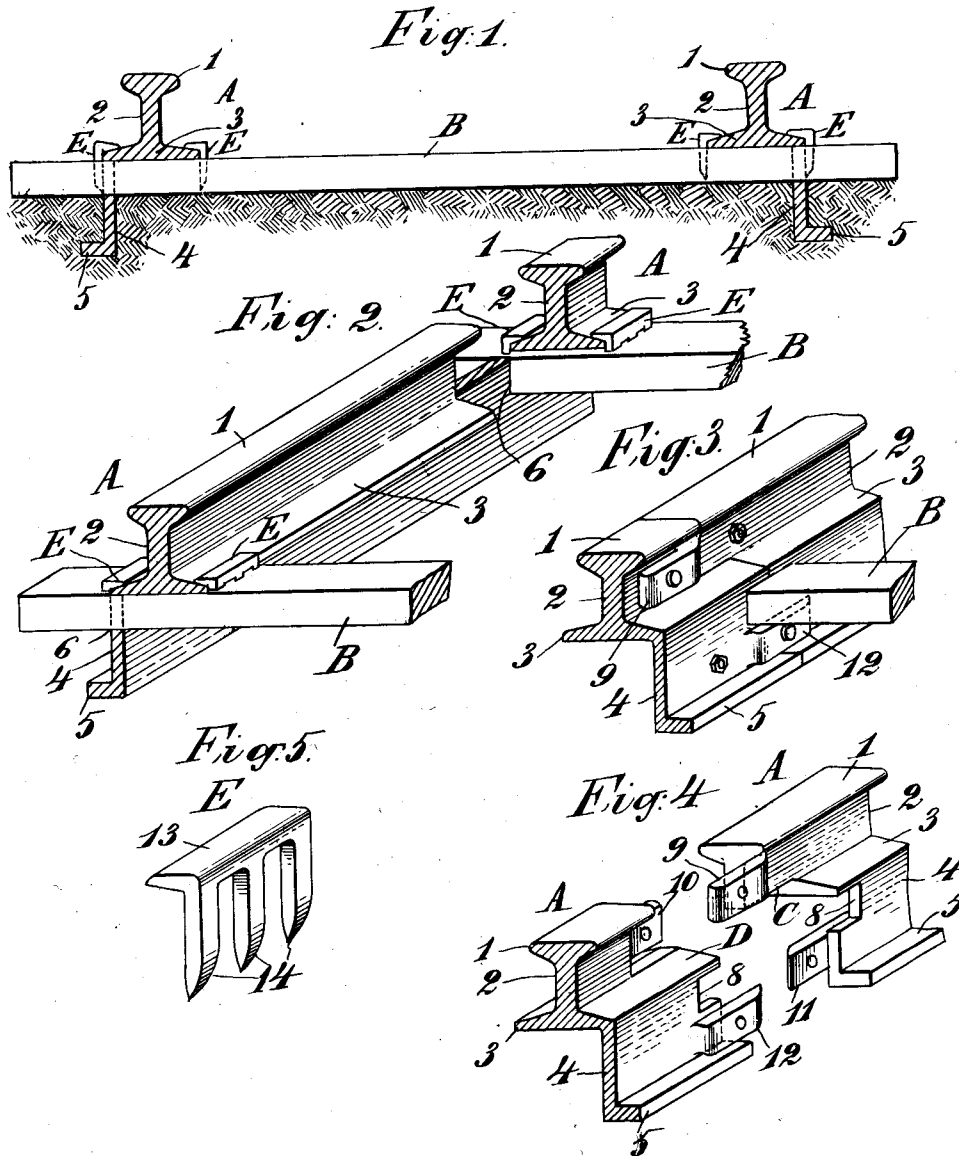


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RAIL.
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1,034,928.

Patented Aug. 6, 1912.



WITNESSES:

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ANNIE O'SULLIVAN, OF NEW YORK, N. Y.

RAIL.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ANNIE O'SULLIVAN, a citizen of the United States, and a resident of the city and State of New York, have invented certain Improvements in Rails, of which the following is a specification.

This invention relates to certain improvements in rails and has relation more particularly to a device of this general character which is employed in railroad construction, and it is the object of the invention to provide a device of this general character wherein means are provided for securely and effectually holding the rail in operative position and in providing an effective union or joint for the meeting ends of adjacent rails and presenting certain features of novelty and advantage whereby increased durability is attained.

The invention consists in certain novel features of the construction, and combinations and arrangements of the several parts of the rail whereby certain important advantages are attained, and the rail is rendered less expensive in structure and operation and more convenient and effective in use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the appended claims.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification and wherein:

Figure 1, is a view taken transversely of a road bed constructed in accordance with my invention; Fig. 2, is an enlarged fragmentary view partly in perspective and partly in section illustrating certain details of my invention as disclosed in Fig. 1; Fig. 3, is a view similar to Fig. 2 and illustrating a joint or union of the meeting ends of adjacent rails; Fig. 4, is a view similar to Fig. 3 with the meeting ends of adjacent rails in a separated position; and Fig. 5, is an enlarged detached view in perspective of the rail retaining means that may be employed in connection with my invention.

In these views A, A, represent the rails which are provided with the head portions 1, 1, to be engaged by the wheels of the vehicle traveling over said rails when assembled into operative position as indicated in Fig. 1, and being provided, as usual with the web portions 2, 2, and the base portions 3, 3. The base portion 3 of each of the rails A,

A, is provided with the depending portion or member 4 which is adapted to be embedded within the supporting material for the rails and the ties B therefor. This depending portion or member 4 may be of any predetermined depth and of any desired width. While such portion or member 4 is herein shown in the form of a depending flange I wish to state that it may be of a thickness equal to the width of the base 3 or of less width, as shown, or of a greater width, according to the requirements and necessities of practice. The depending portion or member 4 is provided with the outstanding portion 5 herein shown as a flange disposed at substantially right angles to the portion or member 4 adjacent its lower longitudinal edge portion and serves as an anchoring means to prevent accidental displacement of the rail A, or more particularly the depending portion or member 4 from within the supporting material.

As herein shown the under or bottom surfaces of the bases 3, 3 of the rails A, A are adapted to rest on the ties B, arranged as ordinarily, across the road bed or in a direction perpendicular to the rails A, A and in order that this result may be obtained the laterally directed openings 6 are provided through the depending portions or members 4, 4 of the rails through which the ties B, B are adapted to pass as is believed to be clearly apparent in Figs. 1 to 3 of the drawings, it being particularly noticed that the openings 6 are so produced in each of the rails A, A, or the depending portions or members 4, thereof as to be in alinement when placed into operative position, as shown in Fig. 1, which permits a ready insertion or application of the ties beneath the rails A, A proper.

In order to effectually hold the rails A, A, to the ties B, B I have found in practice that the best results may be obtained by employing the multi-pronged retaining device particularly illustrated in Fig. 5 and indicated at E. This device comprises the head or flange portion 13 adapted to overlap the upper surfaces of the base portions 3, 3, and the depending spaced prongs 14 formed integral with the head or flange 13 and adapted to enter into the ties B, B in the manner of the single spikes now commonly employed in railroad construction. By this arrangement I have found that the rails are securely clamped or held to the ties

owing to the greater contact of the head or flange 13 with the base portion 3 which also results in reducing to a minimum the possibility of the rails spreading.

5 In order to effect a strong and durable union or joint between the meeting ends of adjacent rails I have shown in Figs. 3 and 4, the under portion of one rail cut away as at C to overlap the extended portion of the adjacent rail, as at D. Produced integrally with the web 2 of one of the rails is the extended lug 9 arranged in a direction longitudinally of the rail adapted to overlap the web 2 of the adjacent rail and to the opposite side of the web of the second rail is integrally produced a second lug 10 extending in a direction opposite to that of the lug 9 and operating in the same manner and each of these lugs 9 and 10 is provided with a bolt opening adapted to aline with such an opening in the webs of the rails for the passage of a clamping bolt in a manner which is believed to be obvious. The depending portion or member 4, is also provided adjacent its lower longitudinal edge portion with the projecting lug 11 extended in a direction lengthwise of the rail and adapted to overlap the end portion of the depending member or portion of the adjacent rail, and such adjacent rail has produced on the opposite side of its depending portion or member 4 a similarly located lug 12. These lugs 11 and 12 are also provided with suitable openings adapted to register with openings in the portions 4, 4, for the passage of clamping bolts in a well known way. In order to further reinforce the union or joint of the meeting ends of adjacent rails and to prevent undue pounding at such union or joint, it is to be observed that at the proper point in the end of each rail there is provided the cut out portion 8 which, when the rails are applied in operative positions register with a similar cut out portion in the end of the second rail to form an opening similar to one of the openings 6 hereinbefore referred to in order to permit a tie B, as shown in Fig. 3, to be positioned directly beneath the meeting ends of the rails whereby the shock at such joint incident to the passing of a vehicle thereover will be received directly on the tie.

From the foregoing description of my improvements it is believed to be obvious that my invention is particularly well adapted

for use by reason of the effectiveness with which it is held in operative position and by reason of the efficient union or joint between the meeting ends of adjacent rails and it is also believed to be obvious from the foregoing description that a rail constructed in accordance with my invention is susceptible of considerable modification without material departure from the spirit and scope of my invention as herein contained and for this reason I do not wish to be understood as limiting myself to the precise construction herein shown and described.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A rail having a base portion, a member depending from such base, said depending member having an opening therethrough, a tie extended through the opening of the depending member, and means engaging the base portion and the ties to hold the rail against displacement.

2. A rail having a base portion, a member depending from such base, said depending portion having an opening therethrough in a direction transverse of the rail, a tie extended through said opening, and means engaging the base portion and the rail for holding the rail against displacement.

3. In combination, a plurality of rails adapted to be placed end to end one relatively to the other, each of said rails having a base, and a portion depending from said base, said depending portion having a portion cut away at its ends, the cut away portions of one rail being adapted to register with the cut away portion of an adjacent rail to produce an opening, and a tie extending through the opening thus produced.

4. A rail having a base portion, a member depending from said rail, and lugs extending lengthwise from said rail and depending member, said lugs being positioned at opposite sides, said lugs being adapted to engage the adjacent end portion of a second rail.

In witness whereof I have hereunto signed my name this 7 day of Oct. 1911, in the presence of two subscribing witnesses.

ANNIE O'SULLIVAN.

Witnesses:

ROBT. MUNNISTER,
W. M. GILDERSLEVE.