

W. F. TRAVES.
RAILROAD RAIL.
APPLICATION FILED FEB. 2, 1911.

1,000,461.

Patented Aug. 15, 1911.

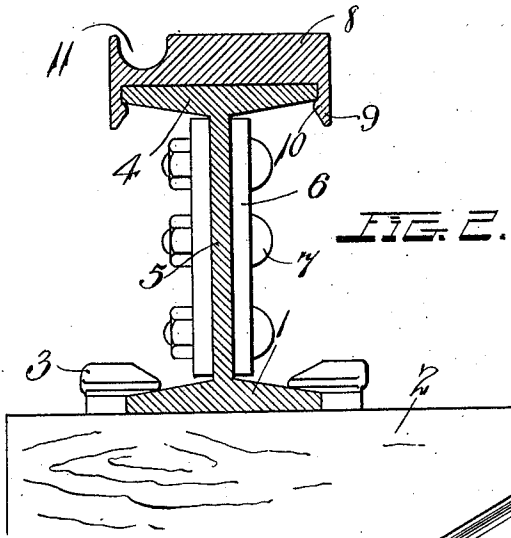


FIG. 2.

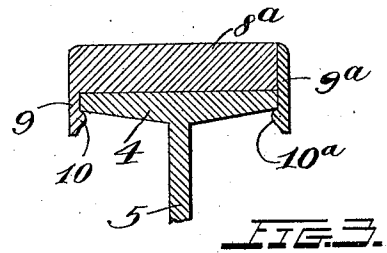


FIG. 3.

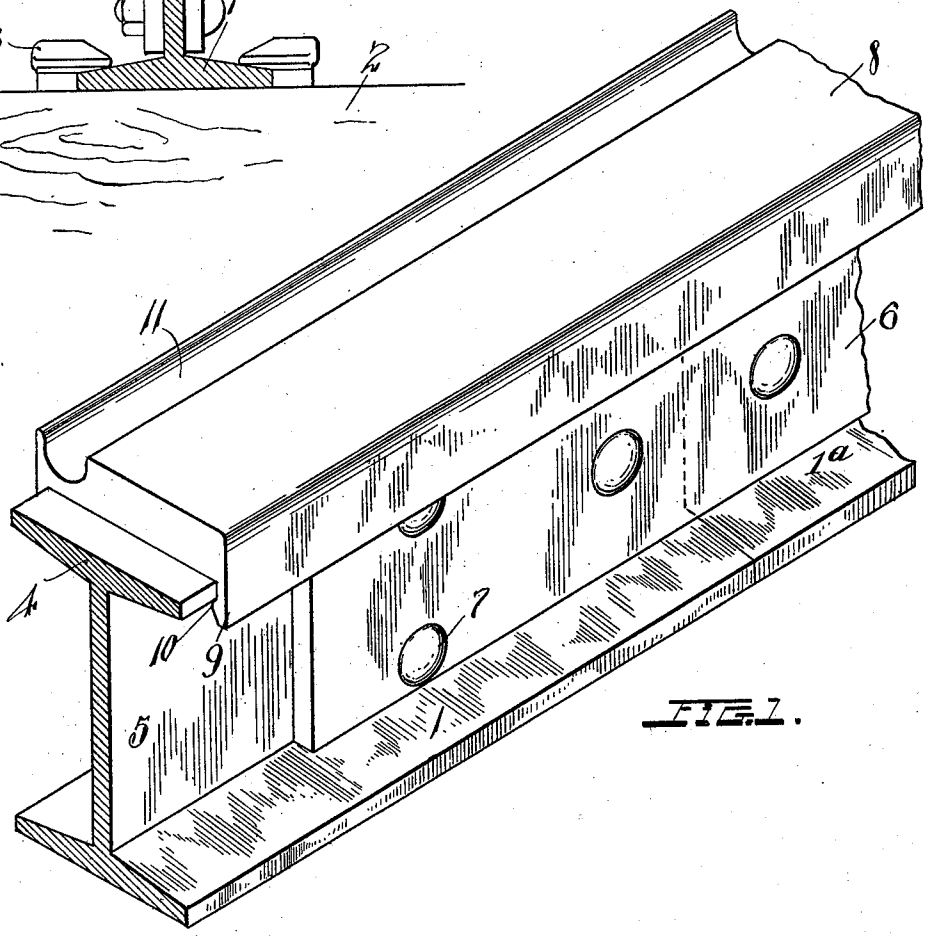


FIG. 1.

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RAILROAD-RAIL.

1,000,461.

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To all whom it may concern:

Be it known that I, WEBSTER F. TRAVES, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Railroad-Rails, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to railroad rails, and has for its object the provision of a rail the tread portion of which can be cheaply and expeditiously replaced when worn, and which can be cheaply and easily manufactured.

Another object is the provision of a rail in which the joints shall be so thoroughly overlapped and broken as to materially increase their strength and to diminish the noise and shock occasioned by the car wheels passing thereover.

A further object is the provision of a rail having increased facilities for electrical bonding.

Additional objects and advantages will appear from the following description and claims.

One embodiment of my invention is illustrated in the accompanying drawings in which—

Figure 1 is a perspective view of a portion of a rail made in accordance with my invention showing the manner of applying my invention to a joint between two rail base sections; Fig. 2 is a vertical cross sectional view of a rail constructed in accordance with my invention and Fig. 3 represents a view, similar to Fig. 2, of a modified form of my invention.

Describing the parts by reference characters, the base 1 of the rail consists of a steel member of substantially I-shape having a flat base adapted to be secured to the ties 2 by means of the usual bolts 3 and having a flat horizontal head 4 connected to said base by means of the vertical web 5. This construction is exactly the same as that of the ordinary rail now in use except that the head is made thinner and flatter than in the ordinary construction. Adjacent base members 1 and 1^a are connected together by means of fish plates 6 and bolts 7 as in the usual construction.

The tread member of the rail is made separate from the base member and com-

prises a flat steel plate 8 slightly wider than the head 4 and having at each side a depending lip or flange 9 adapted to overhang the edges of the head. The lower surface of the tread member is made flat so as to engage the surface of the head 4 and the internal faces of the lips or flanges 9 are beveled ribs 10 which are adapted to spring over the edges of the head so as to hold the tread member securely in position thereon. The upper surface of the tread member is shown as provided with a longitudinal groove 11 adjacent one side to receive the flange of the car wheel, thus adapting the rail particularly for street car work, although it is obvious that the rail head might be made smooth and rounded according to the usual practice in steam railroad work and the lower surface of the tread member 8 be correspondingly rounded. With this construction of the tread member and base member the tread member can be pried away from the base member at one end and progressively detached therefrom, the shape and resilience of the lips or flanges 9 being sufficient to permit this action and at the same time to hold the two members securely together according to the requirements of actual use. The method of assembling is but the reverse of the method of dismantling since, if one end of the tread member be applied to the head member 4, the two members can be progressively united from this starting point by the application of pressure to the tread member. This pressure can be created by allowing a car to run upon the tread member, the weight of the car forcing the tread member in place. The joints between successive tread members are staggered as regards those of the base members thus strengthening the rail in a marked degree and retarding the wearing of the tread members at the joints which is so obvious in ordinary rails. Furthermore this overlapping of the different rail members will be found to form a sufficiently close electrical union for many purposes, since the relative abrasion of the members caused by their method of assembling will be found to scrape some of the oxid from the surfaces thereof, and the pressure created by the wheels of passing vehicles will tend to keep the clean surfaces in close electrical contact.

In Fig. 3 I have shown the tread member 8^a as formed with a separate flange member

9^a at one side so as to permit the same to be made of more flexible and resilient steel than could profitably be employed for the whole tread. This flange member is formed with the same inclined rib 10^a, and is secured to the tread member, as by brazing, welding, riveting or bolting. It will be obvious that both flanges could be made in this way if desired, and that many other changes could be made in the details thereof. All such modifications I consider as within the scope of my invention except as excluded by the terms of the claims hereto annexed, or as existing in the prior art.

In practice the portions of the depending flanges 9, 9^a, which receive the sides of the rail head 4 have been made about one-eighth inch thick, the thickness of the metal across the beveled ribs 10 being about three-sixteenths of an inch. The flanges have been given a special treatment which gives them substantially the resilience of spring steel.

Having thus described my invention, what I claim is:

1. In a railroad rail, the combination of a base member having a head, and a tread member applied to the head, said tread member comprising a plate adapted to rest on top of the head and having depending resilient flanges, each flange being provided with an inner lateral surface adapted to bear against the adjacent lateral surface of the head and having an inwardly extending projection below such surface, such projection being beveled inwardly and downwardly adjacent to said surface and being beveled outwardly and downwardly below the former beveled surface.

2. In a railroad rail, the combination of a base member having a head provided with

substantially vertical sides, and a tread member supported by the head of the base member, the tread member comprising a plate adapted to rest on top of the head and having depending resilient flanges, each flange being provided with a substantially vertical inner lateral surface adapted to bear against the corresponding vertical surface of the head and with an inwardly extending projection below such vertical surface so located as to engage the under surface of the head to lock the tread member in place thereon, such projection having its lower portion downwardly and outwardly inclined to facilitate the application of the tread member to the head.

3. In a railroad rail, the combination of a base member having a head, the head being provided with substantially vertical sides, and a tread member applied to the head, said tread member having depending flanges adapted to engage the sides of the head, each of said flanges being provided with a substantially vertical inner surface adapted to bear against the corresponding side of the head and provided with an inwardly extending projection below such inner surface, each of said projections being adapted to engage the under surface of the head and being downwardly and inwardly beveled immediately below such surface and being outwardly and downwardly beveled below the former beveled surface.

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

WEBSTER F. TRAVES.

Witnesses:

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BRENNAN B. WEST.