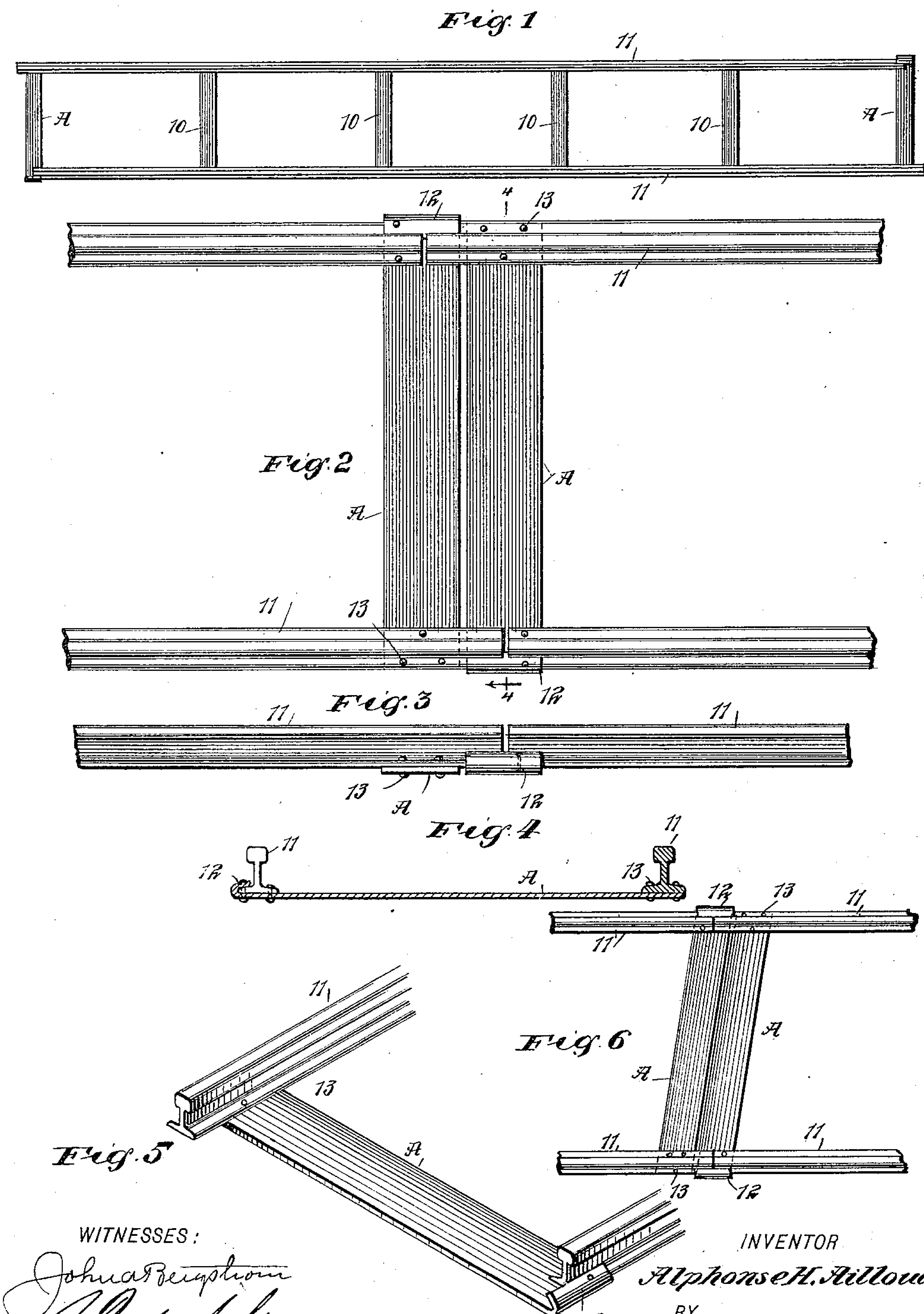
A. H. AILLOUD.

JOINT FOR PORTABLE RAILWAYS.

(Application filed June 27, 1900.)

(No Model.)



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ALPHONSE HUBERT AILLOUD, OF MERIDA, MEXICO.

JOINT FOR PORTABLE RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 658,608, dated September 25, 1900.

Application filed June 27, 1900. Serial No. 21,737. (No model.)

To all whom it may concern:

Be it known that I, ALPHONSE HUBERT AILLOUD, a citizen of the Republic of France, and a resident of Merida, Yucatan, Mexico, have invented a new and Improved Joint for Portable Railways, of which the following is a full, clear, and exact description.

The object of this invention is to provide a joint for the rails of portable railways which will decrease the amount of material used in each section of road without, however, reducing the strength of the structure and at the same time reduce the cost and price of workmanship to the manufacturer without prejudicing the quality of the product or the interests of the customer.

The invention consists in the novel construction and combinatian of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a section of a railway in which two rails are represented and the manner in which the rails are connected. Fig. 2 is an enlarged plan view of a section of track, illustrating the manner in which the rails of opposing sections are connected by the improved device. Fig. 3 is a side elevation of the sections of the rails shown in Fig. 2. Fig. 4 is a transverse section taken substantially on the line 4 4 of Fig. 2. Fig. 5 is a perspective view of the end portions of the rails of one section of a track; and Fig. 6 is a plan view of a portion of a track, showing the manner in which the rails are brought together, but wherein the joints in the parallel rails of the track are in transverse alinement.

Ordinarily sleepers 10 are provided intermediate of the ends of parallel rail-sections 11, and the improved joint is made by having the first and last sleepers A of every section of portable railway overlap the extremity of one of the rails, the left-hand one, for instance, at one end of the section and the right-hand one at the opposite end of the section, and one end of each rail overlaps a sleeper A to an equal length, as is clearly shown in Figs. 1 and 2. Thus it will be observed that one rail at one end will extend transversely on an end sleeper A to a point at or near its center, while the opposing end of the same rail will project beyond the opposite sleeper A a corresponding distance, and the opposing rail is reversely applied to the two end sleepers A. The rails are attached to the intermediate sleepers 10 in any suitable or approved manner.

The sleepers A not only each project beyond the end of a rail, but extend parallel with each other and laterally of the rails beyond the outer sides of the rails, and opposite ends of opposing sleepers A are bent upward and inward over the flanges of the rails 11, thus forming shoes or sheaths 12, in which the free ends of the connecting-rails which project beyond their end sleepers are held in such manner that when once the connecting-rails are pushed or forced or placed in the shoes the said rails cannot move up or down or sidewise, as is clearly shown in Figs. 2 and 3. The rails 11 are secured to the end sleepers A by rivets 13, bolts, or their equivalents, and these bolts or rivets 13 pass through the flanges of the rails. Thus it will be observed that each end sleeper A is straight throughout its length from one end, while the opposite end of the sleeper is provided with an inturned shoe, socket, or sheath 12, which is fitted to the bottom and outer surface of the outer flange of a rail.

It will be observed by reference to Figs. 2 and 5 that the end sleepers A are at right angles to the rail and the joints between opposing ends of the rails are out of transverse alinement. It is, however, desirable that both ends of opposing rails should be on a line at right angles to the rails, as shown in Fig. 6, and this arrangement may be secured by placing the end sleepers A diagonally between the rails of the track instead of straight across, as is also shown in Fig. 6. The relative position of the parallel rails, as shown in Figs. 1, 2, and 5, is not the preferred construction.

The advantages of this improved joint over many others in actual use may be cited as follows:

First. The connecting ends of the rails instead of touching the bare ground, as happens

with other joints formed in portable railways, are supported by and on sleepers, thus preventing the liability to bend down and at the same time avoiding or greatly reducing the jolting of rolling-stock.

Second. This construction is stronger than when the ordinary fish and sole plate joint is employed by reason of the small size of portable rails and necessarily the very thin and narrow material which is to be used in the construction of the fish-plates and sole-plates, which material is easily bent down and accidentally broken. The improved joint, on the contrary, has no minute parts to be broken by rough usage, and its very shape prevents such accidents, the outer curvature of the shoe imparting to said shoe great rigidity.

Third. There is an appreciable reduction in weight in sections of a portable railway when constructed as described and for the same length of rails as compared with like sections of other railways of which I have knowledge, and the fish and sole plates and their respective rivets being done away with less material and less labor are required, and a consequent saving of time is secured in manufacturing. Then, again, the decrease in weight causes a proportionate reduction in freight and carriage expense for the buyer, the said reduction being manifested to a great degree, for instance, in the case of a foreign buyer.

The improved joint has all the advantages of the so-called "hybrid" joint with none of its objections as to wear and tear, and it is adaptable to curves, switches, crossings, turnplates, and other rail accessories.

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

1. In a railway, the combination with opposite rails, of sleepers arranged in pairs close together, one end of each sleeper having rigid attachment to a rail, the end attachment of one sleeper being opposite to that of the other sleeper, and a clamp on each sleeper engaging the ends of two abutting rails opposite the rail to which the sleeper is rigidly attached, substantially as specified.

2. In portable railways, parallel rails, sleepers for the end portions of said rails, one rail end in each end portion of every section of two rails extending to a central transverse point on the end sleeper, while the end of the opposite or connecting rail extends a corresponding distance beyond the outer longitudinal edge of its own sleeper, each end sleeper being secured to both rails and each sleeper being provided with a shoe at one end, which embraces the outer flange of a rail at that end portion of the rail which does not cross the sleeper, as set forth.

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

ALPHONSE HUBERT AILLOUD.

Witnesses:
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