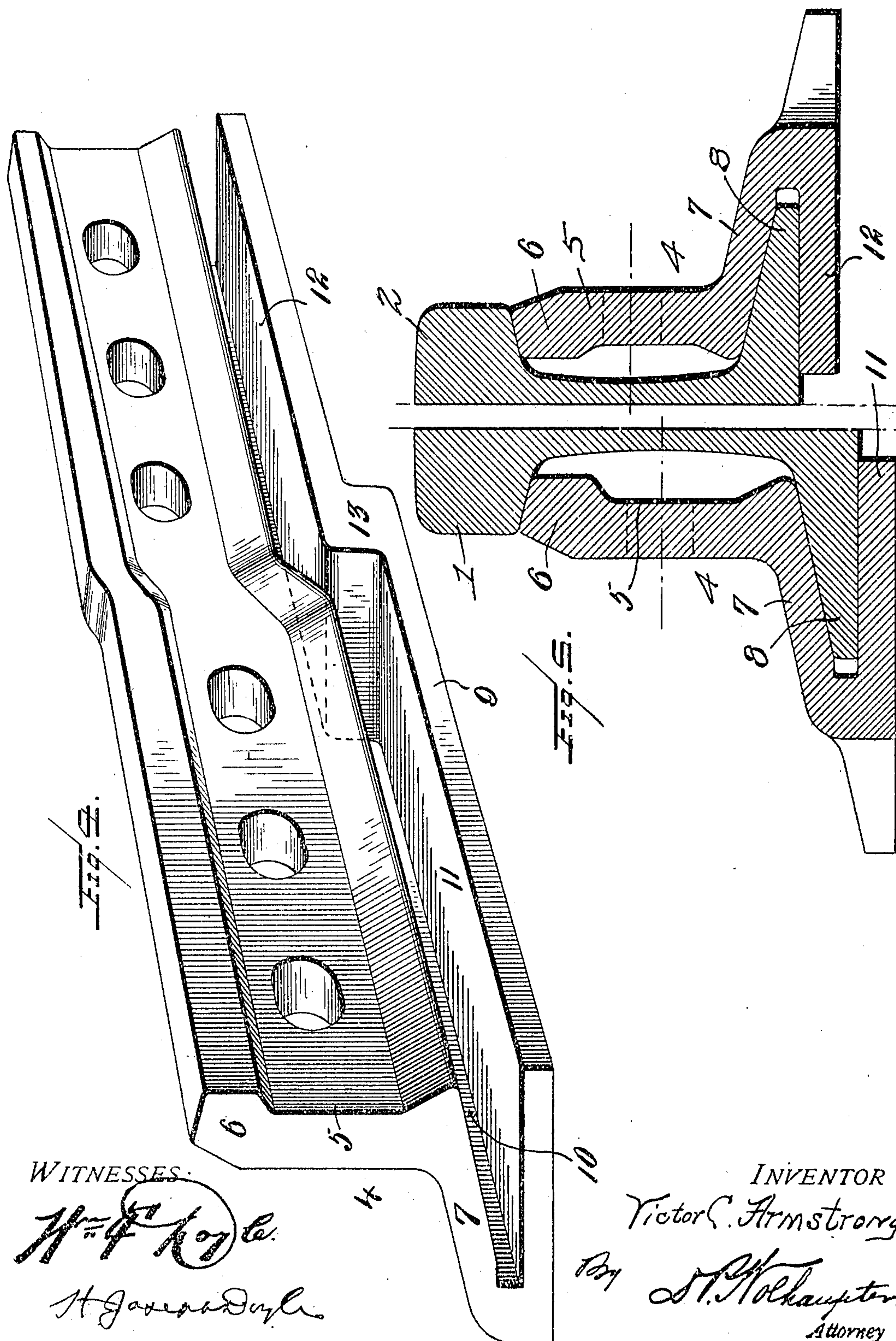


950,588.

V. C. ARMSTRONG.
COMPROMISE RAIL JOINT.
APPLICATION FILED SEPT. 26, 1907.

Patented Mar. 1, 1910.

2 SHEETS—SHEET 2.



WITNESSES:

H. F. Doyle
H. J. Doyle

INVENTOR

Victor C. Armstrong

By S. P. Holmquist
Attorney

UNITED STATES PATENT OFFICE.

VICTOR C. ARMSTRONG, OF NEW YORK, N. Y., ASSIGNOR TO THE RAIL JOINT COMPANY,
OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

COMPROMISE RAIL-JOINT.

950,588.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed September 26, 1907. Serial No. 394,673.

To all whom it may concern:

Be it known that I, VICTOR C. ARMSTRONG, 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 Compromise Rail-Joints, of which the following is a specification.

This invention relates to the subject of rail joints of the compromise or step type, which are employed to connect rails of different heights and sections, so that the tops and inner sides of these dissimilar rails are supported in alinement.

To this end the invention contemplates an improvement in compromise rail joints possessing special utility in its application to joint bars of the continuous type that are utilized to provide for the stepping and alining of dissimilar rails. Heretofore, in the formation of the continuous type of joint bars for use in a compromise or step joint, the bars are generally made of steel or malleable iron castings, and of a design and configuration corresponding to that of the rail sections to be united, besides providing for the stepped relation of the rail supporting base sections by making the base supporting section for the lighter rail thicker than the other, thereby disposing the upper supporting faces of the separate base sections in different elevations, that is, in different horizontal planes.

The well known construction described, involving the idea of a thick, heavy, rail-supporting base section for light rail ends, and a relatively thinner rail supporting base section for heavy rail ends, necessarily provides heavy and somewhat cumbersome joint bars in which one end is much heavier than the other, with the consequence of there being an uneven distribution of weight and material in the joint bar. This feature, in the conventional continuous type of joint bars employed in compromise or step joints, is entirely obviated by the present invention, which has in view the provision of a joint bar of uniform design and dimensions throughout, and in which the weight and thickness of material is uniformly distributed over the entire length of the joint bar, thereby materially contributing not only to the lightness of the joint bar and to its facility of manufacture, but also

serving to more evenly distribute strains imposed thereon by the load.

With these and many other objects in view, which will readily appear 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.

A practical embodiment of the invention is exemplified by the accompanying drawings, in which:

Figure 1 is a side elevation of a compromise rail joint embodying joint bars constructed in accordance with the present invention. Fig. 2 is a cross sectional view of the joint on the line 2—2 of Fig. 1. Fig. 3 is a similar view on the line 3—3 of Fig. 1. Fig. 4 is an inside perspective view of one of the improved joint bars embodying the present invention. Fig. 5 is a zigzag sectional view of the joint, showing two half cross sections respectively on the lines 2—2 and 3—3 of Fig. 1.

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

As indicated, the invention claimed herein, possesses special utility in its application to the continuous type of compromise rail joint, and as shown in the drawings, a joint of this character includes in its general organization the dissimilar service rails 1 and 2 of different height and section, the usual joint bolts 3, and the oppositely arranged continuous joint bars 4.

Each of the continuous joint bars 4 is so patterned and formed as to provide the same with an upright member or splice bar portion 5 having at its upper edge a thickened bearing head 6 engaging against the under side of the rail heads, and at the lower edge of the said upright member, each joint bar is formed with an outwardly extending foot flange 7 overlying the base flanges 8 of the rails, and having integral with the outer edge portion thereof an inwardly extending rail supporting base section 9 underlying and bearing against the rail bases; there being a continuous flange-receiving pocket or space 10 provided between the flange 7 and the base section 9 for the reception of the base flanges of the rails.

A characteristic and distinguishing feature of the present invention resides in the

fact that the integral rail supporting base section 9 extends the full length of the joint bar from one extremity to the other, and is of substantially uniform thickness throughout. In this connection, it will be observed that the base section 9, though constituting a single integrated part of the joint bar from end to end thereof, comprises separate base members 11 and 12 arranged in stepped relation to provide respectively for the support thereon of the dissimilar service rails 1 and 2. The separate parts 11 and 12 of the base section 9 are arranged respectively along opposite end portions of the joint bar and are of substantially the same thickness of material, said base section 9 also having a centrally located offset portion 13 so formed as to provide for disposing the upper supporting surfaces of the members 11 and 12 in the necessary stepped relation for the proper support of the different rails arranged thereon. The central offset 13 of the base section 9 may present a thicker body of material than the supporting base members 11 and 12 and hence serve to reinforce and stiffen the joint bar at the center of the joint, that is, in substantially the transverse plane of the meeting ends of the separate rails.

In the application of the joint described, it will be understood that by reason of the separate members 11 and 12 of the base section being of substantially the same thickness, the bottoms of said members are also disposed in stepped relation, thereby neces-

sitating the employment, under the joint, of two ties T of different heights, said ties respectively supporting thereon the separate members 11 and 12 of the base section, as clearly shown in Fig. 1 of the drawings, and thereby completing a compromise or step joint subserving all of the necessary functions of the ordinary continuous type of compromise joint, while at the same time possessing the added features of utility and advantage herein pointed out.

I claim:

A compromise rail joint comprising, in combination with the rails, a pair of opposite, right and left angle bars, each of which angle bars engages beneath the rail heads and upon the rail flanges, and is constructed with an integral rail supporting base section extending continuously from one end of the bar body to the other and having separate base members arranged in stepped relation and of substantially the same thickness of material throughout, said continuous base section of each angle bar being formed with a thickened portion 13 located at the vertical center of the joint and presenting a thicker body of material, vertically, than said separate base members.

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

VICTOR C. ARMSTRONG.

Witnesses:

BENJ. WOLHAUPTER,
K. McNALLY.