C. A. ALDEN.

RAILROAD RAIL.

APPLICATION FILED MAR. 18, 1908.

925,261. Patented June 15, 1909.

Fig. 1.

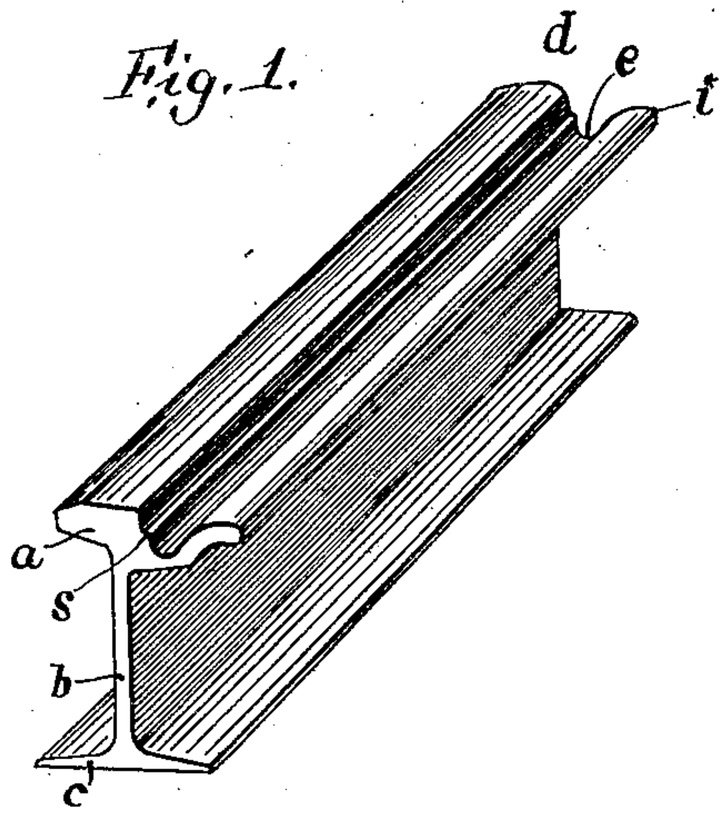


Fig. 2.

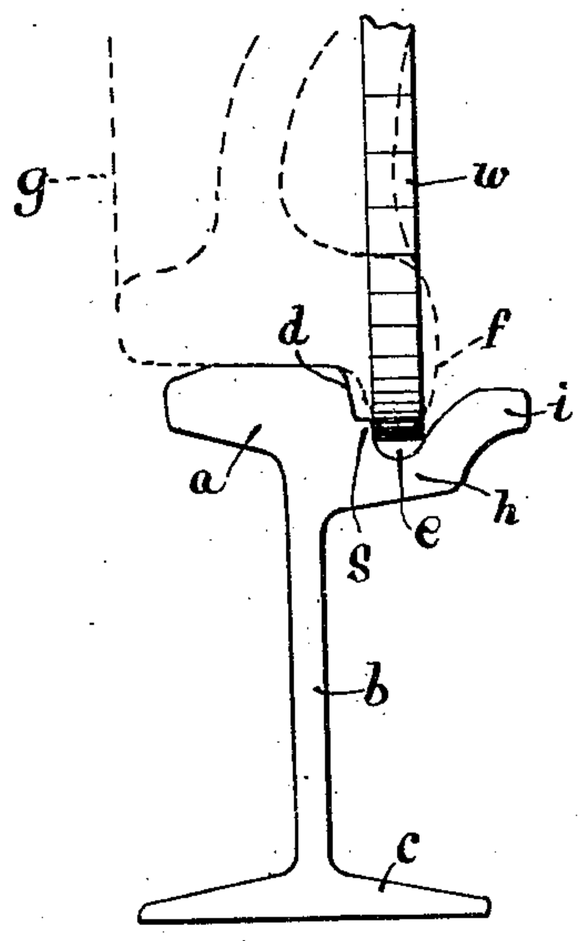
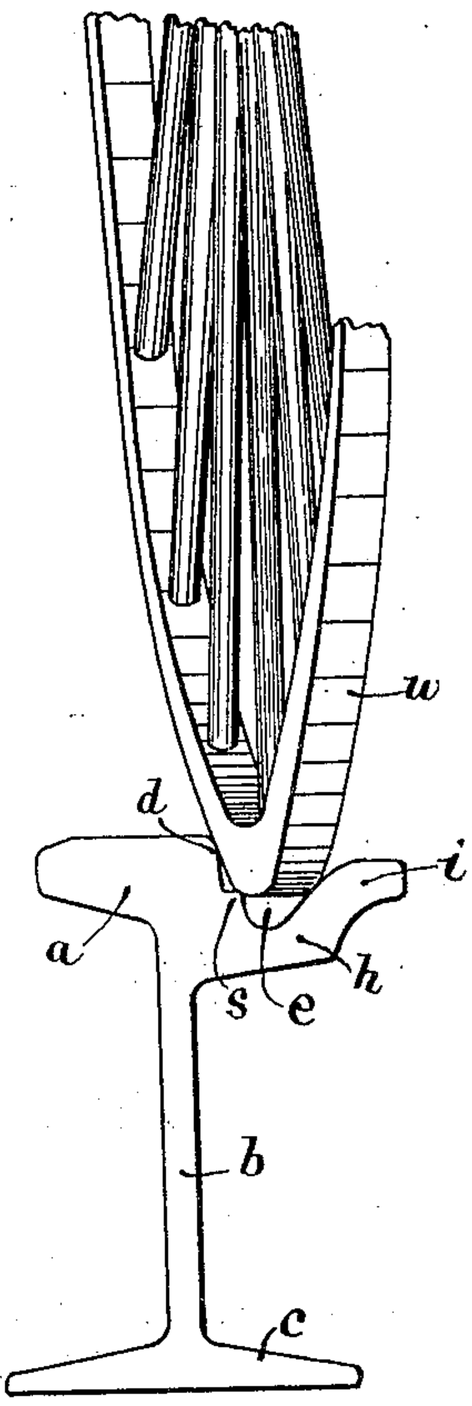


Fig. 3.



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RAILROAD-RAIL.

No. 925,261. Specification of Letters Patent. Patented June 15, 1909.

Application filed March 18, 1908. Serial No. 421,956.

To all whom it may concern:

Be it known that I, CHARLES A. ALDEN, a citizen of the United States, and resident of Steelton, Dauphin county, State of Pennsylvania, have invented certain new and useful Improvements 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 that class of railroad rails wherein is employed a rail head having on one side thereof a flangeway through which the flanges of car wheels pass as the wheels traverse the rails. Rails of this class are employed in railways of city streets, and other places where vehicles travel. The vehicle wheels usually pass through the rail flangeways as the vehicles traverse the trackways; and it is a well known fact that frequently, when an attempt is made to turn a vehicle out of the course of a trackway, great difficulty is experienced in extricating the vehicle wheels from the wheel-flangeways. This is due to the fact that when a vehicle wheel is turned from the course of the trackway, it will engage the adjacent edge of the top of the rail head and slide along the rail with considerable friction some distance before the resistance of the rail head is overcome and the vehicle wheel rolls or climbs over the rail head.

The object of my invention is to provide a railroad rail of simple and efficient construction having provision whereby this difficulty is overcome to a very great extent; and to this end the invention consists in the rail of the novel construction hereinafter fully described and claimed.

In the drawings:—Figure 1 is a perspective view of a section of a railroad rail embodying my invention. Fig. 2 is an end elevation of the rail showing, by dotted lines, the lower portion of a flanged car-wheel, and by full lines, the lower portion of a vehicle wheel within the wheel-flangeway of the rail. Fig. 3 is an end elevation of the rail, showing the lower portion of a vehicle wheel in one of the positions it occupies in the act of leaving the wheel-flangeway or passing over the head of the rail.

a designates the head of the rail, *b*, the vertical web, and *c*, the foot flange thereof. The parts *b* and *c* may be of the well known construction shown, or they may be of any preferred construction. Adjacent the inner face *d* of the head *a*, is the usual flangeway *e*, for the passage therethrough of the flange *f* of the car wheel *g*. Extending inwardly from the lower portion of the inner face *d* of the head *a*, is a flange *h*, which forms the base of the wheel flangeway *e*. This flange *h* may extend only inwardly, to form the base of the flangeway, as is common and well known in rails of this character, or it may extend inwardly a short distance and then upwardly, as at *i* to form both the base *h* and inner wall *i* of the wheel-flangeway *e*, as shown in the drawings. The inner face of the rail head *a* forming the outer wall of the flangeway *e*, is provided with a shoulder *s*, which projects into the flangeway *e* and is positioned below the top of the head *a* and above the bottom of the flangeway *e*. The shoulder *s* is so designed and arranged, that during the passage of the wheel flange *f* through the flangeway *e*, the wheel flange will either not touch the shoulder *s* at all, or touch it very lightly. Thus the shoulder *s* will not interfere with the car wheels passing over the rail.

When the wagon wheel *w* gets into the wheel-flangeway *e* of a rail of my improved construction, it may be easily extricated therefrom. When the wheel *w* is turned to direct the vehicle from the trackway, the force acting upon the axis of the wheel in the direction of travel of the vehicle will cause the wheel *w* to first engage the shoulder *s* and thereafter engage the top inner corner of the rail head *a*, in rolling or climbing over said head. Thus the wheel *w* is greatly assisted by the shoulder *s* in passing over the rail head *a*, and the liability of the wheel slipping to any extent along the rail before passing over the head thereof, after it has been turned to leave the wheel-flangeway, is greatly reduced, if not entirely obviated, for the reason that the leverage of the wheel is greatly increased by the wheel being first raised by its engagement with the shoulder *s*, and thereafter still further raised by its engagement with the upper, inner corner of the rail head *a*.

My invention is especially desirable where deep wheel-flangeways are desired, either for the employment of deep wheel flanges, or where the wheel-flangeways are originally made deeper than need be to provide for wear upon the rail head.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A railroad rail provided with a head, a flange extending inwardly from the head below the top thereof, and forming the base of a wheel-flangeway, and a shoulder projecting from the inner or wheel-flangeway side of the head and positioned between the base of the wheel-flangeway and the top of the head, the shape of the rail in cross section being the same throughout its length, substantially as described.

2. A railroad rail provided with a head, a flange extending inwardly from the head below the top thereof and forming a wheel-flangeway base and then extending upwardly to form the inner wall of a wheel-flangeway, and a shoulder projecting from the inner or wheel-flangeway side of the head and positioned between the base of the wheel-flangeway and the top of the head the shape of the rail in cross section being the same throughout its length, substantially as described.

3. A railroad rail comprising a base, a vertical web rising from the base, a head on said web, a flange extending inwardly from the head below the top thereof, and forming a wheel-flangeway base, and then extending upwardly to form the inner wall of a wheel-flangeway, and a shoulder projecting from the inner or wheel-flangeway side of the head and positioned between the base of the wheel flangeway and the top of the head, the shape of the rail in cross-section being the same throughout its length.

In testimony whereof, I have hereunto affixed my signature.

CHARLES A. ALDEN.

Witnesses:
B. L. Weaver,
Wm. R. Miller