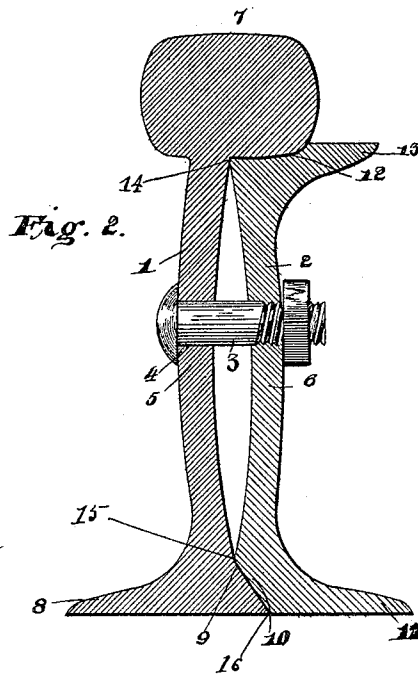
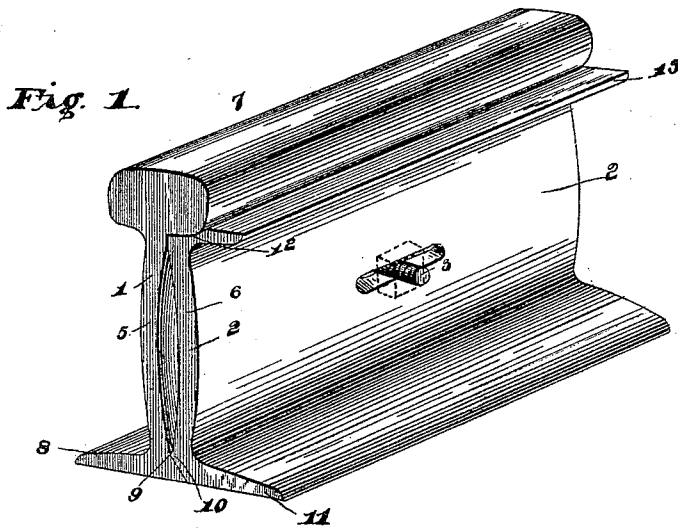


(No Model.)

B. F. CURTIS.
RAILWAY RAIL.

No. 460,742.

Patented Oct. 6, 1891.



Witnesses

Peace Behrend.

J. F. Riley

Inventor

Benjamin F. Curtis.

By *us* Attorneys,

Chas. Snow & Co.

UNITED STATES PATENT OFFICE.

BENJAMIN F. CURTIS, OF ATLANTA, GEORGIA.

RAILWAY-RAIL.

SPECIFICATION forming part of Letters Patent No. 460,742, dated October 6, 1891.

Application filed September 23, 1890. Serial No. 365,911. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. CURTIS, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented a new and useful Rail-Joint, of which the following is a specification.

The invention relates to improvements in rails.

10 The object of the present invention is to provide a simple and inexpensive rail, which will dispense with stringers, chairs, fish-plates, and to enable tracks to be laid with fewer ties.

15 The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

20 In the drawings, Figure 1 is a perspective view of a rail embodying the invention. Fig. 2 is a vertical sectional view.

Referring to the accompanying drawings, 1 and 2 designate sections of a rail constructed of suitable metal and secured together by transverse bolts 3, arranged in elongated openings 4 of the sections to permit the creeping or expansion and contraction of the sections without liability of cutting the bolts 3.

30 The rail is composed of the outer or main section 1 and the inner section 2, which are constructed of equal length, and a continuous rail is formed, and fish-plates are dispensed with by arranging the ends of one section at 35 points midway the length of the adjacent sections. The outer section 1 has a curved web 5, which presents a convex outer face and a concave inner face, and the inner section 2 has a similar web 6, which is reversely 40 arranged, and the oppositely-curved webs 5 and 6 are adapted to be drawn together by the bolts 3, and the resiliency of the webs forces the sections into closer contact and prevents any lateral movement of the same, and the said main section is provided with a 45 tread 7 and a bottom flange 8, which extends outward from one side of the rail, and the lower edge 9 at the opposite side of the main section is beveled and engaged by a bevel-edge 50 10 of the section 2. The section 2 is provided at its lower edge with a bottom flange 11,

which extends outward from the rail in the usual manner, and the upper edge 12 at the inner side of the section is curved and conforms to the configuration of the lower bevel 55 of the tread of the rail in which it engages, and the said section is provided at its top with a laterally-extending flange 13, which serves as a guard to prevent paving-stones being placed too close to the tread 7 of the rail 60 and thereby avoid the track.

It will be seen that by constructing the webs of the sections oppositely curved the transverse bolts when tightened will force the bevel edges 9 and 10 into contact with 65 each other and also force the curved edge 12 into engagement with the lower bevel of the tread of the rail and lateral movement of the sections will be prevented, and the oppositely-curved webs diminish the engaging sur- 70 faces of the sections and lessen friction.

The rail is designed for street and other railways, and is continuous and avoids the necessity of employing fish-plates, chairs, stringers, and a track may be constructed by 75 fewer ties than has heretofore been necessary.

The rail has a center bearing and the webs are concave and are bolted in the center and possess greater strength when bolted up than would be were the webs straight, in which 80 case too tight straining would weaken the parts. It is only necessary to bolt the concave webs in the center, thereby greatly lessening the cost of construction and dispensing with a great number of bolts required for 85 straight webs. The concave webs are not affected when subjected to extreme heat and cold, and they possess great strength and durability, like tubular metal.

What I claim is—

90 1. In a rail, the combination of the section 1, having an outwardly curved or bowed web and provided at its top with a tread 7 and provided at its bottom with the flange 8 and the bevel edge 9, and the section 2, having an 95 oppositely curved or bowed web secured to the section by bolts, and provided at its bottom with the flange 11 and the beveled edge 10, engaging the bevel 9 of the opposite section and having its top engaging the lower 100 bevel of the tread 7 and conforming thereto, and provided with the laterally-extending

guard-flange 13, whereby the flange of a wheel is prevented coming in contact with paving-stones and the like, substantially as described.

2. In a rail, the section 1, having an outwardly-bowed web and provided at its top with a tread and at its bottom with a flange 8, the section 2, having an oppositely-bowed web and provided at its bottom with a flange and a transverse bolt passing through the middle of the sections and adapted to draw

the bowed portions together, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

BENJAMIN F. CURTIS.

Witnesses:

J. H. MOUNTAIN,

W. M. SCOTT.