

B. G. BRAINE.

RAIL JOINT.

APPLICATION FILED AUG. 26, 1908.

1,026,300.

Patented May 14, 1912.

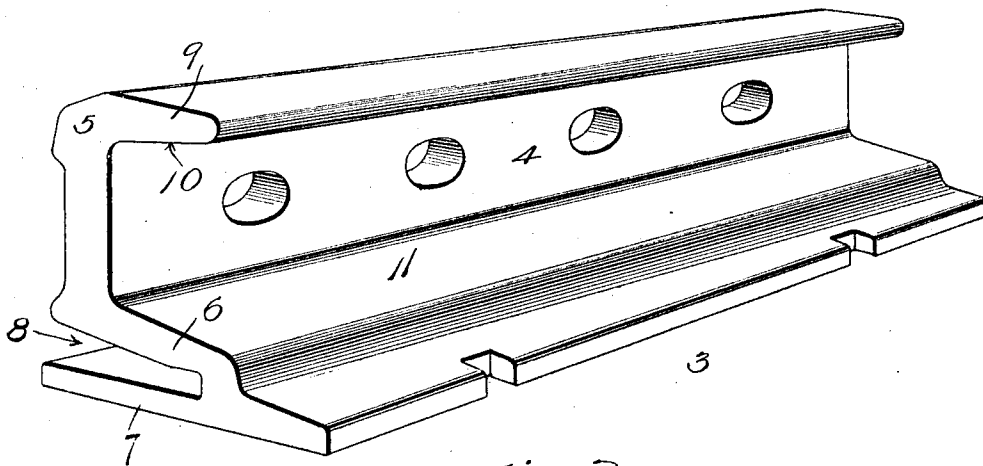
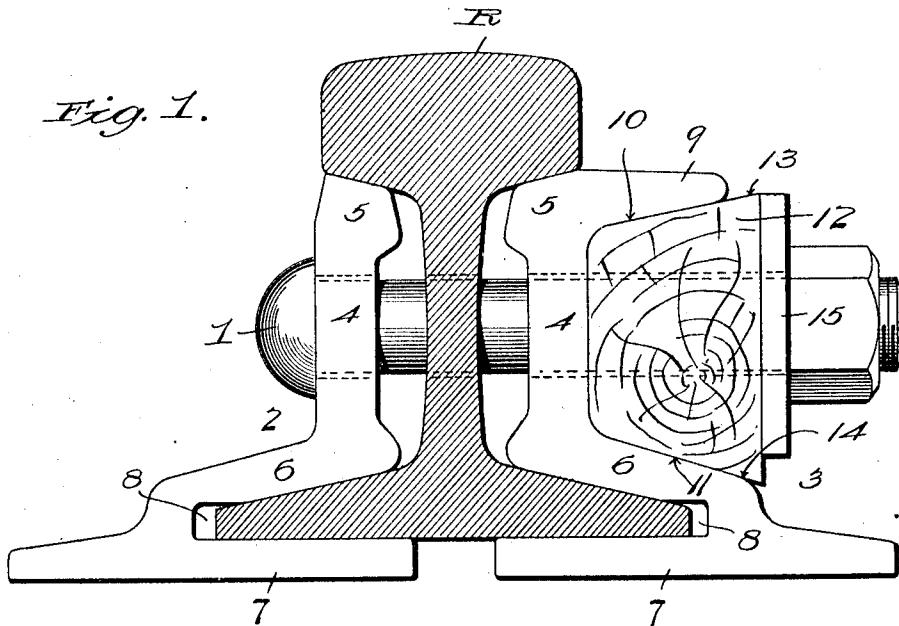


Fig. 2.

Inventor

Bancroft G. Braine

Witnesses

T. L. Moerland
Emory L. Groff

By

S. P. Kohlhauser

Attorney

UNITED STATES PATENT OFFICE.

BANCROFT G. BRAINE, OF NEW YORK, N. Y., ASSIGNOR TO THE RAIL JOINT COMPANY,
OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

RAIL-JOINT.

1,026,300.

Specification of Letters Patent.

Patented May 14, 1912.

Application filed August 26, 1908. Serial No. 450,355.

To all whom it may concern:

Be it known that I, BANCROFT G. BRAINE, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to the subject of rail joints, and more particularly to the construction of joint bars of the type known as the continuous bar.

The standard type of continuous rail joint is characterized by the employment of joint bars, each of which is rolled to provide an upright member interposed between the rail head and the upper side of the rail base flange, an outwardly extending foot flange overhanging the base flange of the rail, and an inwardly extending horizontal rail-supporting base section integral with the outer edge of the foot flange and underlying and flatly bearing against the rail base, there being a continuous flange-receiving pocket or space provided between said foot flange and the base section for the reception of the base flange of the rail. The above construction of joint bar, of the continuous type, possesses great utility and efficiency, and in many years' practical use has demonstrated a capability of meeting and withstanding all traffic conditions to which a base supporting rail joint is subjected.

It is therefore the purpose of the present invention to provide an improved rail joint bar of the general continuous form which shall preserve all of the desirable and practical features of the continuous bar, while at the same time improving the latter in the particulars of adding to the strength thereof, and adapting the same for use in combination with a wooden or equivalent filler member, the special advantages for which will be hereinafter more fully pointed out.

With these and many other objects in view, which will more readily appear to those familiar with the art as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

The essential feature of the invention in-

volved in the novel design of the improved joint bar, of the continuous type, is necessarily susceptible to being used in a variety of ways in connection with both standard and insulated rail joints without departing from the scope of the invention, but a preferred and practical embodiment of the latter is shown in the accompanying drawings, in which:

Figure 1 is an end view of a rail joint, of the non-insulated continuous type, embodying the improvements contemplated by the present invention; the rail showing in cross section. Fig. 2 is a detail in perspective of a continuous type of joint bar, the design of which is modified in accordance with the present invention.

Like references designate corresponding parts in the several figures of the drawings.

As indicated, the invention claimed herein possesses special utility in connection with the continuous type of rail joint, and, as shown in the drawings, a joint of this character includes in its construction the service rails R, the usual joint bolts 1, and the oppositely arranged continuous joint bars 2 and 3 respectively.

Each of the opposite bars 2 and 3 is so rolled and shaped as to form the same with an upright member 4 provided at its upper edge with the usual bearing head 5 engaging beneath the under side of the rail head, and, at the lower edge of the said upright member, each joint bar is formed with an outwardly extending foot flange 6 overlying the base flange of the rail. This foot flange 6 has integrated with the outer edge portion thereof an inwardly extending, horizontal rail-supporting base section 7, underlying and bearing against the rail base, there being a continuous flange receiving pocket or space 8 provided between said flange 6 and said base section 7 for the reception of the base flange of the rail.

The several elements above enumerated are characteristic of the continuous type of joint bar, and it is the purpose of the present invention to retain all of these elements in the bar construction, with their attendant functions, but in addition to so modify the design of the bar 3 which is employed as the outer angle bar of the joint, as to provide said bar, in the formation thereof, with an approximately horizontal, laterally projecting, reinforcing top

flange 9. This reinforcing top flange 9 is located at the top edge of the upright member 4 of the bar and projects laterally and outwardly therefrom a sufficient distance to provide a substantial and well defined reinforcement therefor throughout the entire length of the bar. Also, a feature of special importance resides in the fact that the said top flange 9 is formed on its under surface with an inclined bearing face 10 corresponding to the inclined bearing face 11 at the upper side of the foot flange 6 of the joint bar, thus providing the said joint bar with a longitudinal channel at the outer side thereof. In other words, the modified construction provides a channel construction for a continuous type of joint bar, and the channel of said bar preferably accommodates therein a wooden or equivalent compressible filler member or block 12 having inclined bearing surfaces 13 and 14 at the upper and lower sides thereof which respectively engage the bearing faces 10 and 11 of the flanges 9 and 6. In order to preserve the full efficiency of the filler 12, and provide a maximum bearing of the metal parts thereon, the present invention contemplates the feature of the said projecting top flange 9 having an upper bearing face 10 of materially greater area than the area of the under side of the rail head.

The wooden or equivalent filler member 12 forms a compressible backing against which bears the bolt strap or washer 15 against which are tightened the heads or nuts of the bolts, as the case may be. In this connection, it should be noted that the wooden or equivalent blocking 12 has the advantage of forming a nut lock on account of its compressibility, while at the same time serving to absorb the noise as the wheels pass over the rails. Furthermore, in addition to preserving all of the desirable and practical features of the continuous type of rail joint, it will be observed that the improved construction described herein not only adds materially to the strength of the joint as an entirety, and particularly to the outer bar thereof, but also presents the distinct advantage of admitting of a ready and easy expansion of the rails when the joint parts are held together in connection with the compressible wood filler. Hence, the combination with the wooden filler is of special utility in this particular, as well as in the other particu-

lars hereinbefore pointed out, and it will also be observed that by reason of the novel construction described possessing special utility as the outer rail joint member, the same may be obviously combined with any suitable bar or angle as the inside bar of the joint, thus effecting a saving in the cost of the joint.

From the foregoing it is thought that the construction, action, and many advantages of the herein described rail joint will be readily apparent without further description.

I claim:

1. A rail joint comprising, in combination with the rails, a pair of opposite adjustable joint bars of angle formation and provided with integral horizontal rail supporting base sections terminating short of the vertical center of the joint, one of said bars being further provided with a channeled outer side and formed at its top edge with an outwardly projecting reinforcing flange having at its under side an inclined face of greater area than the area of the under side of the rail head, a compressible filler member having inclined faces respectively engaging said inclined face of the reinforcing flange and of the foot flange of the channeled bar, a metallic bolt strap arranged at the outer side of the filler member, and joint bolts.

2. A rail joint comprising in combination with the rails a pair of opposite adjustable joint bars of angle formation, one of said bars being provided with an integral, horizontal, rail supporting base section, said bar being further provided with a channeled outer side and formed at its top edge with an outwardly projecting reinforcing flange having at its under side an inclined face of greater area than the area of the under side of the rail head, a compressible filler member having inclined faces respectively engaging said inclined face of the reinforcing flange and of the foot flange of the channel bar, a metallic bolt strap arranged at the outside of the filler member, and joint bolts.

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

BANCROFT G. BRAINE.

Witnesses:

BENJ. WOLHAUPT,
E. F. SCHERMERHORN.