

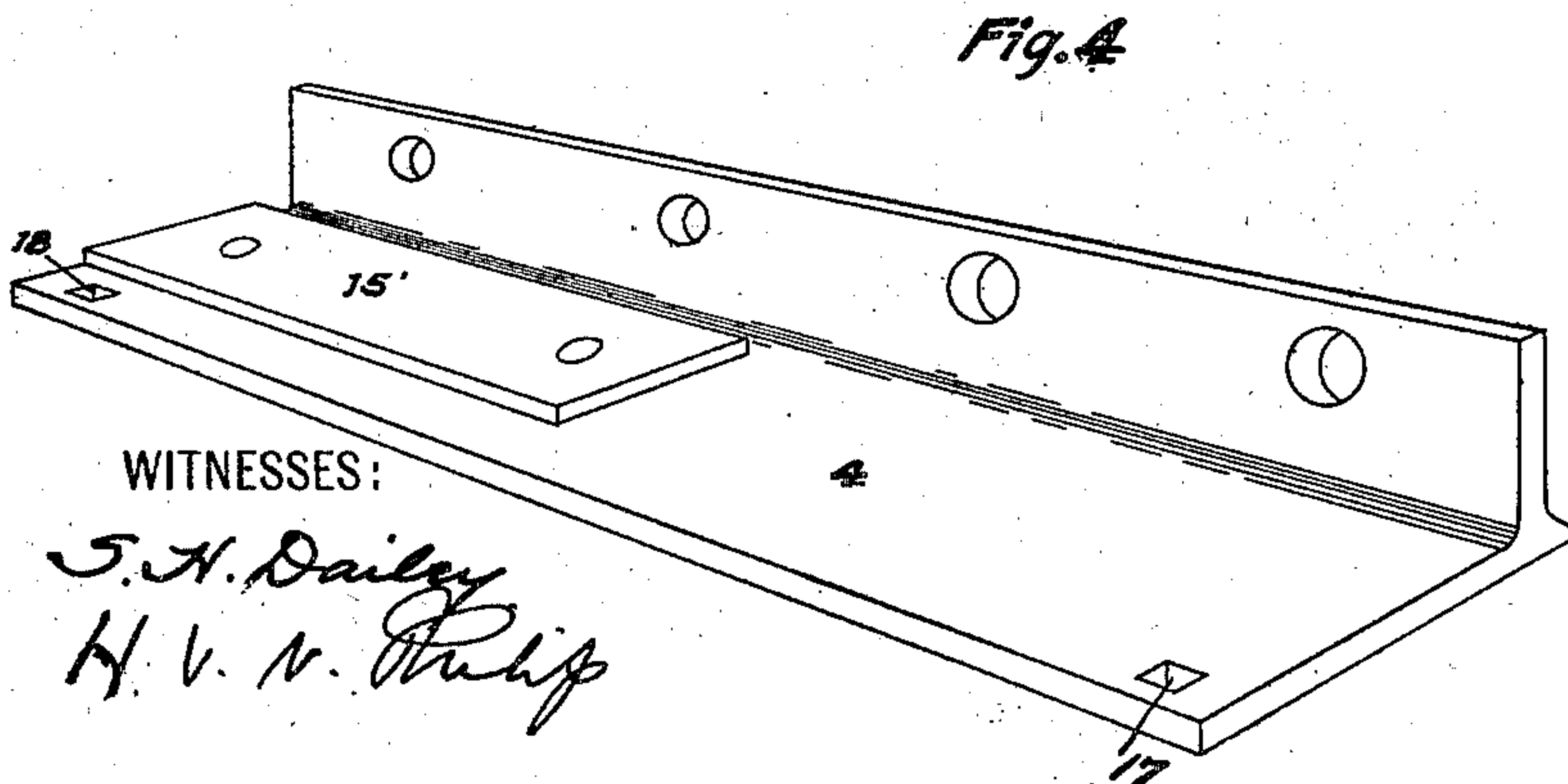
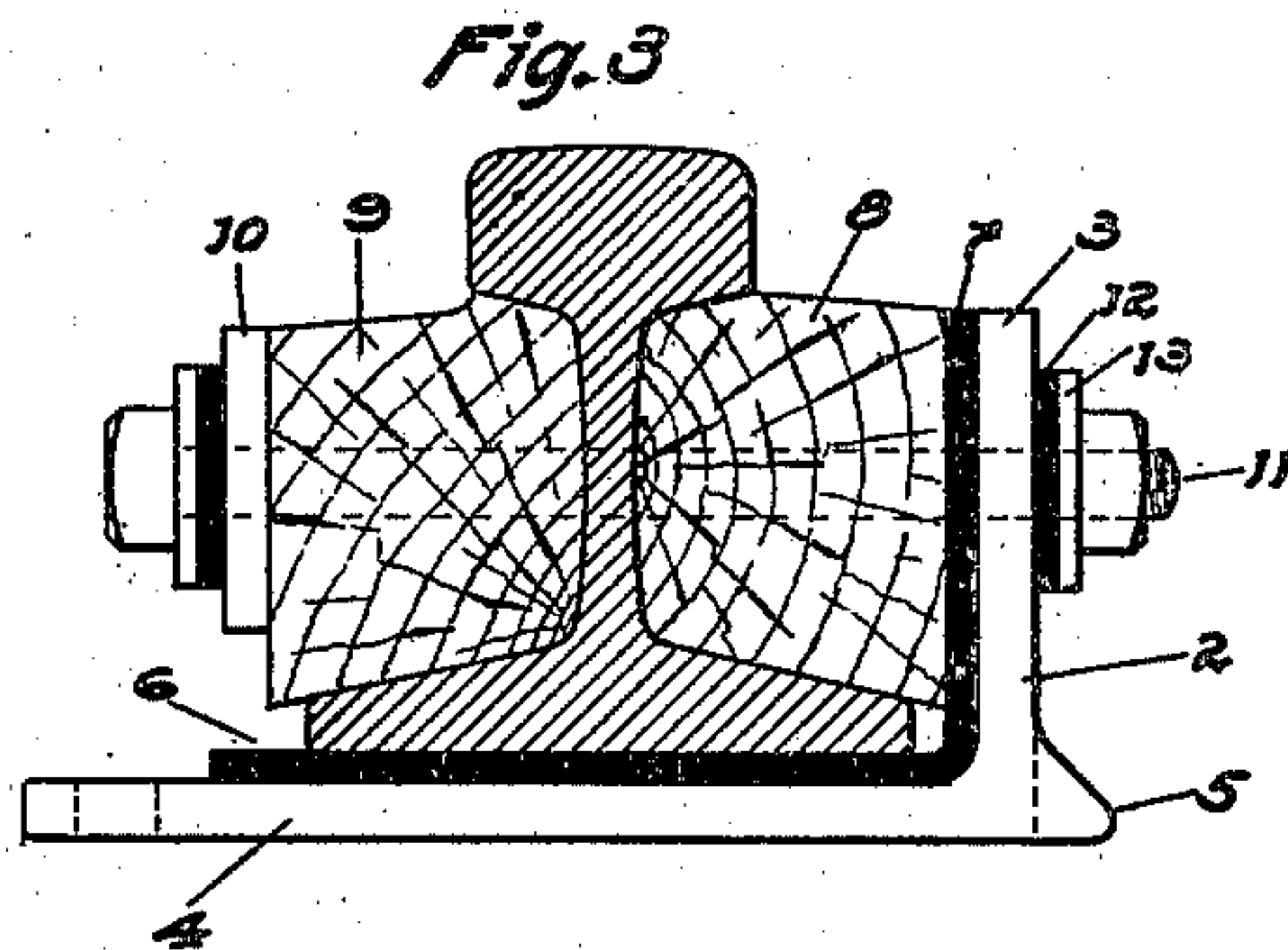
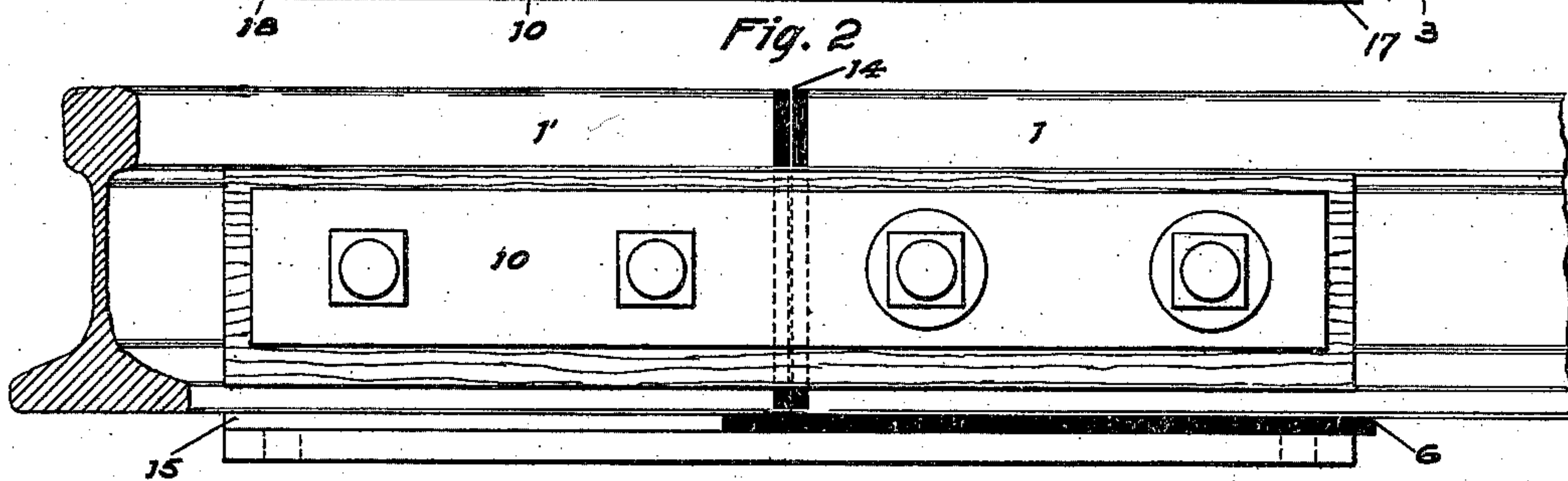
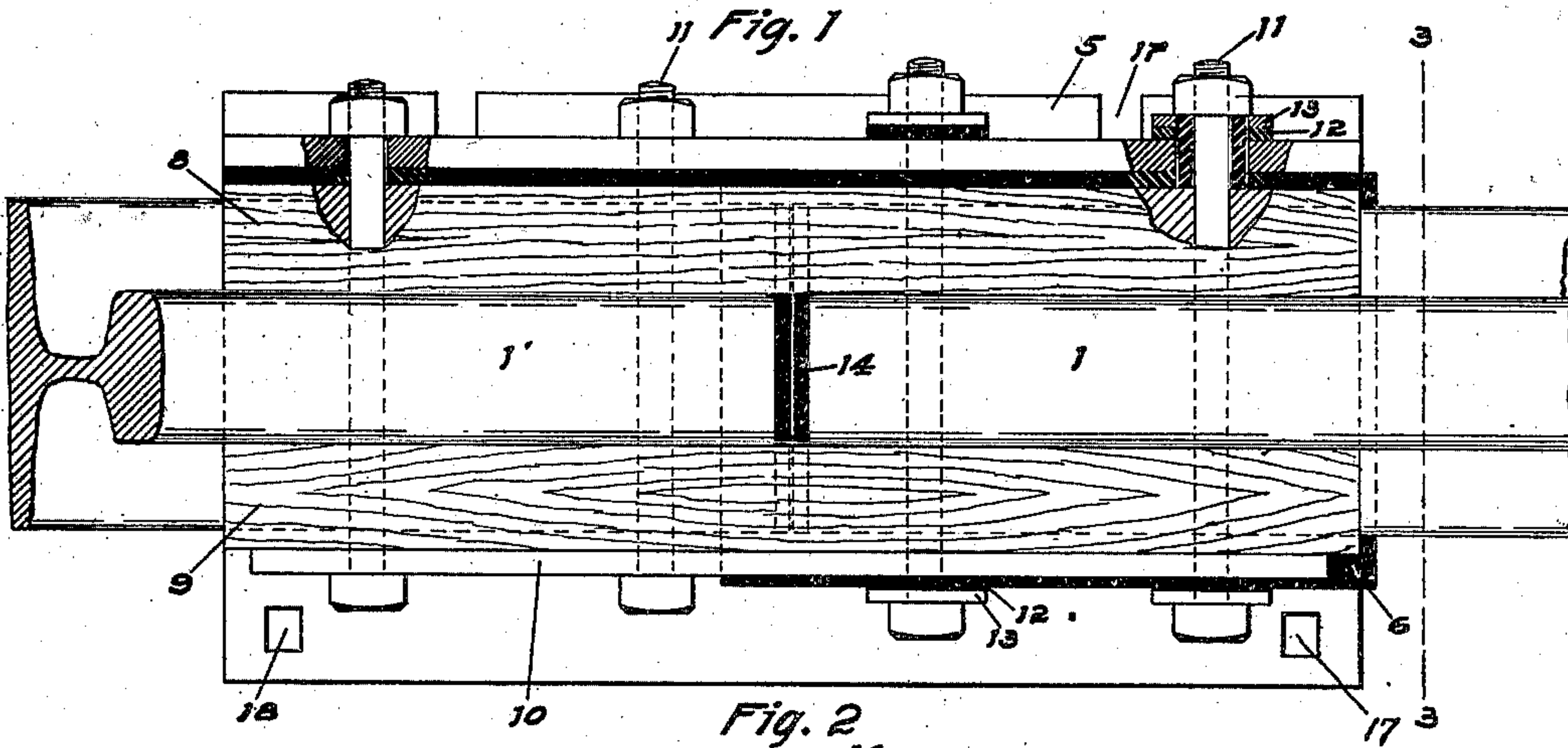
No. 708,350.

Patented Sept. 2, 1902.

G. L. HALL.
INSULATED RAIL JOINT.

(Application filed Apr. 8, 1902.)

(No Model.)



WITNESSES:

S. H. Dailey
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INVENTOR

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INSULATED-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 708,350, dated September 2, 1902.

Application filed April 8, 1902. Serial No. 101,867. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. HALL, a citizen of the United States of America, residing in the borough of Brooklyn, city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Insulated-Rail Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My invention relates to joints between adjacent rails of a railway and to the insulation of one rail from the rail adjacent to it; and its object is to provide a more durable joint than has yet been accomplished.

15 To this end my invention consists of means whereby the rail end from which the train leaves in crossing the joint is insulated from the metal parts of the joint, and the other rail end is given additional support to receive
20 the blow from the wheel as the train crosses the joint.

It will be understood that my device is mainly applicable to a railway on which the travel is usually in one direction.

25 I hereinafter describe a rail-joint embodying my invention and then point out the novel features in the claims, having reference to the accompanying drawings, in which similar numerals of reference indicate similar parts
30 throughout the various views, of which—

Figure 1 is a plan view, partly in section. Fig. 2 is a side view. Fig. 3 is an end view, partly in section, on the line 3 3 of Fig. 1. Fig. 4 is a perspective view of a modification.

35 The joint shown is applicable to a railway on which the usual travel is in the direction of right to left.

1 is the rail end from which the train leaves when crossing the joint, and 1' the other rail
40 end.

2 is a rail-chair provided with an upright part or bolt-plate 3, a bridge or supporting plate 4, and a strengthening and spiking rib 5.

45 6 is insulating material between bridge 4 and the rail end 1, also extending a small distance under rail end 1', and in order to hold same in proper position it is extended up into the upright part thereof 7.

50 Between the bolt-plate 3, the adjacent insulating material 7, and the rail ends 1 and 1' and extending across the joint is a block of

wood or other strengthening and insulating material 8. On the other side of the rail ends and next to them is another block of wood or
55 other strengthening and insulating material 9, also extending across the joint. 10 is a metal band opposite said bolt-plate 3 and outside said block 9 and also extending across the joint, said metal band being separated
60 from the chair, so that insulating material 6 may be removed easily when the same is held in position by means independent of the joint.

11 represents bolts passing through bolt-plate 3, upright portion 7 of insulating material 6, block 8, rail ends 1 and 1', block 9, and
65 band 10 and adapted to hold the parts in proper relation with each other.

12 represents insulating thimbles or bushings adapted to insulate in the well-known
70 manner all of bolts 11 passing through the rail end 1 from both the bolt-plate 3 of the rail-chair 2 and the band 10. 13 represents washers for the protection of said bushings 12.

14 is insulating material between the rail
75 ends; but this is unnecessary when the said ends are maintained separate from each other by air-space.

The bridge-plate 4 of rail-chair 2 is thickened at that part thereof underneath the rail
80 end 1', excepting just at the end of said rail 1', under which insulating material 6 extends, as above described. This thickening of the plate 4 at 15 should be the same as the thickness of the insulating material 6, so as to
85 maintain the two ends 1 and 1' level. In Fig. 4 this thickening of the metal is provided for by riveting or otherwise fastening to bridge-plate 4 an additional piece of metal 15' of the proper thickness.

17 and 18 are recesses or holes for spiking
90 the chair to the ties.

What I claim, and desire to secure by Letters Patent, is—

1. An insulated-rail joint comprising a rail-
95 chair having a bridge-plate and a bolt-plate, said bridge-plate being provided with additional metal at one end thereof, insulating material between one of the rail ends and said bridge-plate, a metal band separated from
100 the chair and opposing said bolt-plate and extending across the joint, two insulating-blocks, one between said bolt-plate and the rail ends and the other between said band and

the rail ends and both extending across the joint, a plurality of bolts extending through the bolt-plate, insulating-blocks, rail ends, and band, insulating-bushings adapted to insulate every of said bolts passing through the rail end insulated from said bridge-plate from both said bolt-plate and said band, and means of maintaining the rail ends from contact with each other.

2. An insulated-rail joint comprising a rail-chair having a bridge-plate and a bolt-plate, said bridge-plate being provided with additional metal at one end thereof, insulating material between one of the rail ends and said bridge-plate, means of holding said insulating material in proper position on said bridge-plate, a metal band separated from the chair and opposing said bolt-plate and extending across the joint, two insulating-blocks, one

between said bolt-plate and the rail ends and the other between said band and the rail ends and both extending across the joint, a plurality of bolts extending through the bolt-plate, insulating-blocks, rail ends, and band, insulating-bushings adapted to insulate every of said bolts passing through the rail end insulated from said bridge-plate from both said bolt-plate and said band, and means of maintaining the rail ends from contact with each other.

In witness whereof I hereunto affix my name, in the presence of two witnesses, this 7th day of April, 1902.

GEO. L. HALL.

Witnesses:

H. V. N. PHILIP,
J. F. BOUDREAU.