J. NOLL.

COMPOUND RAIL.

APPLICATION FILED JAN. 30, 1912.

1,068,814.

Patented July 29, 1913.

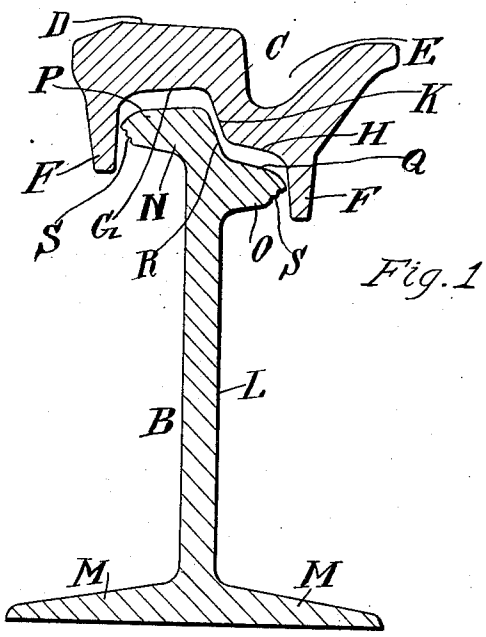


Fig. 1

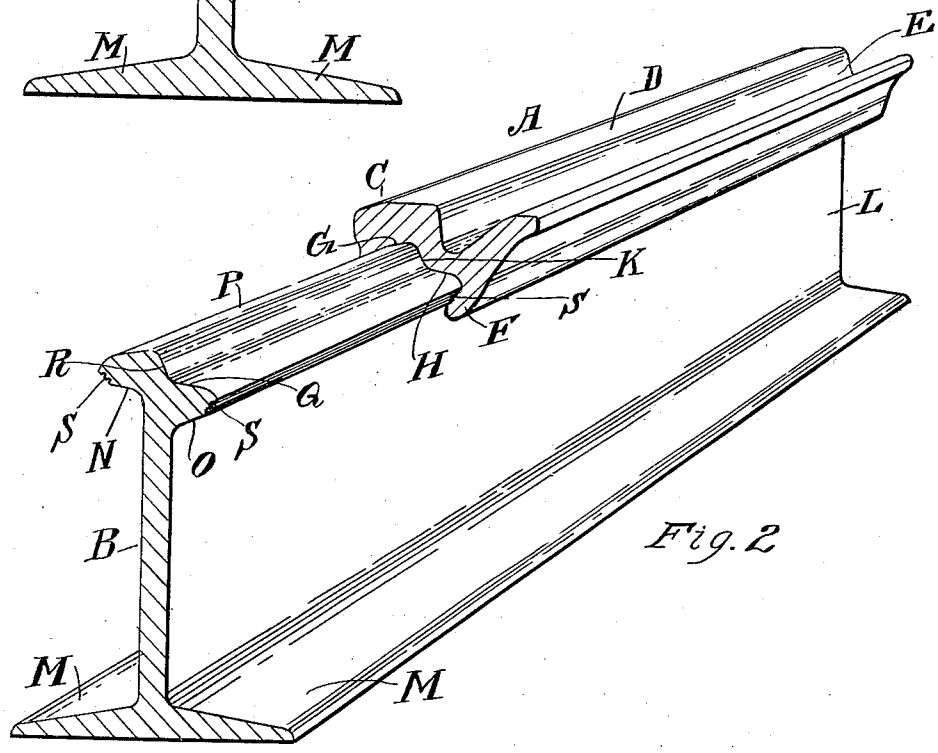


Fig. 2

Witnesses:
A. S. MacKenzie
Eugene Delmas

Inventor
John Noll
By his Attorneys
Riddle & Mundell

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN NOLL, OF NEW YORK, N. Y., ASSIGNOR TO CONTINUOUS RAIL COMPANY, OF WILMINGTON, DELAWARE, A CORPORATION OF DELAWARE.

COMPOUND RAIL.

1,068,814. Specification of Letters Patent. Patented July 29, 1913.

Application filed January 30, 1912. Serial No. 674,308.

To all whom it may concern:

Be it known that I, JOHN NOLL, a citizen of the United States, and a resident of the borough of Brooklyn of the city of New York, in the county of Queens and State of New York, have invented certain new and useful Improvements in Compound Rails, of which the following is a specification.

The object of the invention is to construct a compound rail comprising a base or girder supporting section designed to decrease the amount of material which is necessary in the wearing portion and at the same time not sacrifice any of the strength or rigidity of the rail.

Another object of the invention is to provide a compound rail construction in which the base is provided at the top portion thereof with flanges arranged at different elevations and an inclined surface portion or resisting ledge extending between the top surfaces of the flanges.

A further object of the invention is to construct a compound rail in which the wearing section at the top is provided with a tread portion and a grooved portion and the bottom with supporting surfaces at different elevations; the lower supporting surface being located under the groove and which supporting surfaces fit the top surface of flange members on the base section.

As showing a specific embodiment of the invention reference is made to the drawing in which—

Figure 1 shows a cross sectional view of a compound rail, the sections thereof being located a slight difference apart and prior to the depending flanges being bent to holding position. Fig. 2 is a perspective view of the compound rail showing the girder section and a portion of a top section held in place thereupon by the depending flanges which have been bent to holding position.

The reference character A designates a compound rail comprising the base or girder section B and the top or wearing section C both of which are preferably elongated shapes or members formed by rolling. The wearing section C is provided at the top thereof with a tread portion D and a grooved portion E to receive a car wheel flange. This section is also provided with the depending lips F, F between which are located the supporting surfaces G and H, which are at different elevations, and the inclined surface portion or ledge K extending therebetween. It will be observed that the lower supporting surface H is directly below the grooved portion E.

The base section comprises the vertically extending web L, the outwardly and horizontally extending flanges M, M upon opposite sides of the web at the lower portion thereof and the outwardly and horizontally extending flanges N, O located at the upper portion of the web upon the opposite sides thereof. The top supporting surfaces P and Q, of the flanges N and O respectively, are arranged at different elevations and there extends between said supporting surface portions the inclined surface portion R which constitutes a resistance ledge to absorb some of the lateral thrust which is imparted to the top section by the pressure of the wheel flange against the tread side of the grooved portion. The ends of the flange portions may be serrated or grooved as shown at S, S to provide a gripping surface against which the depending lips are pressed as in Fig. 2.

It will be noted that the vertical dimension of all of the flanges and the horizontal dimension of the web in the base section are very nearly the same and also that the transverse dimensions or thickness of the metal in the tread portion and grooved portion of the top section are also nearly the same. Thus the sections of the rail when shaped as shown are comparatively easy to roll and at the same time well adapted for the rough and hard usage which rails of this class often have to undergo. It will also be observed that all of the flange portions extend outwardly in a horizontal direction from the vertically extending web and that the vertical dimension of any part of any one of the flanges at or near the edge of said flange is less than the vertical dimension of any part in the same flange which is nearer to the web than the part first referred to.

The improvements herein set forth are not limited to the precise construction shown and described, as they may be embodied in various forms and modifications without departing from the spirit and scope of the invention.

I claim as my invention:

1. A compound rail comprising a top

wearing section and base section held together by depending bent holding lips on the former, the base section being a member having a web, supporting flanges at the bottom thereof and two flanges at the top thereof which are engaged by the lower surface portion of the wearing section, one of the flanges at the top being located at one side of the web and at a different elevation from the other upper flange which is located at the other side of the web, the top wearing section also engaging the ledge between the top flanges.

2. A compound rail construction comprising top wearing sections and base sections, each of the wearing sections having at the top thereof a tread portion and a grooved portion to receive a car wheel flange, at the sides depending holding flanges and at the bottom between the flanges a surface portion below the grooved portion which is at a lower elevation than the longitudinally extending surface below the tread portion; the base sections each comprising a vertically extending web portion provided at the upper edge with outwardly and horizontally extending flanges having top surfaces at different elevations upon which the top wearing sections are seated, the edges of the last mentioned flanges being engaged by the lips when in holding position and the top sections fitting the base sections whereby lateral thrust against the top sections will be transmitted to the ledge portions between the top flanges of the base sections.

3. A compound rail comprising a top wearing section and a base section held together by bent holding lips which are integral with the top section, the base section being a member having a web, supporting flanges at the bottom thereof and two flanges at the top thereof whose top surfaces are in different elevations, thus providing a ledge formation between said last mentioned flanges, the top wearing section fitting the upper portion of the base section whereby lateral thrust will be imparted from the top section to the ledge portion of the base section.

4. A compound rail comprising a wearing section and a base section having engaging supporting surfaces of the same contour, the wearing section having at the top thereof a tread portion and a grooved portion to receive a car wheel flange, said wearing section also being provided with the depending holding flanges between which are supporting portions at different elevations and an inclined surface portion extending between said supporting portions, the lower supporting portion being located under the groove, the base section comprising a web portion, flanges located at opposite sides of the lower portion of the web and top flanges extending longitudinally of the web and upon opposite sides thereof, the supporting surfaces of the top flanges being arranged at different elevations and connected by an inclined surface portion located over the web, the inclined surface portions on the top and base sections fitting each other whereby any outward lateral thrust which is imparted to the top section may be absorbed by the inclined surface portion of the base section.

5. A compound rail comprising a base section and a top wearing section provided on opposite sides thereof with depending holding lips, the base section having a vertically extending web portion, supporting flanges along the latter and extending horizontally and outwardly therefrom and flanges along opposite sides of the upper portion of the web at different elevations, each of said last mentioned flanges extending horizontally and outwardly from the web and tapering as it approaches the outer edge portions whereby the vertical dimension of any part thereof at or near the edge is less than the vertical dimension of any part thereof which is nearer the web than the part first referred to, the wearing section having at the under side and opposite sides thereof supporting surfaces at different elevations which engage the top of said upper flanges, the depending holding lips on said wearing sections engaging the outer edges of said upper flanges to hold the sections together.

This specification signed and witnessed this 26th day of January, A. D., 1912.

JOHN NOLL.

Signed in the presence of—
EDWIN A. PACKARD,
G. MCGRANN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."