

J. A. LOFSTROM.
RAIL JOINT.
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1,056,561.

Patented Mar. 18, 1913.

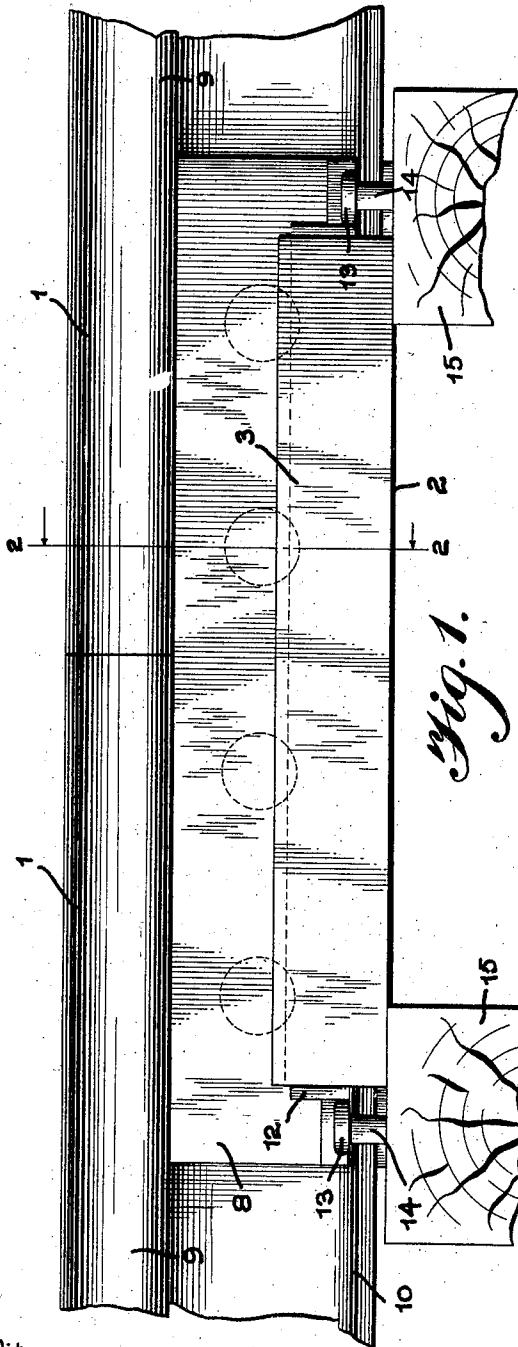


Fig. 1.

Fig. 2.

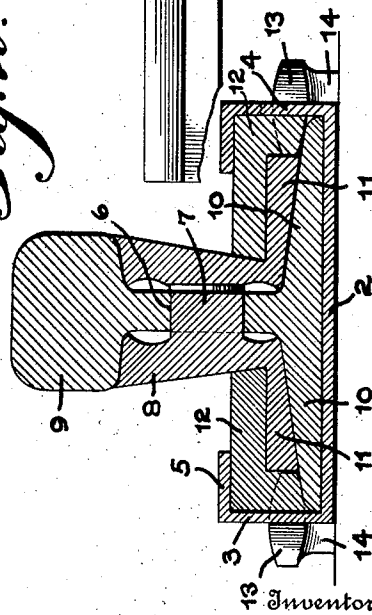


Fig. 3.

Witnesses
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RAIL-JOINT.

1,056,561.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN A. LOFSTROM, a citizen of the United States, residing at Morris Run, in the county of Tioga and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention relates to improvements in rail joints, the object of the invention being to provide a strong and durable joint which dispenses with the necessity for bolts and nuts, and which most effectually connects the meeting ends of rails and gives their base flanges an extended bearing surface.

A further object is to provide improvements of this character which are held in operative position by means of wedge bars which are forced into position and securely held against movement.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a view in side elevation illustrating my improvements. Fig. 2 is a view in section on the line 2—2 of Fig. 1, and Fig. 3 is a view in elevation of one of the wedge bars 12.

1, 1, represent the meeting ends of ordinary railroad rails which are supported upon an improved base plate 2. This base plate 2 is of substantially the same width as the base of the rail, and at both side edges is provided with integral flanges 3 and 4 respectively. Both flanges at their upper edges have inwardly projecting lips 5, so that the flanges are angular in cross section. The rails 1 are provided in their web portions with the ordinary bolt openings 6, but I dispense altogether with the use of bolts and in lieu thereof, provide integral studs 7 on angle plate 8, located at opposite sides of the rails. These angle plates 8 are shaped to fit under the head 9 of the rail and snugly between the head and the base flange 10. The horizontal portions 11 of the angle plates fit on top of the base flanges 10, but are of appreciably less width than the base flanges as clearly shown in Fig. 2.

12, 12, represent angle wedge bars. These wedge bars fit inside of the flanges 3 and 4,

and over the base portions 11 of angle plates 8. The inner edges of said wedge bars bear against the vertical portions of the wedge plates to securely hold the latter in their operative position with their studs 7 in the openings 6. As rails are ordinarily provided with two bolt holes in each end, there will be four bolt holes at each joint. Each angle plate 8 will therefore be provided with two studs 7, one in each rail, so that the rails will be effectually secured together.

In assembling the parts, the rails are positioned on the base 2, the angle plates 8 are then properly positioned with their studs 7 in the openings 6, and angle wedge bars 12 are driven longitudinally inside of the flanges 3 and 4. As the wedge bars are forced in one direction, they tightly bind under the inwardly projecting lips 5 of flanges 3 and 4, and securely hold the angle plates 6 in their operative position.

By reference particularly to Fig. 1, it will be seen that the flanges 3 and 4 terminate short of the ends of the base 2, so that the heads 13 of the ordinary spikes 14, when the latter are driven into the ties 15, will extend over the base 2 and the base flanges 10 of the rails. Furthermore, this position of the spike heads prevents longitudinal movement of the wedge bars 12.

The wedge bars 12 are preferably slightly longer than the flanges 3 and 4, although they may be otherwise constructed, but in any event the spike heads are located so that they prevent any possibility of accidental longitudinal movement of the wedge bars after they are driven into place. It will also be noted that the base 2 extends from one tie to the other, so that an extended support is provided for the rails, and by reason of the construction above set forth, the rails may be quickly and effectually secured together without the employment of bolts and nuts.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. A rail joint comprising a base having

an angle flange at one edge projecting over the base, a plate having studs thereon adapted to be positioned through openings in the webs of meeting ends of rails, and a wedge
 5 bar adapted to bear against the upper face of the base flange of the rail and against said plate between the same and the said angle flange, whereby the plate is wedged against the rail, said angle flanges and said
 10 wedges shorter than the base, and securing means for the base adapted to prevent longitudinal movement of the wedge bars, substantially as described.

2. A rail joint comprising a base, angle
 15 flanges at both side edges of the base, angle plates having integral studs thereon adapted to be projected through openings in the webs of meeting ends of rails with their horizontal members located upon the base flanges of
 20 the rails and terminating short of the side edges of said base flanges, angle bar wedges fitting the horizontal members of the angle plates adapted to bear upon the base flanges of the rail and located under the angle
 25 flanges at the sides of the base, said angle flanges and said wedges shorter than the base, and securing means for the base adapted to prevent longitudinal movement of the wedge bars, substantially as described.

30 3. In a rail joint, the combination with supports, rails positioned end to end, and having openings in their web portions, a base plate located between the base flanges of the rails and the said supports, angle
 35 flanges at both longitudinal edges of the base plate, angle plates located at both sides of the rails, integral studs on said angle

plates located in the openings in the webs of the rails, and angle bar wedges positioned against the angle plates and inside of the
 40 flanges on the base, said angle flanges terminating short of the ends of the base, and spikes driven into the supports and having their heads projecting over the base flanges
 45 of the rails, the spike heads located in the path of movement of the wedge bars, and preventing longitudinal movement thereof, substantially as described.

4. In a rail joint, the combination with a base plate of approximately the same width
 50 as the base of a rail supported thereon, angle flanges at both edges of the base plate, said flanges projecting inwardly, angle plates supported at opposite sides of the rails and having their horizontal members
 55 terminating short of the side edges of the rail base, and wedges angular in cross section inclosing the horizontal portions of the angle plates and fitting between the base of the rail and said inwardly projecting
 60 flanges, said angle plates being longer than the flanges and the wedges projecting at both ends beyond the flanges, and securing devices positioned against the base of the rail and in line with the wedges, whereby
 65 the wedges are held against longitudinal movement, substantially as described.

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

JOHN AUGUST LOFSTROM.

Witnesses:

JOSEPH JOHNSON,
 OTTO PATTERSON.