O. P. W. MICHAEL.

SECTIONAL RAIL.

APPLICATION FILED JULY 11, 1904.

922,439. Patented May 18, 1909.

Fig. 1.

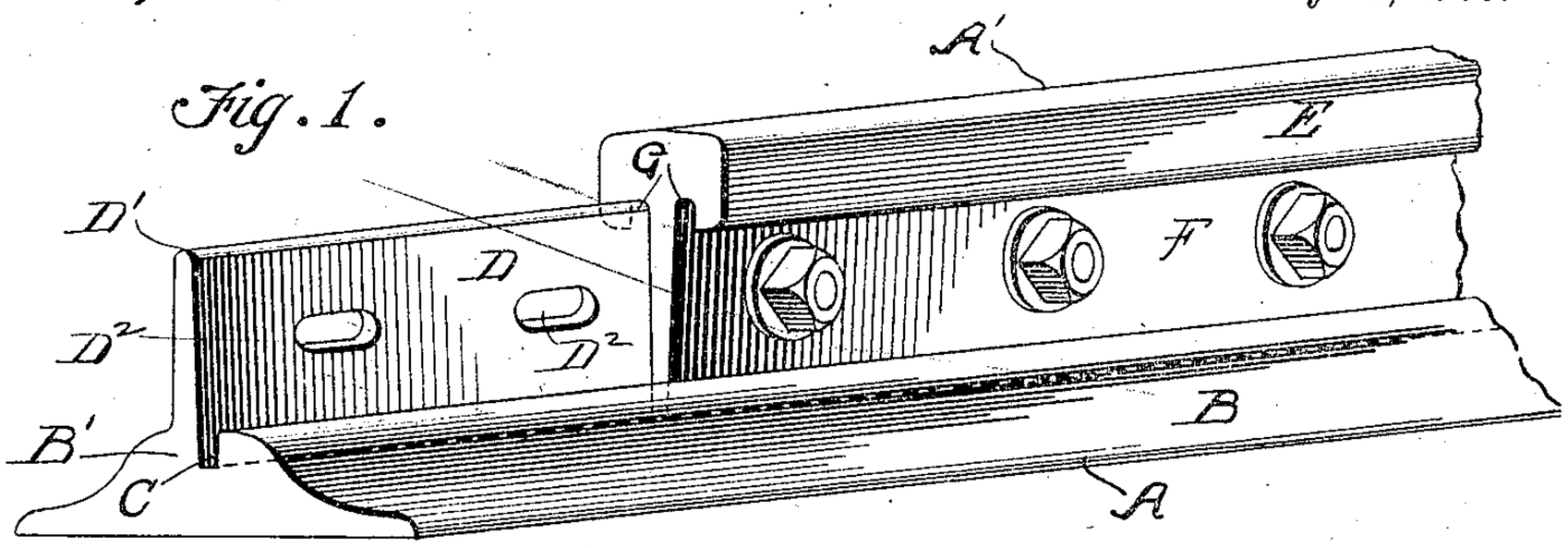
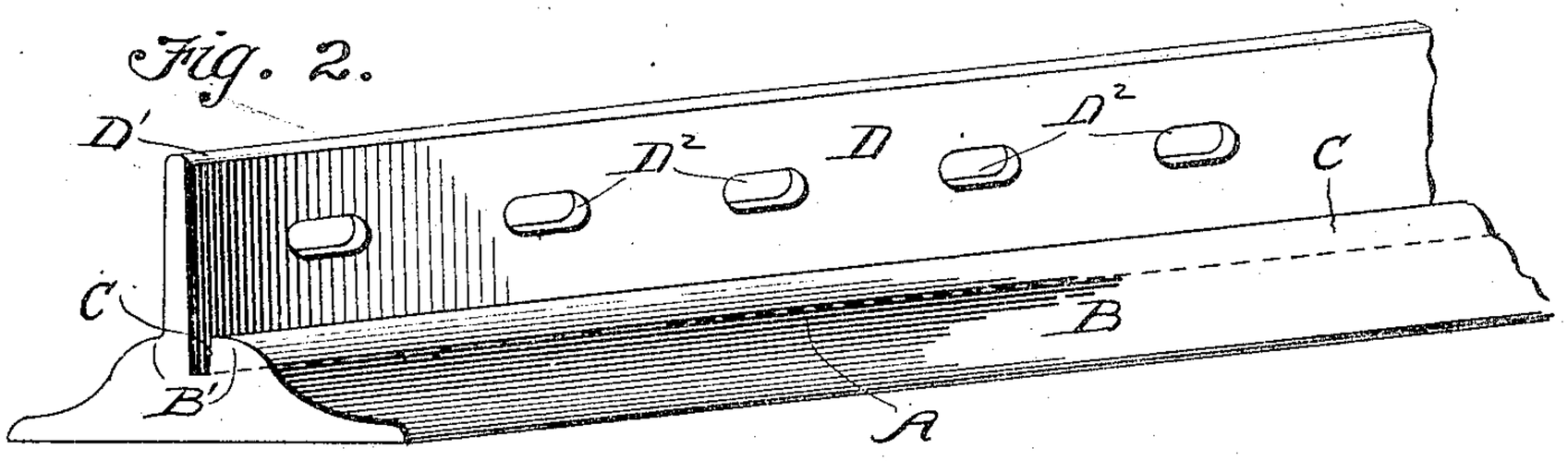


Fig. 2.



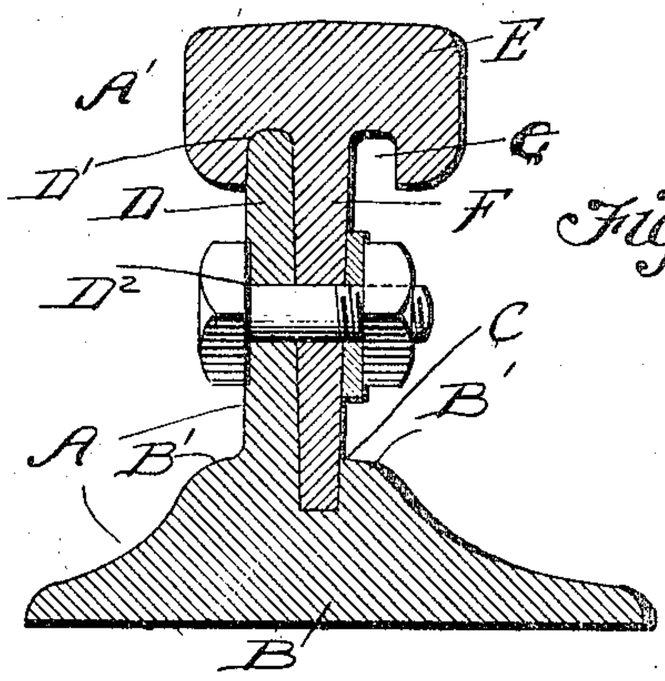
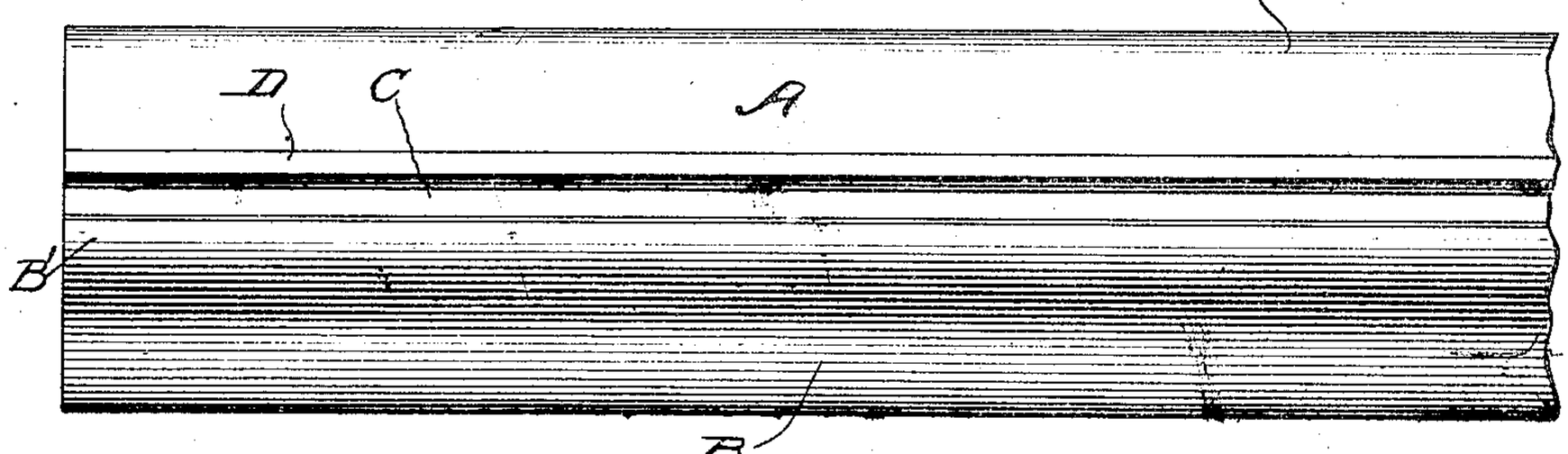


Fig. 3.

Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

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SECTIONAL RAIL.

No. 922,439. Specification of Letters Patent. Patented May 18, 1909.

Application filed July 11, 1904. Serial No. 216,037.

To all whom it may concern:

Be it known that I, OLLIE P. W. MICHAEL, a citizen of the United States, residing at Cherryvale, in the county of Montgomery and the State of Kansas, have invented a new and useful Improvement in Sectional Rails, of which the following is a specification.

This invention relates to a rail formed in two longitudinal sections, the base portion forming one section and the tread portion forming the other section.

The invention also relates to the particular construction of these sections by which they are interlocked.

The object of the invention is a rail strong and durable; easily and quickly placed in position, readily repaired by the replacing of a new section when any section already in place becomes worn; and a further object of the invention is to reduce the cost of railroad construction by avoiding the use of fish-plates, angle-bars, tie plates, outside braces on curves, and the long bolts employed in connection with fish-plates and other rail-road joints.

The invention consists in the novel features of construction and combination of parts hereinafter described, particularly pointed out in the claim, and shown in the accompanying drawings, in which:—

Figure 1 is a complete rail shown in perspective, the Fig. 2 is a perspective view of the base section, the upper or tread section being removed. Fig. 3 is a vertical section through the rail, the two sections being in position. Fig. 4 is a plan view of a portion of one of the base sections.

In constructing my rail I manufacture the same in two longitudinal sections, thereby providing a bed, base or lower section A, and an upper, tread section A′. As these two sections are readily detachable they will be described separately. The lower section A consists of a base portion proper as shown at B. This portion B has a broad, flat under face and is adapted to rest upon and be spiked to the cross ties in the usual manner. Between its side edges it is thickened by the formation of a longitudinal ridge B′ the longitudinal center of the ridge being on the outer side of the longitudinal center of the base portion B. Adjacent its inner side this ridge B′ is longitudinally grooved as shown at C and the outer wall of the groove is extended upwardly to form the inner face of a web D carried by the ridge B′ and extending longitudinally along the ridge parallel to and adjacent the groove C. It will be understood that the ridge, groove and web above mentioned extend the entire length of the lower, base section B of the rail. The web D has an outer perpendicular face but the inner face commencing from the bottom of the groove C and extending to the upper edge of the web D is outwardly inclined, the web D being approximately two-eighths of an inch thicker at its base than at its top. The upper edges of the web D are not sharp corners but are slightly rounded as at D′, the object of which will be stated hereafter. The inner wall of the groove C is also upwardly angled having the same degree of inclination that is given to the opposite, outer wall of the groove, but of course in the opposite direction. The groove C is therefore wedge-shape in cross section.

The tread portion or upper section A′ consists of the tread proper E which carries a depending web F, the upper section A′ being T-shaped in cross-section. The depending web F is gradually reduced in thickness toward its lower edge, being wedge-shaped in cross section, and rests in the groove C the underside of the tread portion on each side of the web F being grooved as shown at G, and the upper edge portion of the web D rests in one of these grooves. It will be obvious that by this construction the upper section A′ is reversible, and that either face of the web F is adapted to bear on the inner, inclined face of the web D, and either groove G is adapted to receive the upper portion of the web D. The grooves G have their bottoms slightly rounded adjacent the sides of the grooves to fit the rounded edges of the web D, as shown at D′, the object of this being to save the expense of milling the edges to form a sharp corner, and to prevent any rattling or battering down of the rail.

The web D is formed with a plurality of elongated bolt openings as shown at D^2 while the web F has formed in it the usual circular bolt holes, and the two sections A and A′ are secured together by suitable bolts and nuts. Owing to the absence of fish plates, angles bars and braces, the bolts are of much less weight than the ordinary rail road bolt, being much shorter, and a considerable saving is thus effected.

In operation the upper sections A′ are ar-

ranged so that the said upper sections will overlap the meeting ends of the lower sections A and in this manner a continuous rail is practically formed. The meeting ends of both the upper and lower sections, or of either section, may be squared or beveled or angled in any desired manner as may be found most desirable.

By employing a rail as herein described the work of construction is greatly facilitated as the base sections may be laid in place by one gang of men followed by a second gang engaged in fitting the upper sections in position, these sections being lighter and more easily handled than the usual solid, one piece rail. By having the bolt opening of the base section elongated allowance is made for proper adjustment of the upper section, and for expansion and contraction.

Repair work is readily accomplished as any of the sections A′ forming the track can be readily detached from their base sections and lifted out of place, and a new section put in position, without the necessity of extracting the spikes from the ties and removing fish plates and taking up the entire rail, as with rails now in ordinary use. It will be obvious that the wedging of the two sections together will give a rigid construction independent of the bolts, and furthermore that a great advantage is gained by so constructing the upper section A′ that it is reversible as it is therefore adapted for use upon either the right or left hand side of the track, and when a tread section is to be placed in position it is not necessary to consider the side of the track upon which it is to be placed, and pick out some special section, as would be the case if the upper sections were not reversible.

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

A rail having a base provided with an upwardly extending web having a curved upper edge to one side of the longitudinal center and a longitudinal groove parallel to said web having inclined side walls and a square bottom, the outer face of the groove being continuous with the inner face of the web, the said face being outwardly and upwardly inclined on the same angle as the inner side wall of the groove, a rail having a tread provided with a central longitudinal web having downwardly converging faces and a square end adapted to fit in the groove of the base and the said rail having longitudinal grooves formed in its under face on each side of the web having concaved tops in which the rounded end of the web carried by the base is adapted to fit.

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