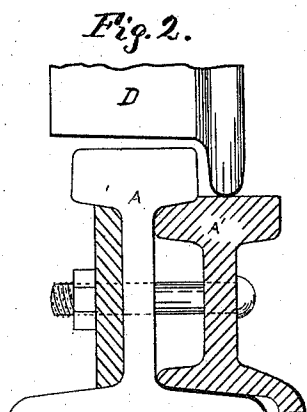
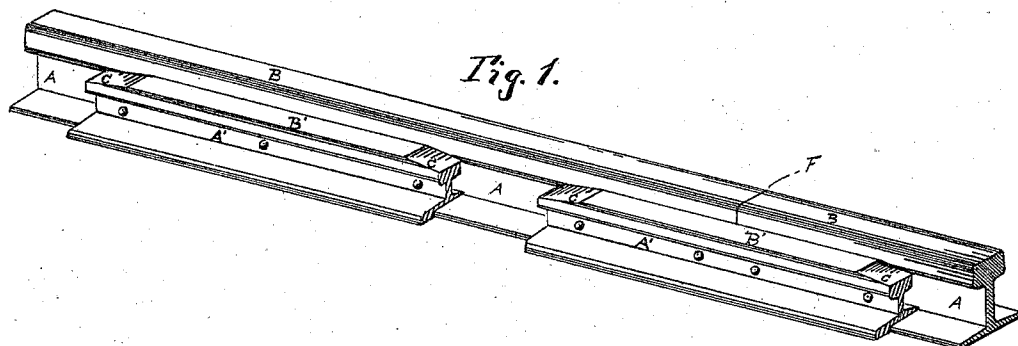


(No Model.)

W. C. FERGUSON.
RAILWAY RAIL.

No. 579,264.

Patented Mar. 23, 1897.



Witnesses
A. P. Glenn
M. L. Glenn

William C. Ferguson, Inventor

By his Attorney
Geo. P. Glenn

UNITED STATES PATENT OFFICE.

WILLIAM C. FERGUSON, OF JACKSONVILLE, FLORIDA.

RAILWAY-RAIL.

SPECIFICATION forming part of Letters Patent No. 579,264, dated March 23, 1897.

Application filed June 27, 1896. Serial No. 597,099. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. FERGUSON, a citizen of the United States, residing at Jacksonville, county of Duval, and State of Florida, have invented a new and useful Improvement in Railway-Rails, of which the following is a specification.

This invention has for its objects the preventing of friction between the rail and the flange of the wheel on railway-curves and the consequent cramping and straining of the truck, the avoiding of the necessity of greasing the rails at curves, which greasing destroys the efficiency of an emergency-brake and thereby endangers life and property, the switching of cars from the main line, &c., and it may obviously be used in the construction of either street or steam railway-tracks. I attain these and other objects by means of the peculiar composite railway-rail composed of a main-line tread-bearing portion and an auxiliary flange-bearing portion, as illustrated by the accompanying drawings, in which—

Figure 1 is a detailed perspective view of my invention, showing all parts. Fig. 2 is an enlarged transverse section of the composite rail at the point F, a joint in the main-line portion, and shows also a facial view of a portion of the wheel D resting upon the flange-bearing portion of the rail, but lifted free from the main-line tread-bearing portion.

Referring to the drawings as a part of this specification, A is the main-line portion, having a continuous upper tread-bearing surface B, but employed only in alternating sections.

A' is the auxiliary flange-bearing portion, arranged in sections and having an upper flange-bearing surface B', beveled downward at each end into a short inclined plane C, and depressed below the upper surface of the main-line portion a little less than the circumference of the wheel's flange falls below the same. The head of this flange-bearing portion is so constructed as to fit snugly under the head of and against the web of the main-line portion, while the foot of the same is so inclined to its web and so constructed otherwise as to set firmly on top of the foot of the main-line portion, to fit snugly against the web of the main-line portion and to rest

firmly on the cross-tie beyond the foot of the main-line portion. The flange-bearing portion thus formed is bound firmly to the main-line portion by bolts and takes the place of half the fish-tie wherever it laps a joint of the main-line portion, as at F in Fig. 1. The composite rail thus formed receives and transfers the bearing of the wheel to and from the flange and tread alternately and produces a double-plane motion horizontally by the slight and gradual lifting and dropping of the wheel from and to the main-line portion.

The relative lengths of tread-bearing and flange-bearing surfaces are adjustable to the radius of curvature—viz., the greater the radius the less the amount of flange-bearing surface and used only on the outer side of the track to increase the speed of the outer wheel over that of the inner, thereby keeping the axle perpendicular to the tangent of the curve at every point of curvature.

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

1. In a composite railway-rail, a main-line tread-bearing portion secured to an auxiliary flange-bearing portion and provided with a continuous upper surface employed in alternating sections of relatively variable lengths, substantially as specified.

2. In a composite railway-rail, a sectional flange-bearing portion secured to an auxiliary tread-bearing portion and provided with upper, depressed, beveled surfaces of relatively variable lengths, substantially as specified.

3. In a composite railway-rail, a main-line tread-bearing portion provided with a continuous upper surface employed in alternating sections of relatively variable lengths, in combination with an auxiliary flange-bearing portion provided with upper, depressed, beveled surfaces of relatively variable lengths, substantially as specified.

4. A composite railway-rail having a main-line tread-bearing portion provided with a continuous upper surface employed in alternating sections of relatively variable lengths and a sectional flange-bearing portion provided with upper, depressed, beveled surfaces of relatively variable lengths, substantially as specified.

5. In a composite railway-rail, a main-line tread-bearing portion, a sectional flange-bearing portion and means for combining said portions, substantially as specified.

6. In a composite railway-rail, a sectional flange-bearing portion, its upper depressed surfaces, and the downwardly-beveled in-

clined planes approaching each of said depressed surfaces, substantially as specified.

WM. C. FERGUSON.

Witnesses:

W. P. GIFFORD,

W. M. ARCHIBALD.