

No. 618,381.

Patented Jan. 24, 1899.

H. HANSEN.

SLEEPER SUPPORT FOR RAIL JOINTS.

(Application filed Nov. 11, 1898.)

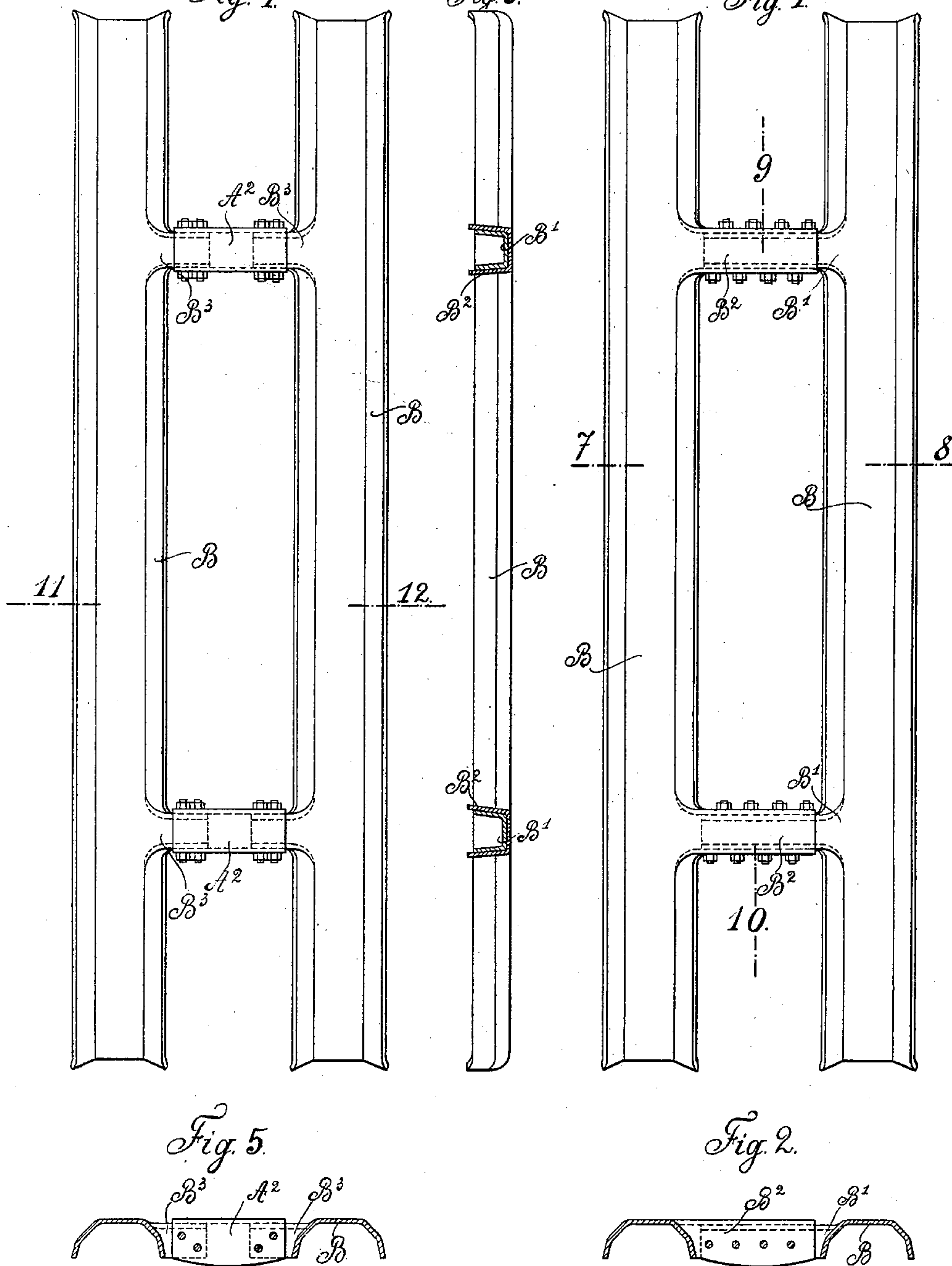
(No Model.)

Fig. 4.

Fig. 3.

Fig. 1.

2 Sheets—Sheet 1.



Witnesses:

Adm  
Barbara Chambers

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by Edward P. Attorney.

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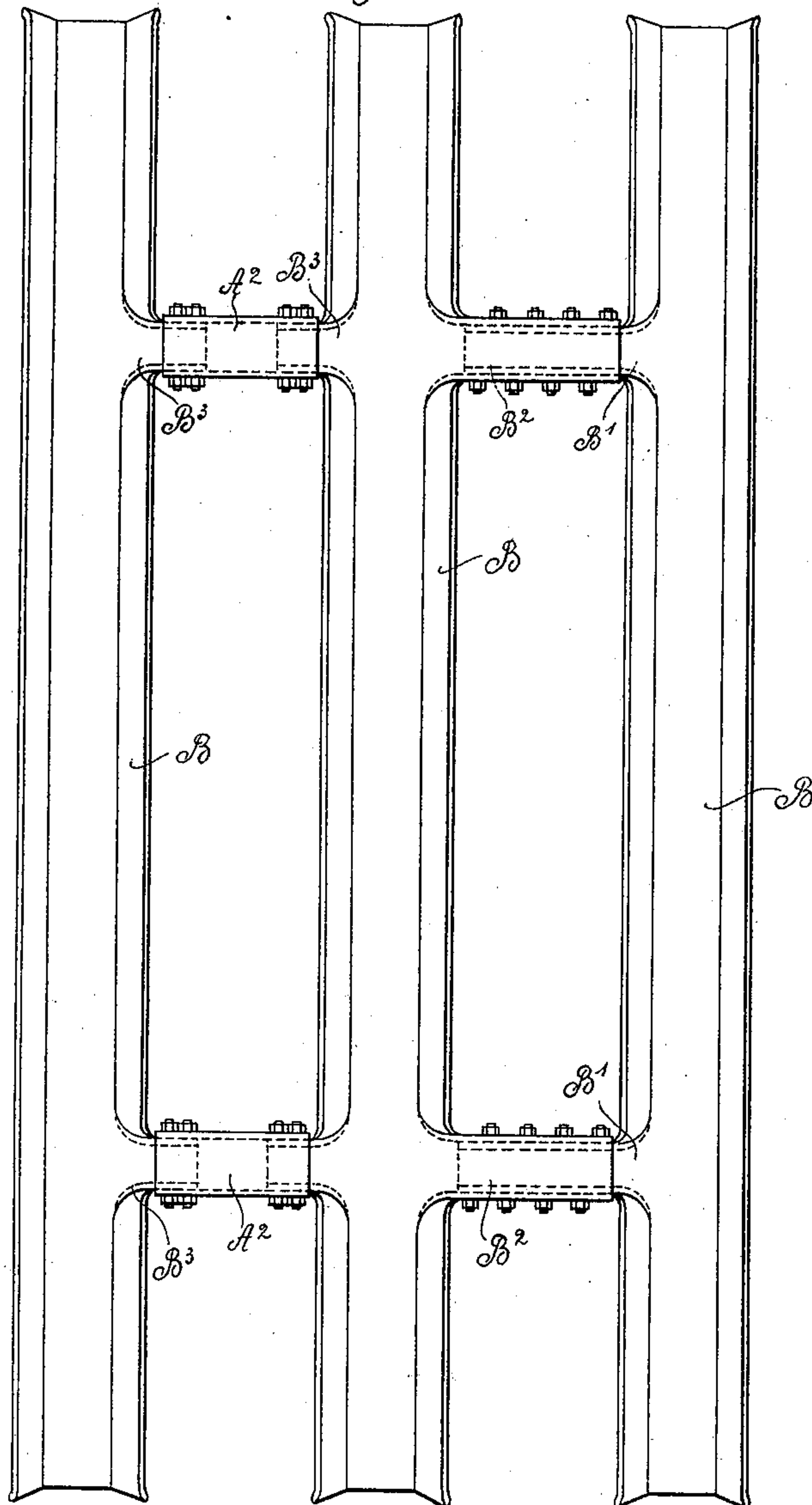
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2 Sheets—Sheet 2.

*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

HEINRICH HANSEN, OF AIX-LA-CHAPELLE, GERMANY.

## SLEEPER-SUPPORT FOR RAIL-JOINTS.

SPECIFICATION forming part of Letters Patent No. 618,381, dated January 24, 1899.

Application filed November 11, 1898. Serial No. 696,191. (No model.)

*To all whom it may concern:*

Be it known that I, HEINRICH HANSEN, civil engineer, a subject of the King of Prussia, German Emperor, residing at Aix-la-Chapelle, in the Province of the Rhine, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Sleeper-Supports for Rail-Joints, of which the following is a specification.

10 This invention relates to an improved sleeper-support for rail-joints, whereby the disadvantages of the existing construction of rail-supports by means of a double or multiple joint-sleeper are avoided.

15 It consists in constituting such supports of transverse sleepers, which are for this purpose connected together by means of lateral extensions or connecting-pieces running in the direction of the rails, so as to form a kind of continuous framework. The said connect-  
20 ing-pieces thus constitute parts of longitudinal sleepers, and according to the mode of fastening for the rails employed they support the rail-joints either directly or as suspended joints.

In consequence of the rigid integral inter-connection of the two or more joint-sleepers all shifting thereof, and consequently all change of position of the connecting parts that support the rail-joints, is entirely pre-  
30 vented. The fish-plates and bolts are freed from all strain by the said connecting-pieces and the rail-joint is protected from injury, and the movements of the connecting parts being  
35 reduced to a minimum a correspondingly quieter motion of the rolling-stock will result. With such direct support of the rail-joints by connecting-pieces or longitudinal sleepers, which connect the joint-sleepers rig-  
40 idly together, any flattening of the abutting heads of the rails by the concussive action of the passing wheels is prevented, and consequently no material difference of height of the two abutting rails or rail ends can ensue.

45 In order to make my invention more clear, I refer to the accompanying drawings, in which similar letters denote similar parts throughout the different views, and in which—

50 Figure 1 is a plan of a rail-joint support constructed according to my invention. Fig. 2 is a cross-section in line 7 8 of Fig. 1. Fig. 3 is a longitudinal section in line 9 10 of Fig.

1. Fig. 4 is a plan of a slightly-modified form of construction. Fig. 5 is a cross-section in line 11 12 of Fig. 4, and Fig. 6 is a plan of a  
55 form of construction in which the rail-joint support is composed of three sleepers.

In the form of construction represented in Figs. 1, 2, and 3 the sleepers B are provided with lateral extensions B' B<sup>2</sup>, the size of which  
60 is such that they can be fitted upon or over each other. In the construction shown the branch pieces B<sup>2</sup> overlap the pieces B', the two combined pieces constituting a connect-  
65 ing-piece for the sleepers running parallel to the rails. The connection of the branch pieces with each other is here shown to be, by way of example, by screw-bolts and nuts.

In the other form of construction, Figs. 4 and 5, the lateral extensions B<sup>3</sup> of the sleep-  
70 ers B are all of equal size, and there are special connecting-pieces A<sup>2</sup>, which fit upon or over the extensions B<sup>3</sup>, with which they may be connected by screw-bolts and nuts or equivalent means.

75 The height of the parts B<sup>2</sup>, Figs. 1, 2, and 3, or A<sup>2</sup>, Figs. 4 and 5, is in the two cases shown mainly the same as that of the sleepers B; but the middle portion of said parts may be raised so much above the level of the sleepers  
80 as corresponds to the height of the supporting-plate, (not shown,) so that although the rail-joints do not rest directly upon the transverse sleepers, but upon the hook-plates, yet the rails on each side of the joint rest di-  
85 rectly upon the parts B<sup>2</sup>, Figs. 1 to 3, or A<sup>2</sup>, Figs. 4 and 5, which serve as longitudinal sleepers. Consequently on the one hand there can be no sinking of the rail ends under the weight of the rolling-stock, and on the  
90 other hand the pressure exerted by the rail ends upon the part B<sup>2</sup> or A<sup>2</sup> is transmitted to both joint-sleepers, so that all change of the respective heights is practically impossible.

95 As already mentioned in the preamble, more than two transverse sleepers can be connected together in the described manner. If, by way of example, the improved support for rail-joints is composed of three transverse sleepers, the middle one will have two such  
100 projections as B' or B<sup>2</sup> or B<sup>3</sup> on each side, whereas the two other sleepers will be provided with such projections on one side only, as will be clear without any further detailed

description. I have shown such a form of construction in Fig. 6, in which the two forms before described are combined, as is to be seen from said figure without any further detailed description. I wish it, however, to be understood that the connections between each two of the three sleepers may be either such as shown in Fig. 1 or such as shown in Fig. 4.

10 Having now described the nature of my invention, what I claim, to be secured by Letters Patent of the United States, is—

1. In combination, the two ties, each having a projection of channeled form extending  
15 laterally therefrom, one projection having a larger channel than the other to receive the

other and the bolts passing through the channeled projections, substantially as described.

2. In combination, the two sleepers and the channeled connections between them, which connections include integral lateral projections of channeled form on the sleepers, one of said connections being larger and receiving the other channeled part and the bolts passing through the same, substantially as  
25 described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

HEINRICH HANSEN.

Witnesses:

ALFAUS ERVEUS,  
CARL HANSEN.