No. 766,033. PATENTED JULY 26, 1904.

C. F. HALL.

RAIL JOINT.

APPLICATION FILED DEC. 10, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

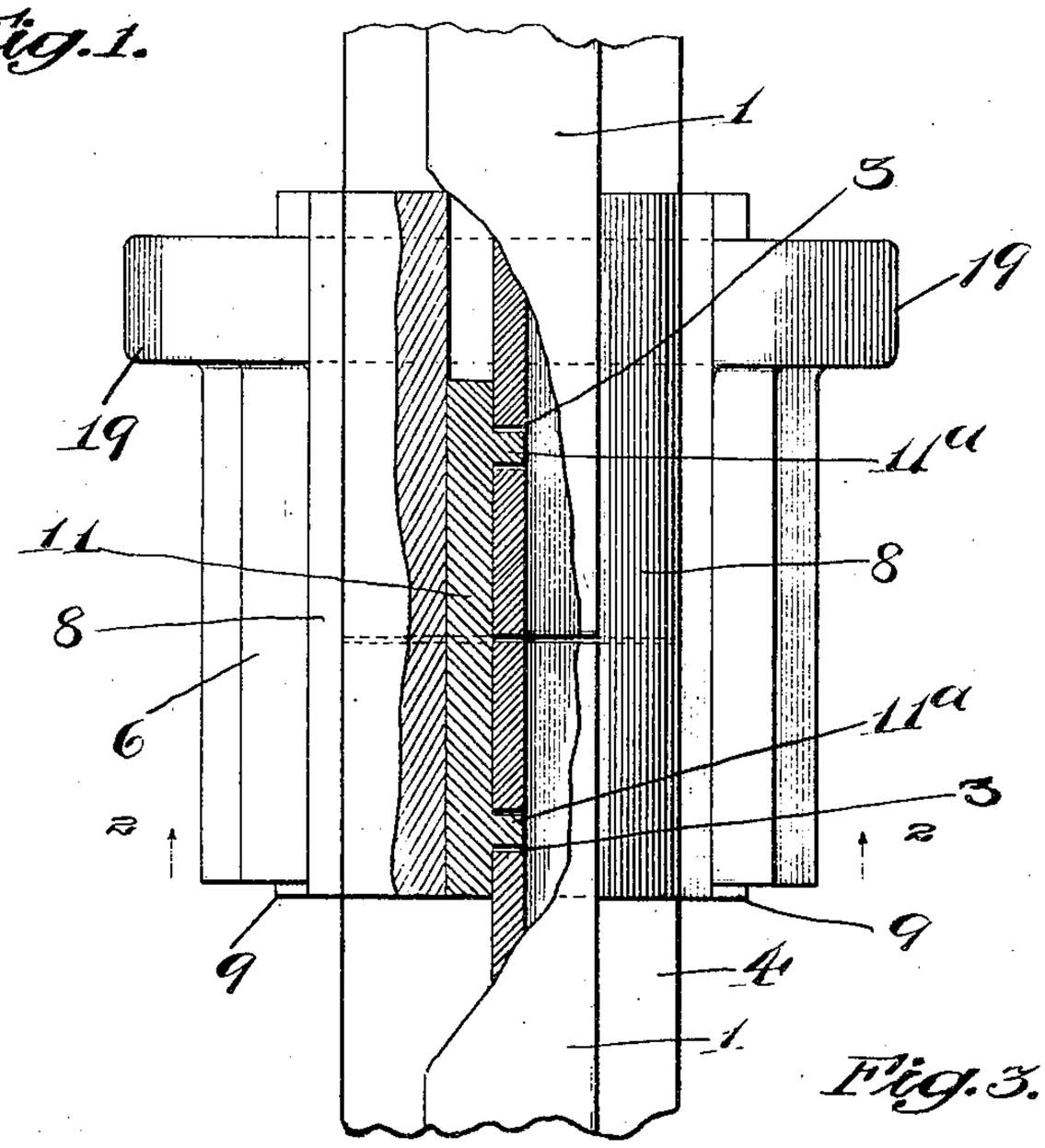


Fig. 3.

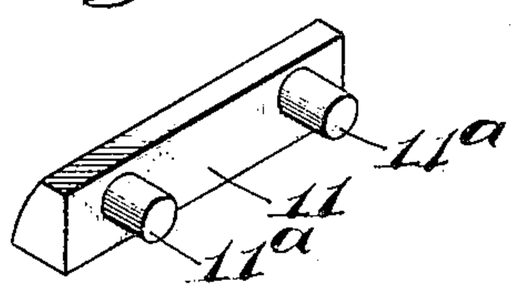
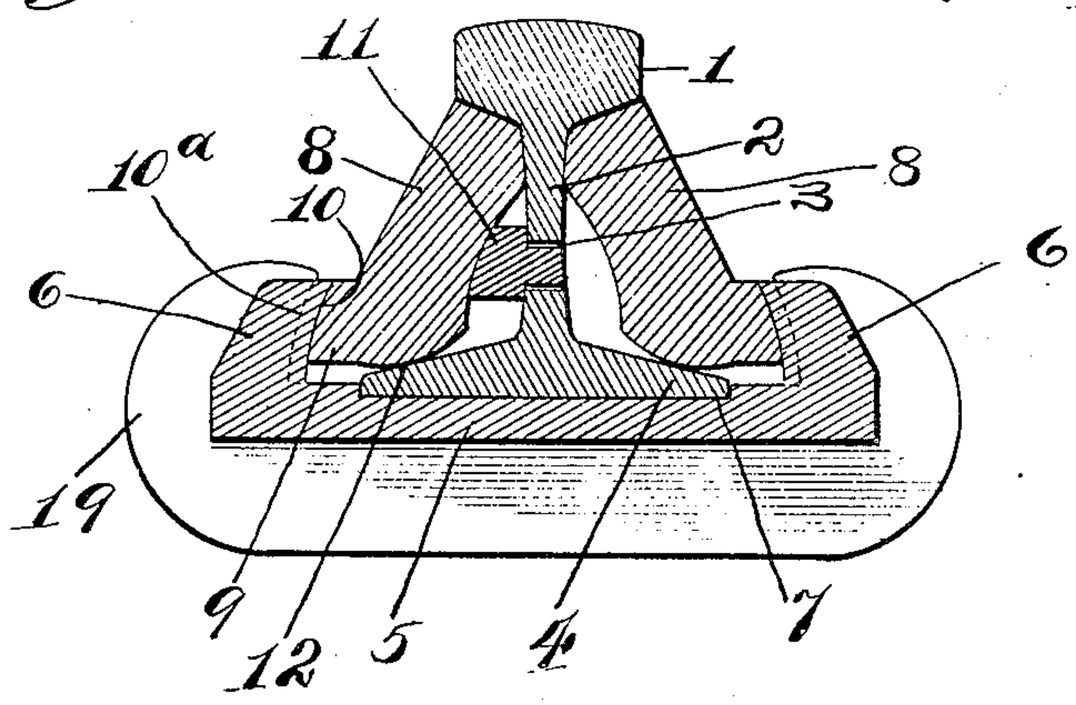


Fig. 2.



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APPLICATION FILED DEC. 10, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

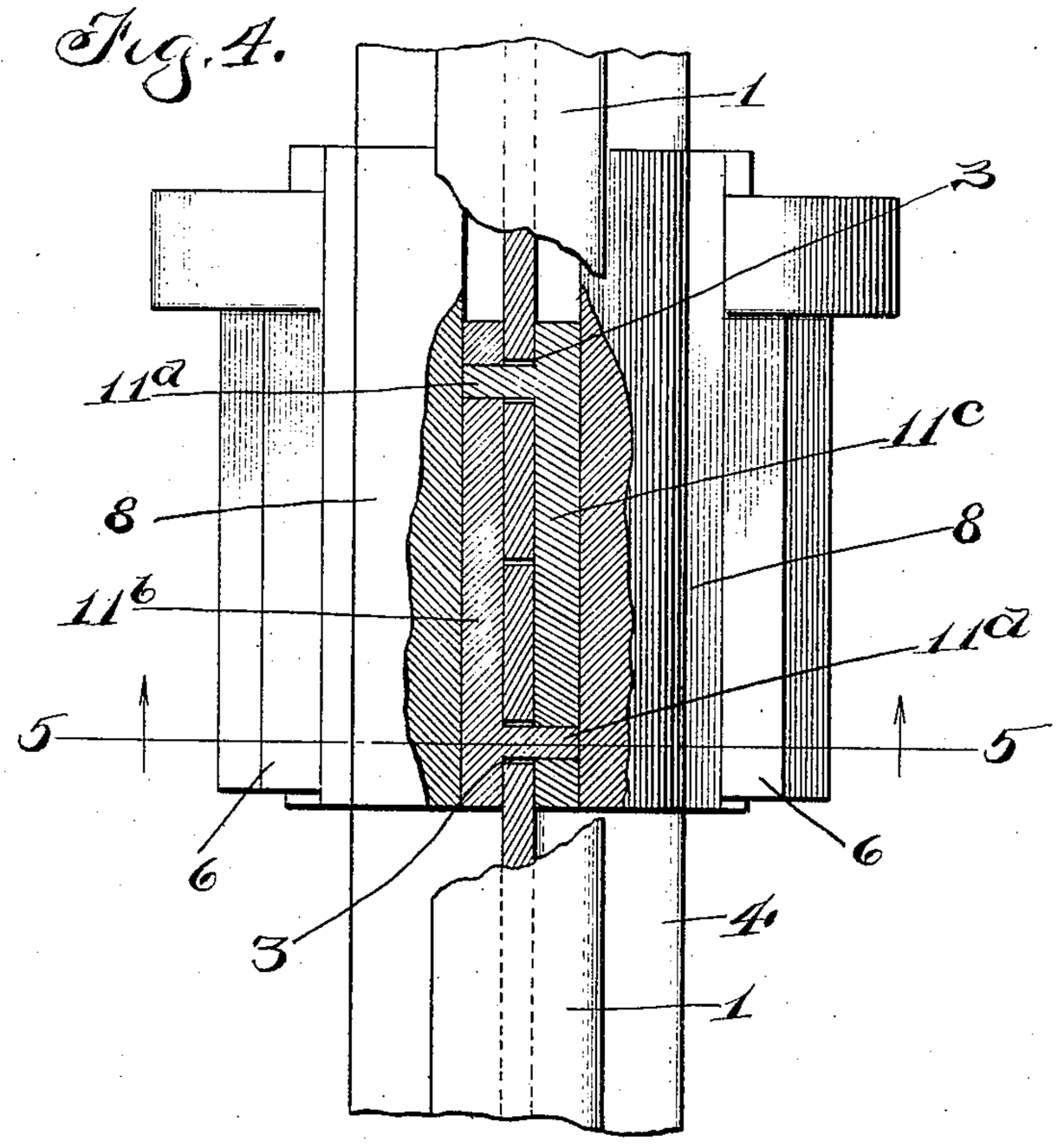


Fig. 6.

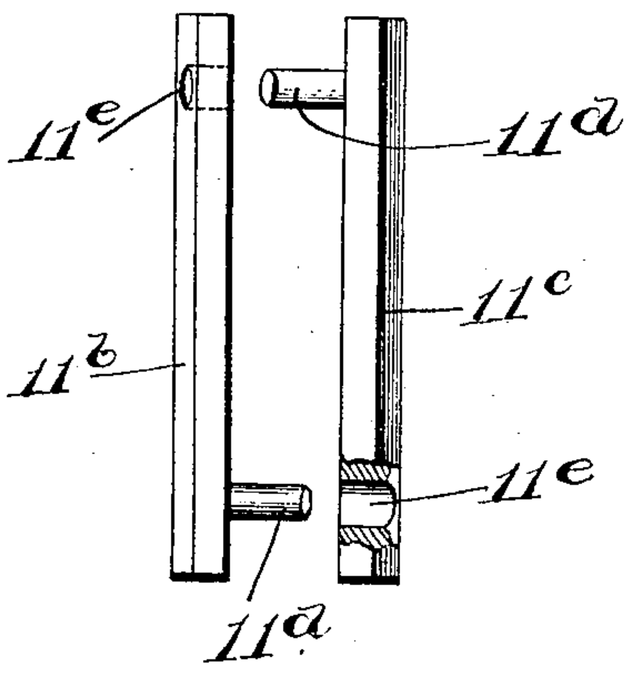
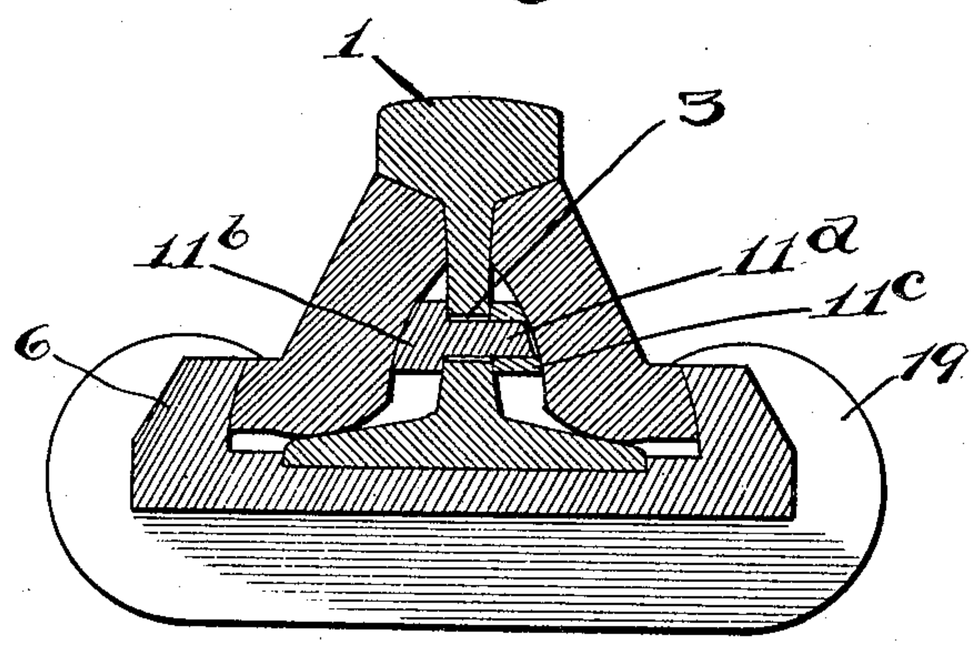


Fig. 5.



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No. 766,033. Patented July 26, 1904.

UNITED STATES PATENT OFFICE.

CHARLES F. HALL, OF CHICAGO, ILLINOIS, ASSIGNOR TO HALL RAIL JOINT COMPANY, A CORPORATION OF ILLINOIS.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 766,033, dated July 26, 1904.

Application filed December 10, 1903. Serial No. 184,591. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. HALL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Rail-Joints, of which the following is a full, clear, and exact specification.

My invention relates more particularly to the type of rail-joint shown in United States Letters Patent No. 729,576, issued to me June 2, 1903, and the improvements have especial reference to means for preventing the unequal creeping of the rails. In that type of rail-joint the rails are supported at their joint or meeting ends by braces or wedges without the aid of bolts; but it is found that in some instances they creep or move unequally and eventually work apart, widening the space between rail ends to an objectionable extent.

My present invention has for its primary object to provide a simple and improved link acting independent of the splice-bars which will be adapted to connect the two rails together with capability of a limited movement to permit of the slight movement of the rail occasioned by expansion and contraction and which link shall be so formed and arranged that it may be conveniently applied and held in place by the other parts of the joint without making any changes therein or additions thereto.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said objects and certain other objects hereinafter appearing are attained, all as fully described, wich reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a plan view of a rail-joint provided with my improvements, partially in section. Fig. 2 is a cross-section on the line 2 2, Fig. 1. Fig. 3 is a perspective view of the creeper-link. Figs. 4 to 6 show a modification of the invention, Fig. 4 being a view similar to that of Fig. 1, Fig. 5 a cross-section thereof on the line 5 5, Fig. 4, and Fig. 6 a detail plan view, partly in section, of the two members of the link detached.

The form of rail shown in the drawings for the purpose of illustrating the uses of my invention is the ordinary form, having a head 1, a vertical web 2, which is or may be provided near the end of the rail with one or more bolt-holes 3, and a base-flange 4, and 5 is the base-plate, having side flanges 6, rail-seat 7, and end flange 19; 8, the wedges or splice-plates, having the lateral extensions 9 along their lower edges and the fulcrum 12 resting on the base-flange of the rail and so arranged with reference to the head of the rail and the inclined or tapered or rounded surfaces 10 10^a of the flanges 6 as to support the rails at their meeting ends and to grip one of the rails with a pressure greater than that with which the other one is gripped, all as described and shown in my aforesaid patent.

The inner faces of the wedge-plates 8, it will be seen, are curved outwardly from the web of the rails, so as to form a space extending longitudinally thereof, and in this space I arrange a bar 11, which is provided at each end with a lug 11^a, adapted to fit in the bolt-hole 3 near the end of each rail, such lugs 11^a being slightly smaller than said bolt-holes, so as to allow for the expansion and contraction of the rails due to changes of temperature, but will restrict the relative movement of the rails beyond that extent. The outer face of the bar 11 may be made of a form or contour complementary to that of the inner face of the splice-plate 8 and of a size sufficient to enable the splice-plate to hold the bar 11 in place without interfering with the proper functions of the splice-plate or any of the other parts of the rail-supporting members of the joint. A creeper-link thus constructed is simple and inexpensive and may be made to be very powerful, while at the same time it is capable of being readily applied to rails already in use and as readily removed when desired.

In the forms shown in Figs. 4 and 5 the creeper-link is composed of two parts, each comprising one of the bars which are indicated at 11^b 11^c, respectively, and these bars

are each provided at one end with a stud or lug 11^d and at the other end with a perforation 11^e, the perforation of one bar being for the reception of the lug 11^d of the other bar, and in applying this form to the rails one of the bars 11^b 11^c is arranged on each side, and the lugs or studs 11^d in addition to passing through the bolt-holes in the rails project beyond the web of the rail and engage into the registering perforation 11^e of the bar on the opposite side, the perforations 11^e, however, being formed to accurately fit the lugs or studs 11^d, while loose in the bolt-holes in the webs of the rails, and by this means it will be seen that the lugs 11^d are subjected to a double sheer in resisting the creeping movement of the rails, which may be advantageous over the form shown in Fig. 1 in some instances where the strain is very great, as on steep grades, &c.

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

1. In a rail-joint, the combination with two rails, rail-supporting members engaging between the head and foot of the rails and arranged at a distance from the web thereof, of a creeper-link acting independent of the supporting members arranged between one of said members and the web and operatively connected with both rails, said link being held in place by one of said members.

2. In a rail-joint, the combination with two rails having bolt-holes at their meeting ends and a rail-supporting member arranged under the head of the rail and at a distance from the web thereof, of a creeper-link arranged between said member and the web of the rail and having a rigid lug at each end engaging in one of said bolt-holes.

3. In a rail-joint, the combination with two rails having bolt-holes near their meeting ends and a rail-supporting member engaging under the head of the rail and arranged at a distance from the web thereof, of a creeper-link comprising a bar fitting between said member and the web of the rail and having a rigid lug at each end of smaller diameter than said bolt-holes and fitting therein respectively.

4. In a rail-joint, the combination with two rails having bolt-holes near their meeting ends and a rail-supporting member engaging under the head of the rail and arranged at a distance from the web thereof, of a bar arranged between said member and the web of the rails and extending from one rail to the other and lugs of smaller diameter than said bolt-holes engaging therein respectively and having connection with the ends of said bar.

5. In a rail-joint, the combination with two rails having bolt-holes extending entirely through their webs near their meeting ends, and rail-supporting members arranged at both sides of said webs at a distance therefrom, of a bar arranged between each of said members and the webs of the rails and each having a perforation in one end and a laterally-projecting rigid lug at the other end, the lug of each passing through one bolt-hole in the rail and the perforation of the other.

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Witnesses:
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