

No. 692,115.

Patented Jan. 28, 1902.

G. A. CASE.  
RAILROAD RAIL

(Application filed Aug. 22, 1901.)

(No Model.)

Fig. 1.

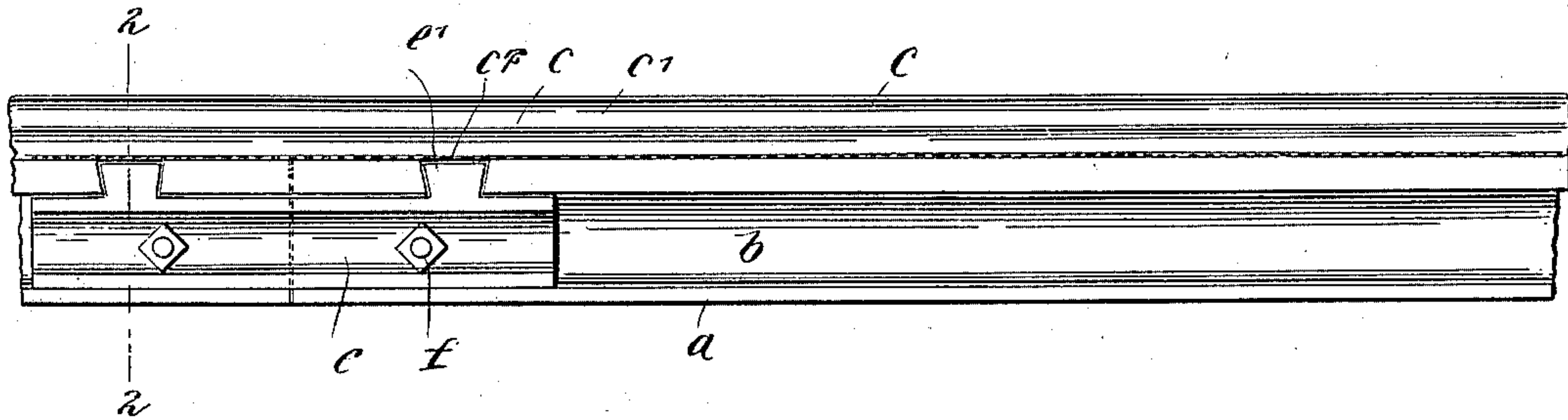
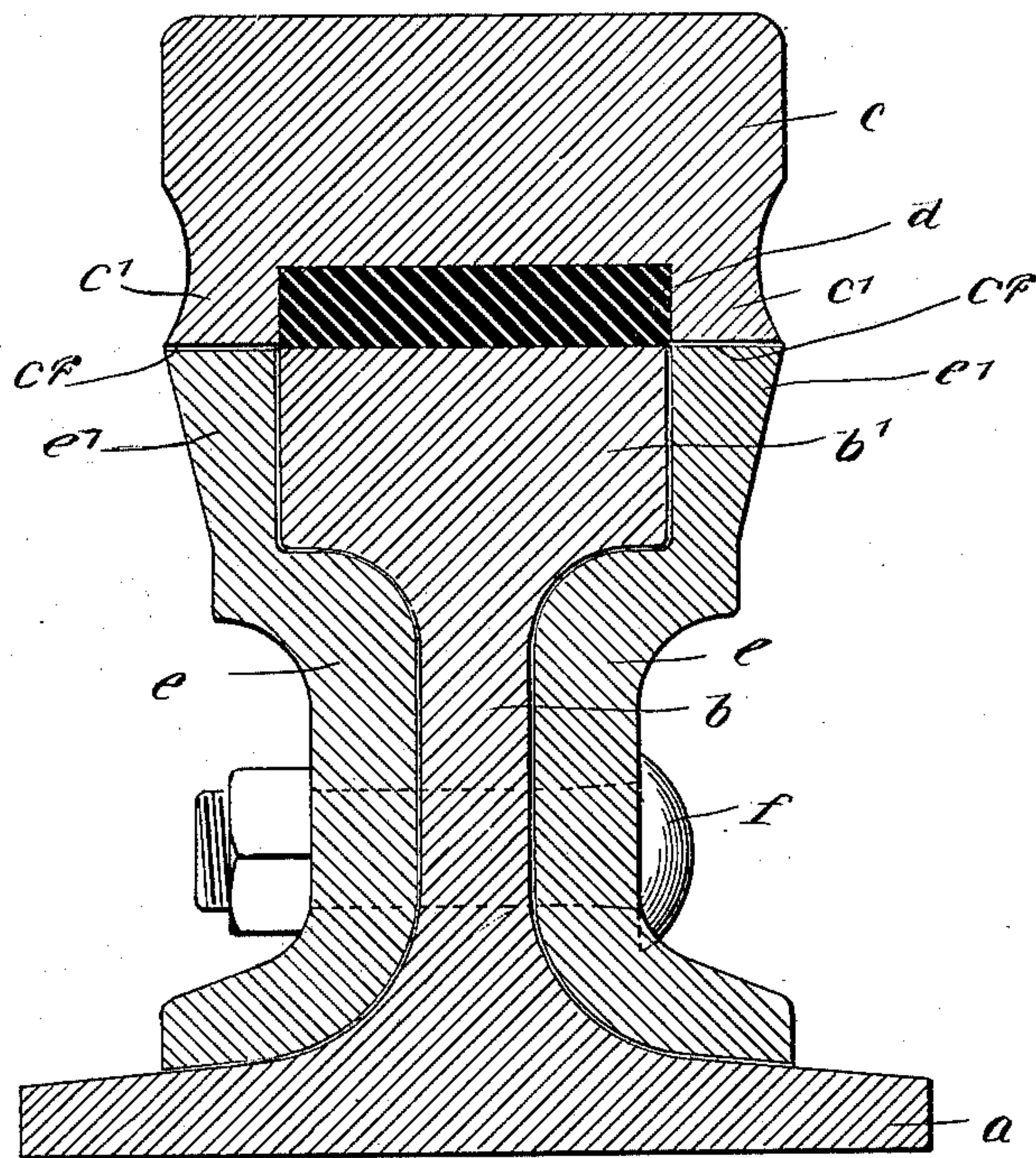


Fig. 2.

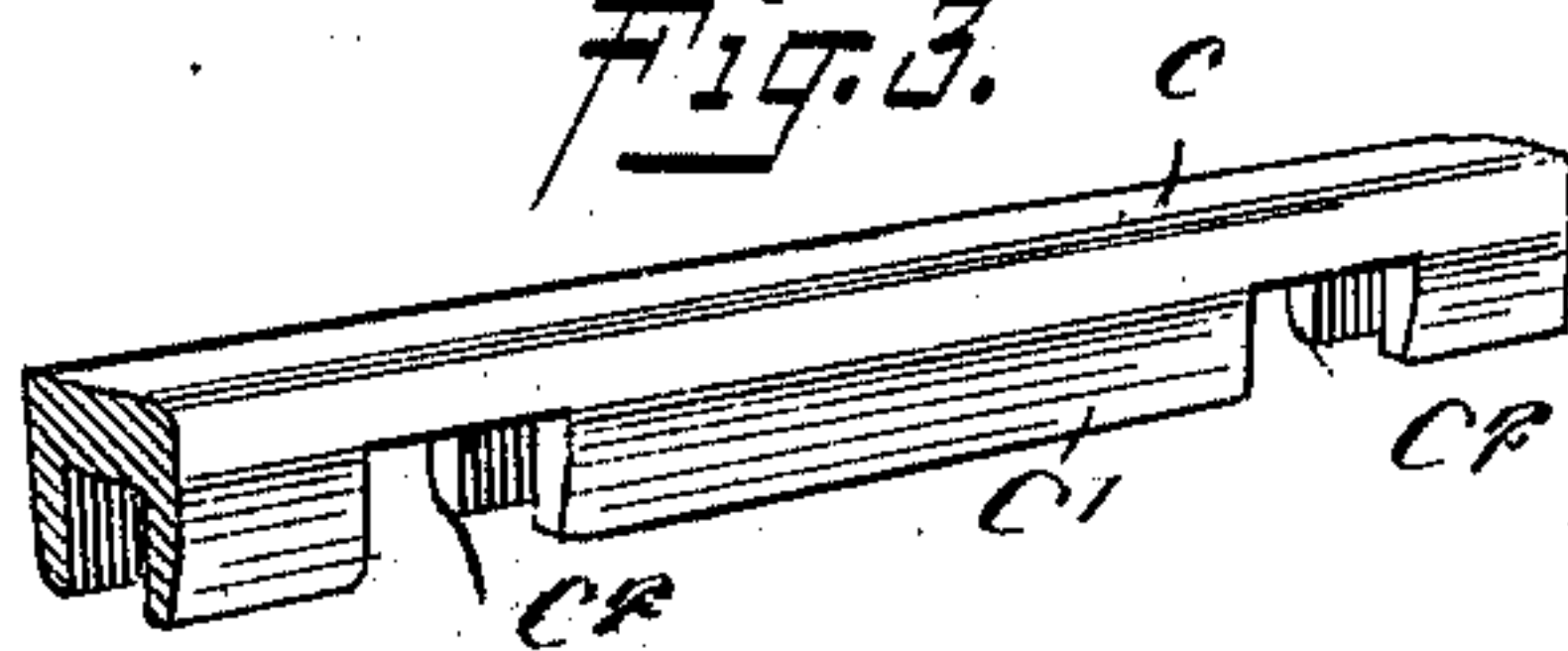


WITNESSES:

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Fig. 3.



INVENTOR

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BY

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# UNITED STATES PATENT OFFICE.

GEORGE ANSON CASE, OF JOPLIN, MISSOURI.

## RAILROAD-RAIL.

SPECIFICATION forming part of Letters Patent No. 692,115, dated January 28, 1902.

Application filed August 22, 1901. Serial No. 72,939. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE ANSON CASE, a citizen of the United States, and a resident of Joplin, in the county of Jasper and State of Missouri, have invented a new and Improved Railroad-Rail, of which the following is a full, clear, and exact description.

This invention relates to a rail for railways; and its principal feature lies in a certain novel structure by which I am enabled to provide in a practical manner a rail-ball which is removable from the web and base of the rail. The advantage of this is that when worn it may be replaced without disturbing the other parts.

The rail embodies certain novel features of construction and arrangement, which will be fully brought out hereinafter.

This specification is a specific description of one form of the invention, while the claims are definitions of the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side view of the invention. Fig. 2 is a cross-section of the same on an enlarged scale, and Fig. 3 is a detail perspective view of the removable ball portion.

The bottom or stationary portion of the rail is made up of a base *a*, on which is arranged a web *b*, having an enlarged upper portion or head *b'*. The removable ball portion of the rail comprises a ball proper, *c*, with downwardly-extending side flanges or skirts *c'*, which straddle the upper portion *b'* of the web *b*. Between the upper part *b'* of the web and the part *c* of the ball a cushion *d* is arranged. This cushion may be of any suitable material—for example, rubber, felt, wood, paper, rubber fiber, or a metallic spring. By means of this cushion the ball *c* is yieldingly supported, and the noise of the moving train is considerably deadened. When the ball becomes worn, it may be removed and a new one placed in position without disturbing the base and web of the rail. In this connection it is pointed out that in applying my invention to railways already built the removable balls may be constructed and placed on the ordinary standard rails with or without the

cushions *d* without departing from the theory of my invention.

The two parts of the rail are held together by fish-plates *e*. These fish-plates, as best shown in Fig. 1, are provided at their upper edges with dovetail lugs *e'*, fitted in corresponding orifices *c''* in the skirts *c'* of the ball portion *c* of the rail. These orifices *c''* should be made sufficiently large with respect to the lugs *e'* to allow for the yielding of the cushions *d*, if such cushions are employed, it being understood that the rail may or may not be constructed with the cushions, according to the desire of the user. The fish-plates *e* are placed in position in the usual manner, as will be apparent upon an inspection of the drawings, and when in place they are held by bolts *f* passing through them in the usual manner.

In putting together the sections of the rail I consider it preferable to arrange the ball-sections so that their joints will not break with the joints of the lower or body section. This arrangement is shown in Fig. 1, and there it will be seen that by breaking the joints in the manner referred to a more effective connection is had and that the parts are held securely together.

Various changes in the form, proportions, and minor details of my invention may be resorted to without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the scope of my claims.

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

1. The combination of a lower or main rail portion, a rail-ball portion having a downwardly-projected flange or skirt with a dovetail recess, a fastening-plate having a part engaged in said recess of the flange or skirt, and means for securing the fastening-plate in position.

2. A rail, comprising a lower or main portion having a base-flange and a web with an enlarged upper edge, a ball portion comprising a ball proper and downwardly-projected side flanges or skirts straddling the upper edge of the web, said skirts having dovetail openings therein, fish-plates lying against the

web of the lower portion and having dovetail lugs which enter the openings in the skirts, and means for securing the fish-plates in position.

5 3. A rail, comprising a lower or main portion, a removable ball portion having a downwardly-projected skirt with an opening therein, a fastening-plate, said plate having a projection entering the opening in the skirt of  
to the ball portion to hold the two together, and means for securing the plate in place.

4. A rail, comprising a lower or main part made up of a base-flange, a web, and a ball of substantially the form of a standard rail,

a removable portion forming the ball proper, 15  
said movable portion lying on the ball of the lower or main part of the rail and having a skirt projecting down alongside of said lower part of the rail, and means engaged with said skirt to hold the removable part of the rail 20  
in place.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE ANSON CASE.

Witnesses:

SAMUEL S. YAGER,  
J. H. SPURGEON.