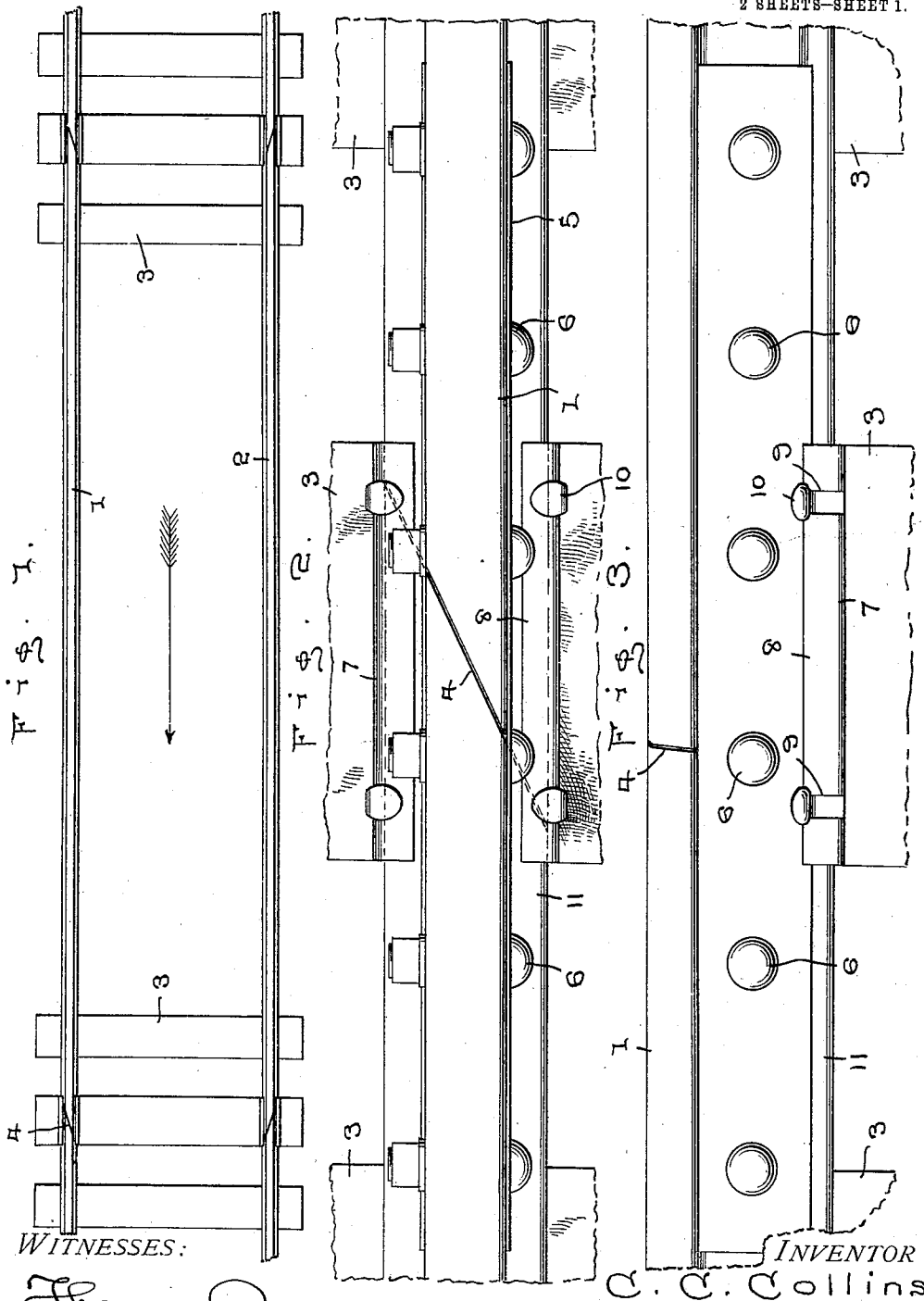


977,514.

Patented Dec. 6, 1910.

2 SHEETS—SHEET 1.



WITNESSES:

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977,514.

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RAIL JOINT.
APPLICATION FILED FEB. 18, 1910.

Patented Dec. 6, 1910.

2 SHEETS—SHEET 2.

Fig. 7.

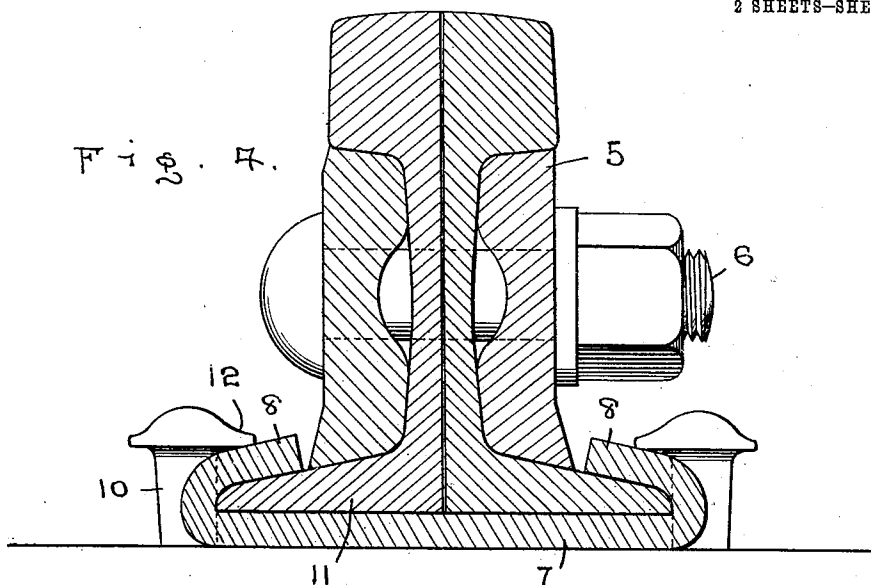


Fig. 5.

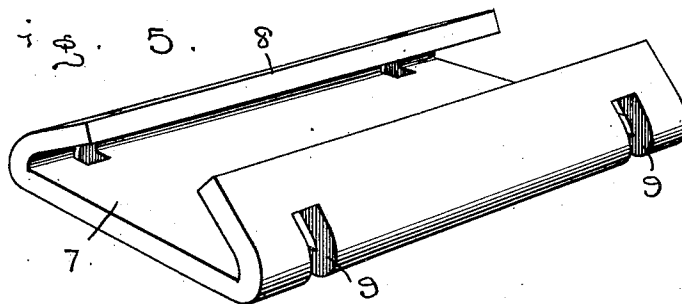
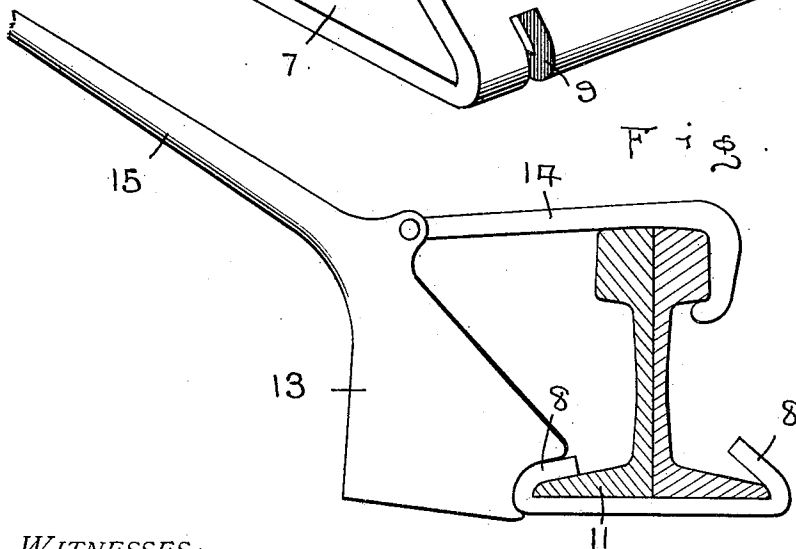


Fig. 6.



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UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

977,514.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed February 18, 1910. Serial No. 544,703.

To all whom it may concern:

Be it known that I, CLAY C. COLLINS, a citizen of the United States, residing at Whiting, in the county of Lake and State of Indiana, have invented certain new and useful Improvements in Rail-Joints; 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.

My invention relates to new and useful improvements in rail joints and means for securing the same together and my object is to provide a joint, whereby the meeting ends of the rails will be disposed at an angle to the trend of the rail.

A further object is to so construct said ends that the rails may be turned end for end if desired.

A further object is to provide suitable fish plates for the rails.

A further object is to provide a suitable sleeve or sheath for the meeting ends of the rails, and, a still further object is to provide means for clamping the edges of the sleeves upon the base of the rails.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the specification and claim.

In the accompanying drawings which are made a part of this application, Figure 1 is a plan view of a portion of a track way showing the manner of constructing the rails. Fig. 2 is a plan view of the meeting ends of two rails showing the manner of securing the same to the tie. Fig. 3 is an elevation thereof. Fig. 4 is a transverse sectional view through the rail and securing means. Fig. 5 is a perspective view of the sleeve, and, Fig. 6 is a sectional view through the rail showing the manner of attaching the sleeve to the base of the rail.

Referring to the drawings in which similar reference numerals designate corresponding parts through the several views, 1 and 2 indicate rails such as are used for constructing railway tracks, said rails being mounted on the usual form of ties 3. The meeting ends of the rails are cut at an oblique angle to form splices 4 so that when the car wheels are passing over the joints, the usual jar incident to the right angled meeting ends of the rails is eliminated, as the tread of the wheels always rests on both rails. The angle of the ends of the rails is

substantially 22° and it will be readily seen that the longer the splices the better, as the probability of causing a jar or pounding as the car passes thereover is reduced to a minimum, if not entirely eliminated.

As best shown in Fig. 1, the trend of the splices of the rails 1 is different from the trend of the splices of the rails 2 and by placing the rails as shown in said figure, the exposed points of the splices will be extended in the direction of the current of the traffic so that the cars can travel with perfect safety at a higher speed without jar or being thrown from the tracks by the flanges of the wheels striking the ends of the rails or catching the exposed point of the splices should the ends of the rails be slightly separated by contraction. It will further be seen that by constructing the rails in this manner should the inner faces of the rails become worn, they can be turned end for end and thus prolong the life of the rail.

After the ends of the rails have been properly brought together, they are secured by means of fish plates 5, which in this instance are made extra heavy and are of such length as to extend over three of the ties, bolts 6 being employed for securing the fish plates on the rails. In addition to securing the ends of the rails together by the fish plates, each joint is provided with a sleeve 7 which fits below the splices and rests upon the tie, thereby forming a solid base for the ends of the rails. Each edge of the sleeve is provided with a flange 8 which is adapted to extend upwardly over the base of the rail, said flanges being provided with notches 9 through which pass the spikes 10 employed for securing the rails to the ties. The notches 9 are so positioned that when the spike is placed therein, the edge of the spike will rest against the edge of the base of the rail, while the lip 12 on the head of the spike will rest on the flange 8 of the sleeve.

When the sleeve is first introduced below the splices, the flanges 8 extend loosely over the base 11, as shown on the right of Fig. 6, one of the flanges being then brought into close engagement with the face of the base by delivering blows thereon with a sledge hammer or the like, as shown on the left of Fig. 6, thus causing a close fit between the flange and base. A dolly bar 13 is then placed against the flange at the left of the rail, as shown in Fig. 6 and a hook 14 engaged with the head of the rail, the opposite

end of the hook being pivoted to the dolly bar. Downward pressure is then applied to the handle 15 and it is held in this position while the flange at the right of the rail is forced into engagement with the base and by first delivering the blows adjacent the integral edge of the flange and gradually working toward the loose edge thereof, the sleeve will be securely clamped around the base of the rail, which will result in drawing the meeting ends of the rails in close proximity to each other.

It will thus be seen that I have provided rails, the ends of which are at such an angle as to readily splice together and eliminate the pounding action of the wheels as the cars pass thereover. It will likewise be seen that by arranging the angle of the ends of the rails, as shown, the exposed portion thereof will trend toward the current of traffic and by making the ends of the rails alike, they may be turned end for end when desired. It will likewise be seen that by providing the sleeve, a solid base will be formed for the

meeting ends of the rails and said ends being held against spreading by clamping the flanges of the sleeve over the base of the rail as described.

What I claim is:—

The combination with rails having their ends cut obliquely; of fish plates engaging the sides of said rails, a sleeve bridging the bottom of said rails below the meeting ends thereof, said sleeve being provided with upwardly inclined flanges extending over the bases of the rails, said flanges being separately forced downwardly to engage said bases, said flanges also having elongated notches, and spikes adapted to extend through said notches and engage the outer edges of said bases.

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

CLAY C. COLLINS.

Witnesses:

JOHN D. WILLIAMS,
GUSTAV LINDER.