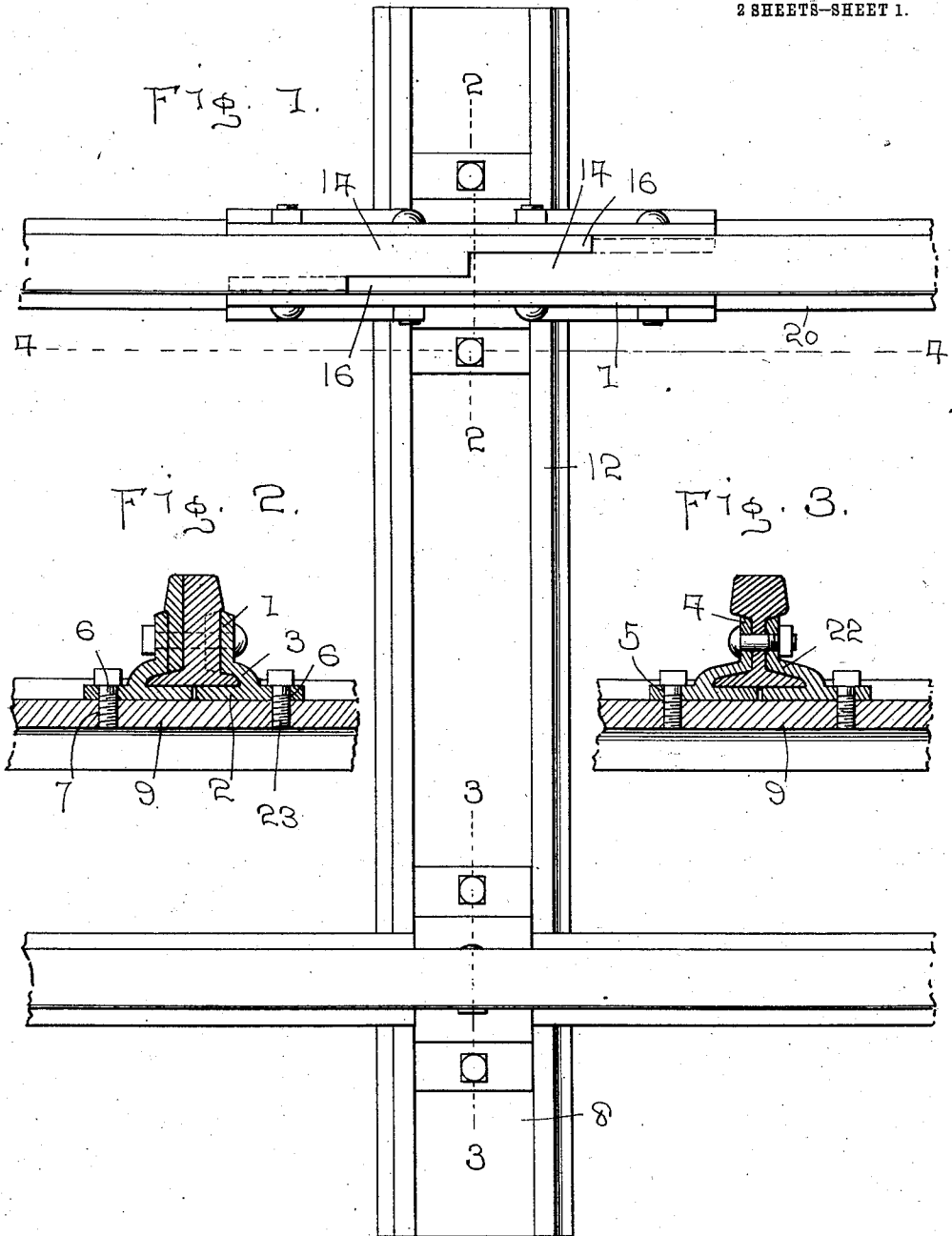


J. GRIFFIN.
JOINT FASTENER FOR RAILWAY RAILS AND TIES.
APPLICATION FILED MAR. 4, 1911.

1,011,341.

Patented Dec. 12, 1911.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 7.

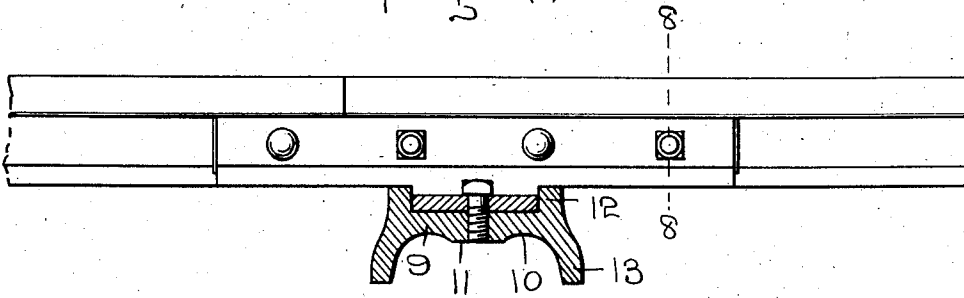


Fig. 5.

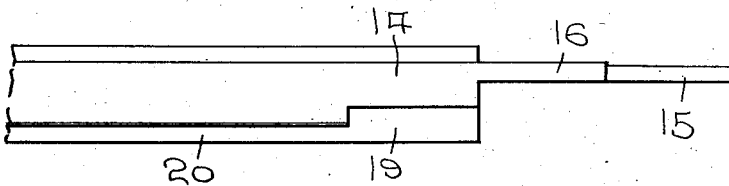


Fig. 8.

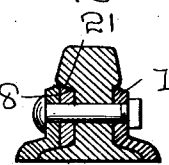


Fig. 6.

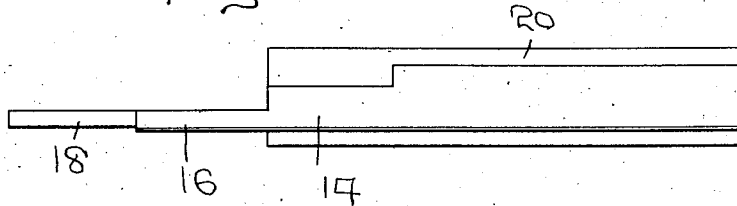
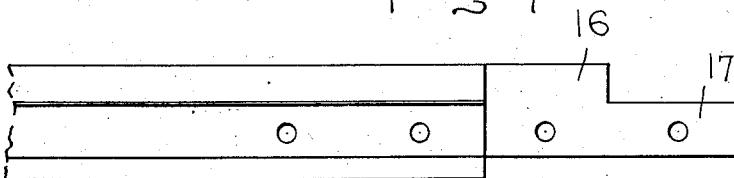


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN GRIFFIN, OF MELROSE, IOWA.

JOINT-FASTENER FOR RAILWAY RAILS AND TIES.

1,011,341.

Specification of Letters Patent.

Patented Dec. 12, 1911.

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To all whom it may concern:

Be it known that I, JOHN GRIFFIN, a citizen of the United States, residing at Melrose, in the county of Monroe and State of Iowa, have invented certain new and useful Improvements in Joint-Fasteners for Railway Rails and Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to fastening means for railway rails and more particularly to joint fasteners specially adapted for use in combination with metallic ties.

An object of the invention is to provide a novel means for fastening the meeting ends of rails and securing the same to the tie.

Another object is to provide means for connecting peculiarly formed meeting ends of rails and securing the same against longitudinal and sidewise movement.

Another object is to form integral the rail joint fastener and the securing means for securing the rails to the tie, and, another object is to construct the combined rail joint fastener and rail securer in a novel manner to be seated within the longitudinal channel of the tie to secure the parts against movement.

Other objects and advantages will be hereinafter set forth and pointed out in the specification.

In the accompanying drawings, which are made a part of this application, Figure 1 is a top plan view of the rails secured to the tie by the securing and fastening means. Fig. 2 is a vertical sectional view 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 a vertical sectional view longitudinally of the track on line 4—4 of Fig. 1. Fig. 5 is a detail view of an end of one of the rails. Fig. 6 is a detail view of the adjacent end of the next rail. Fig. 7 is a side elevation of one of the ends of the rails, and Fig. 8 is a sectional view on the line 8—8 of Fig. 4.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, the combined joint fastener and rail securer is composed of two similar members having the vertical portions 1 positioned against the sides of the rails.

The vertical portions 1 are connected with

the horizontal or base portions 2 by means of the neck or connecting curved portions 3, which fit snugly against the upper and curved surface of the base portions of the rails. The horizontal or base portions 2 rest within the channel of the tie and receive the base of the rail thereupon, the extensions or curved edges of the base resting within the necks 3, as previously mentioned. The vertical portions 1 project for some distance to either side of the tie and are provided with registering bolt receiving apertures 4, the purpose of which will later appear. The horizontal or base portions 2 are provided with the bolt receiving apertures 5 outwardly of the necks 3 and are adapted to receive the securing bolts 6, which screw into the threaded openings 7 through the channel 8 of the tie 9, which is preferably formed by rolling steel or other metal into the form best illustrated in Fig. 4.

The finished tie consists of the longitudinal portion 10 having the longitudinal rib 11 upon its under side and having the upwardly directed flanges 12 extending along the opposite edges thereof to form the channel 8 (previously mentioned), and the downwardly and outwardly curved flanges 13 formed integral with the flanges 12 on the horizontal portion 10.

The meeting ends 14 of the rails are formed in the following manner: Inwardly from the ends 15 the rails are cut away for a short distance leaving the narrow portion 16, the upper portion or tread of which is then cut away leaving the lower narrow portion 17 having the upper inwardly beveled surfaces 18, the purpose of which will later appear. The width of the portion 16 is equal to about one-third the width of the tread portion of the rail. The base of the rail is cut away from beneath the narrow portion 16. The tread portion of the rail, on the side opposite to the narrow portion 16, is then cut away, as shown at 19, from the inner end of the portion 16 toward the opposite end of the rail to a distance equal to about one-half the length of the narrow portion 16. Thus, it will be seen that a zigzag or stepped interlocking arrangement of the meeting ends of the rails is provided. The under surface of the portion 16 is beveled upwardly and inwardly to rest upon the slanting or beveled upper surface of the base portion 20 of the rail, while the upper bev-

eled surface 18 of the part 17 fits snugly against the beveled portion 21 of the underneath surface of the tread of the rail.

The central portions of the rails may be secured to the ties by means of the rail securers 21, in a manner similar to that described in connection with the joint fasteners and rail securers, except that in this case the vertical portions 1 are not extended beyond the ties.

In constructing the meeting ends of the rails, as described, it will be necessary to make the vertical or connecting portion of the rail flush upon the extended side with the side of the tread, thus making the connecting portion thicker near the end than along the central portion of the edge. The extensions 16 are preferably formed to project from opposite sides at the ends of each rail.

When the meeting ends of the rails are fitted together the joint fastener and rail securer is then placed in position upon the opposite sides of the joint, the apertures therein registering with apertures through the meeting ends of the rails. Securing bolts are then passed through the apertures and nuts or other securing means locked upon the threaded ends of the bolts. If desired, the apertures within the vertical portions 1 may be squared to receive square ends of bolts adjacent the heads thereof. The bolts may also be passed through the apertures in opposite directions. After the nuts are secured upon these bolts the horizontal portions 2 are properly positioned within the longitudinal channel 8 and the securing bolts 23 passed through the apertures 6 and threaded in the threaded openings 7 of the tie. The small ends 17 resting, and held by the joint fastener and rail securer, between the tread and base of the rail, press against these portions when pressure applied to the tread of the rail at the joint and thus relieve the joint securer and bolts

passing therethrough of a large amount of the strain which would otherwise have to be borne principally by the bolts.

From the above paragraphs it will be seen that I have provided a novel joint for the meeting ends of rails and tie in combination with a combined joint fastener and rail securer, which will effectively secure the rails at their joints and hold them to the ties. As will be seen, the combined rail joint fastener and means for securing the meeting ends of rails to ties are integral and specially adapted to the construction of rails and ties shown and described in this application.

It will be evident that as the parts are securely fastened together any walking of the rails or longitudinal movement thereof will be effectively prevented as well as spreading of the rails, and as all the parts are of simple formation the invention will be highly efficient in use as well as cheap to manufacture.

What I claim is:

A rail having a reduced end, a narrow portion adjacent said end, said narrow portion having its tread reduced to provide another narrow portion, said last named narrow portion having inwardly beveled surfaces, said rail having its base cut away beneath said first named narrow portion, the tread of said rail also being cut away to a distance equal to one half of the length of the first named narrow portion, thereby forming an interlocking rail adapted for engagement with another rail, and means for holding said rails in interlocking relation.

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

JOHN GRIFFIN.

Witnesses:

GETTS A. PASCHAL,
JOHN H. O'BRYAN.