J. O. MORRIS.

RAIL BRACE.

APPLICATION FILED JAN. 12, 1907.

924,919.

Patented June 15, 1909.

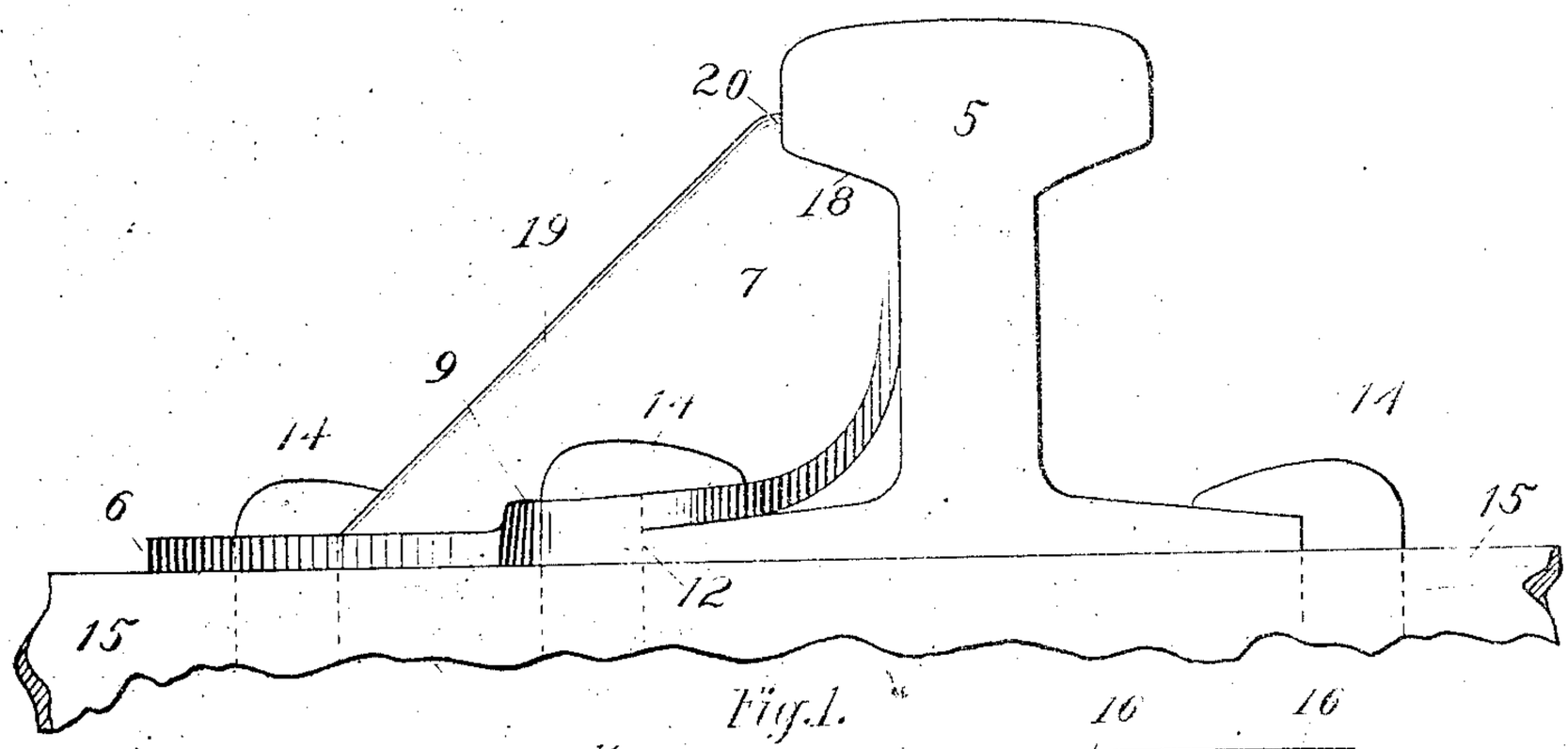

Fig. 1.

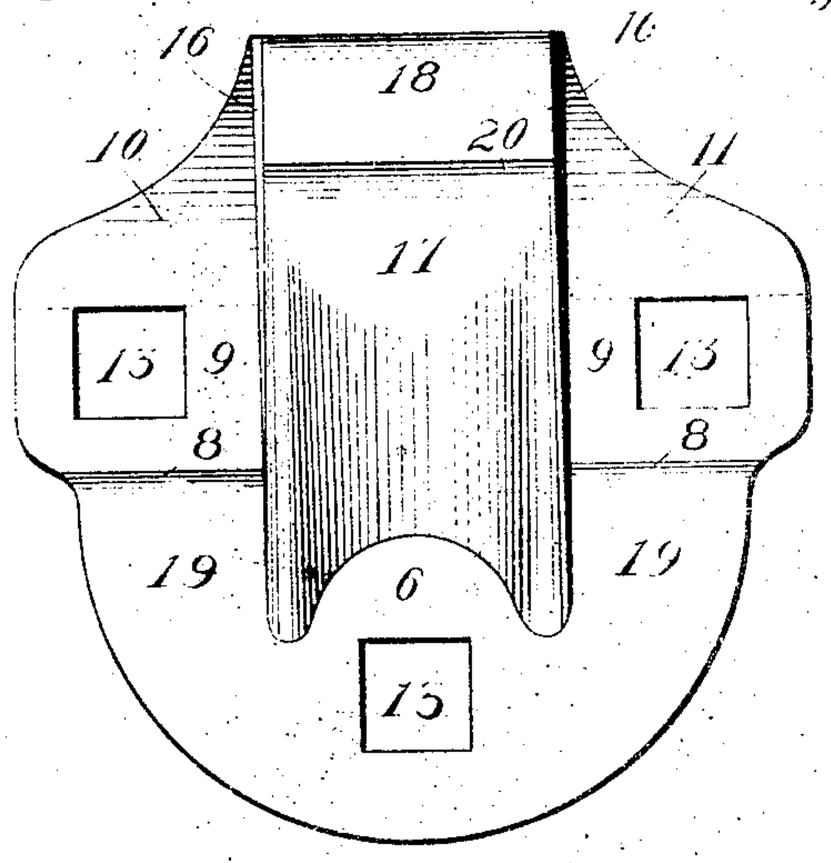

Fig. 2.

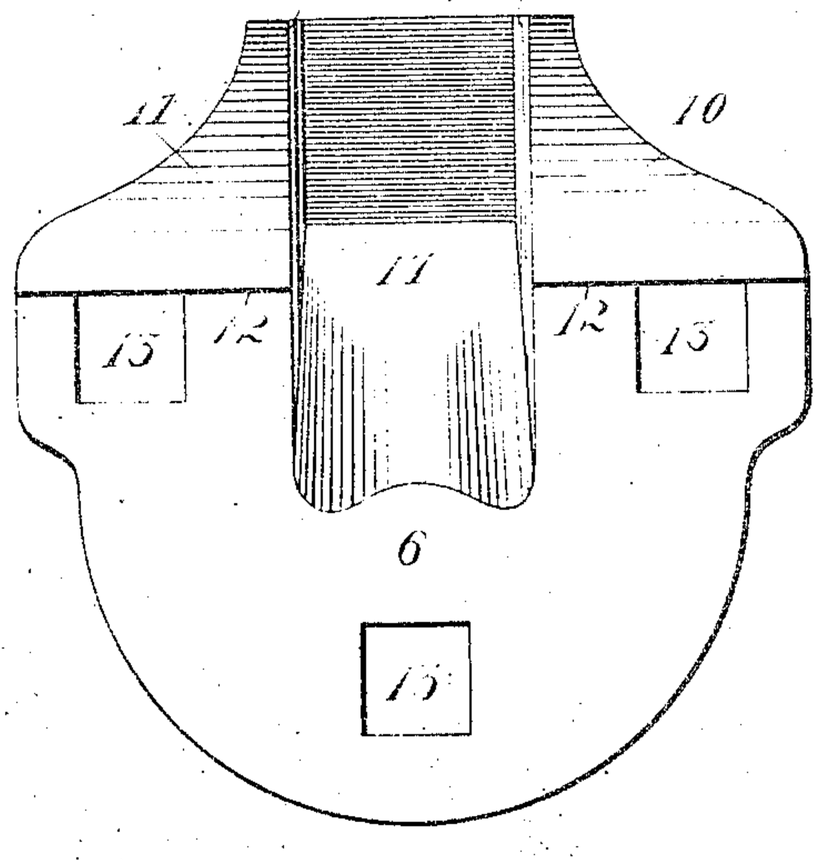

Fig. 3.

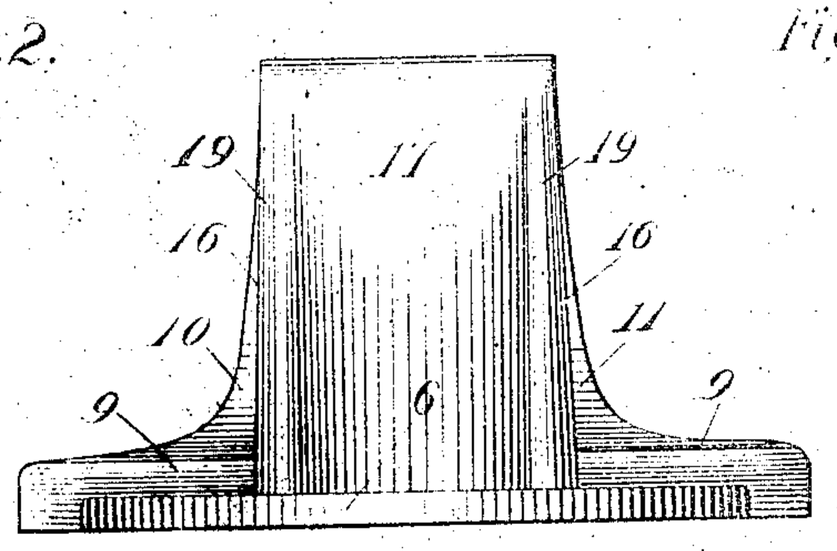

Fig. 4.

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RAIL-BRACE.

No. 924,919. Specification of Letters Patent. Patented June 15, 1909.

Application filed January 12, 1907. Serial No. 351,947.

To all whom it may concern:

Be it known that I, JOHN O. MORRIS, 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-Braces, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in rail braces and consists in the construction and arrangement of parts hereinafter described and then pointed out in the claim.

In the accompanying drawing: Figure 1 is a view in side elevation of a device embodying my invention shown in position with a rail and cross-tie; Fig. 2 is a top plan view of the brace shown in Fig. 1; Fig. 3 is a bottom plan view of the same; and Fig. 4 is a view of the same in front elevation.

Like figures refer to the same parts throughout the drawing, in which—

5 designates a rail with which my improved brace is shown. The brace consists of a base 6 and a body 7, the base being substantially semi-circular in outline and stepped-up as at 8 to form thickened portions 9 at its straight edge upon either side of the body. The thickened or reinforced portions extend in upwardly directed flanges 10 and 11 which taper inwardly and merge into the sides of the body, as clearly shown in the drawing, the flanges being of less thickness or depth than the portions 9 and thereby providing shoulders 12 which abut squarely against the edges of the rail base. The shoulders and flanges provide seats to receive the rail base, in which the shoulders abut against the edge of the base and the flanges rest upon the upper portion or face of the base for a short distance, all as clearly shown in Fig. 1. The base is provided with spike-holes 13, one of which is located in each of the thickened portions 9 and in such relation to the corresponding shoulder 12 that it is open at one side along the line of the shoulder so that when a spike 14 is driven into the cross-tie 15 the side of the spike will bear against the edge of the rail base and the head of the spike will bear upon those portions of the flanges which in turn bear upon the rail base, as clearly shown in Fig. 1. By this construction the sides of the spikes bear directly against the edges of the rail base and are in alinement with the shoulders to make an extended bearing for the base, while their heads overlie the base, so that both the lateral and vertical strains of the rail base are directly opposed by the spikes themselves in the first instance thus relieving the brace to a very considerable extent.

The body of the brace is integral with the base, the whole being constructed of any suitable material, such as malleable iron. The body is composed of sides 16, a back 17 and a top 18, the body being hollow on the side toward the rail and the back being corrugated to form longitudinal ribs 19. In the present instance two such ribs are shown, one at each side of the back, so that the face of the back is concave and allows the head of the outer spike to rest upon the base plate between the ribs; it is of course understood that the number of ribs may be increased and that the spike hole may be set back if desired. The upper end of the back projects above the plane of the top as at 20 and with the top forms a top-shoulder which rests against and under the head of the rail, as shown in Fig. 1. The rear edges of the sides engage the web of the rail at their tops, and then curve away merging into the line of curvature of the flanges.

The thrust of the rail is approximately in the line of the body of the brace, and by providing the body with ribs it possesses greater strength and resistance due to the corrugated effect produced thereby.

Having described my invention what I claim as new, and desire to secure by Letters Patent of the United States, is—

A rail brace comprising a substantially semi-circular base having a spike-hole, a body having sides and a back channeled out on its front face to form ribs in the line of the thrust of the rail, the base having a thickened portion on each side of the body provided with a spike hole, flanges extending from and of less depth than the thickened portions to form shoulders and merging into the sides of the body and adapted to rest upon the rail-base, the flanges being alined with the inner sides of the spike-holes, whereby the sides of the spikes bear against the rail-base and the heads of the spikes overlie

the base, and a top-shoulder on the body adapted to rest against and under the head of the rail, the rear edges of the sides adapted to engage the web of the rail at their tops and then curve away from the web at a point about midway its length and merge into the line of curvature of the flanges.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN O. MORRIS.

Witnesses:
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