A. C. MUNN.

RAIL JOINT CLAMP.

APPLICATION FILED OCT. 9, 1909.

951,694.

Patented Mar. 8, 1910.

Fig. 1.

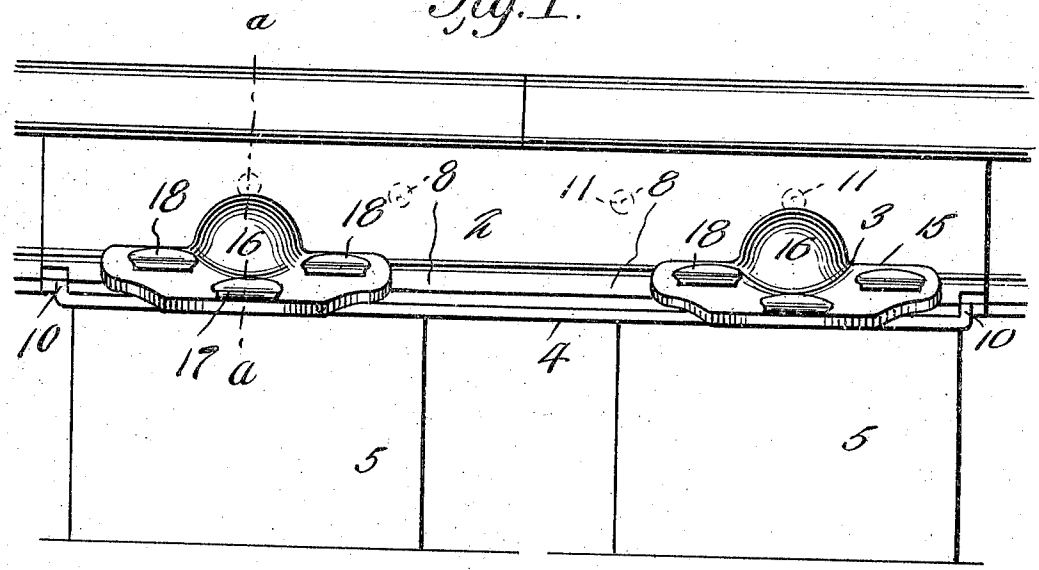


Fig. 2.

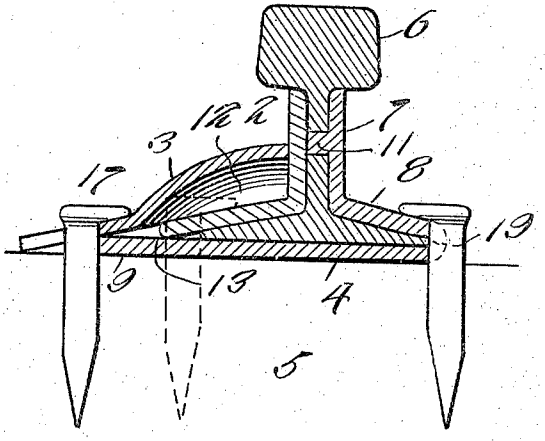
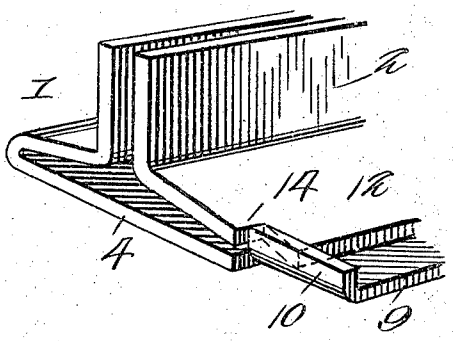


Fig. 3.



Witnesses

Hugh A. Holt

Jos. Garner

Inventor

Albert C. Munn

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

ALBERT C. MUNN, OF MARION, MICHIGAN.

RAIL-JOINT CLAMP.

951,694. Specification of Letters Patent. Patented Mar. 8, 1910.

Application filed October 9, 1909. Serial No. 521,956.

To all whom it may concern:

Be it known that I, ALBERT C. MUNN, a citizen of the United States, residing at Marion, in the county of Osceola and State of Michigan, have invented new and useful Improvements in Rail-Joint Clamps, of which the following is a specification.

This invention is an improved rail joint clamp for securing the meeting ends of rails together and on the cross ties, the object of the invention being to provide a device of this character which may be readily installed and which serves to effectually secure the ends of the rails without necessity of employing bolts or like devices for securing the ends of the rails between the usual fish plates.

A further object of the invention is to effect improvements in the construction of the rail chair, detachable fish plate, and shoe, constituting my improved rail joint clamp so that the said parts may be readily assembled, connected to the rails and secured on the cross ties.

The invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is an elevation of a rail joint clamp constructed in accordance with my invention, showing the same applied to the meeting ends of a pair of rails and mounted on the usual cross ties. Fig. 2 is a transverse sectional view of the same on the plane indicated by the line *a*—*a* of Fig. 1. Fig. 3 is a detail perspective view of one end of the rail chair and of one end of the detachable fish plate, showing the co-engaging means for connecting the fish plate to the base of the chair so that longitudinal movement of the fish plate is prevented.

My improved rail joint clamp comprises a rail chair 1, a detachable fish plate 2 and a shoe 3, two or a suitable number of the shoes being employed in connection with each clamp.

The rail chair 1 comprises a base plate 4 to bear on the usual cross ties 5 and under the rails 6, said base plate being formed with a fixed fish plate 7 to bear against one side of the rails and with an inclined web portion 8 connecting said fixed fish plate to the said base and bearing on the base flanges of one side of the rails. The width of the base plate 4 considerably exceeds that of the bases of the rails so that the said base plate is formed with a lateral extension 9 on one side, the ends of which are upturned to form stop flanges 10. The said fixed fish plate 7 is formed or provided with studs 11 which are here shown as integral therewith, the said studs engaging the usual openings in the shanks of the rails so as to lock the rails to the chair and prevent longitudinal movement thereof.

The detachable fish plate 2 is formed at its lower side with an inclined outwardly extending web 12 to bear on the base flanges of the rails. The width of the said web exceeds that of the base flanges of the rails so that said web at its outer edge bears on the base plate 9, as at 13. The said detachable fish plate is disposed opposite the fixed fish plate 7 so that the rails are between said fixed fish plate and detachable fish plate and the latter bears against the ends of the studs 11 as shown in Fig. 2. The said detachable fish plate 2 has its web 12 provided at its ends with notches 14 which receive the stop flanges 10 of the base plate 4, said stop flanges and said notches forming co-acting devices establishing an interlocking connection between the base plate of the chair and the base web of the detachable fish plate and effectually preventing longitudinal movement of the latter while permitting the detachable fish plate to be readily removed from the chair after the shoes have been first removed.

Each of the shoes 3 comprises a base portion 15 to bear on the base web of the detachable fish plate, the outer edge of the lateral extension of the base plate and to also bear on the upper side of a tie, as indicated clearly in Figs. 1 and 2, and a hood portion 16 at the center of the base portion on the inner side thereof and rising therefrom to form a shoulder to bear against the detachable fish plate. The said hood portion is of concavo-convex form with the concaved side undermost so as to form a hollow or chamber above the base web of the detachable fish plate to facilitate the evaporation of rain or other moisture and retard the rusting or like deterioration of the metal of the detachable fish plate and the said shoe. The shoe has openings for the reception of spikes 17 and 18, the spike 17 being at the center of the shoe and in position to bear against the outer edge of the base plate 4 of the rail chair and the spikes 18 being near the ends of the shoe to pass

through notches in the base web of the detachable fish plate, bear against the edges of the rail bases, pass through coincident openings in the base plate 4 and enter the ties. The shoe on the side provided with the fixed fish plate is provided with notches for the reception of spikes 19 which serve also to secure the chair on the ties.

It will be understood that the shoes which bear on the base web of the detachable fish plate and are secured directly to the ties and also on the base plate of the chair effectually prevent the removal of the detachable fish plate unless the spikes have been first drawn and, hence, the detachable fish plate can not become casually dislodged. Moreover, the shoes effectually brace the detachable fish plate and enable it to withstand the stresses to which the same is subjected and, hence, my improved rail joint is effective to prevent the spreading of the rails and other like accidents.

Having thus described the invention, what is claimed as new, is:—

1. In a railway joint clamp, the combination of a rail chair having a base to bear under the meeting ends of the rails, and a fixed fish plate to bear on one side of the rails and also on one side of the base flanges thereof, and a detachable fish plate to bear on the opposite side of the rails and having a base web to bear on the base flanges of the rails, the said base plate of the chair having a lateral extension on one side on which the outer edge of the base web of the detachable fish plate bears, said lateral extension of said base plate of the chair and said base web of the detachable fish plate having coacting devices to form an interlocking connection between the chair and the detachable fish plate to prevent endwise movement of the latter.

2. In a railway joint clamp, the combination of a rail chair having a base to bear under the meeting ends of the rails, and a fixed fish plate to bear on one side of the rails and also on one side of the base flanges thereof, and a detachable fish plate to bear on the opposite side of the rails and having a base web to bear on the base flanges of the rails, the said base plate of the chair having a lateral extension on one side on which the outer edge of the base web of the detachable fish plate bears, said lateral extension of the base of the chair having upwardly extending stop flanges and the said base web of the detachable fish plate having notches for the reception of said stop flanges, for the purpose set forth.

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

ALBERT C. MUNN.

Witnesses:
THOMAS J. BLEVINS,
I. TEUDO.