

T. HUNTER.  
RAIL JOINT.

APPLICATION FILED DEC. 31, 1910.

990,136.

Patented Apr. 18, 1911.

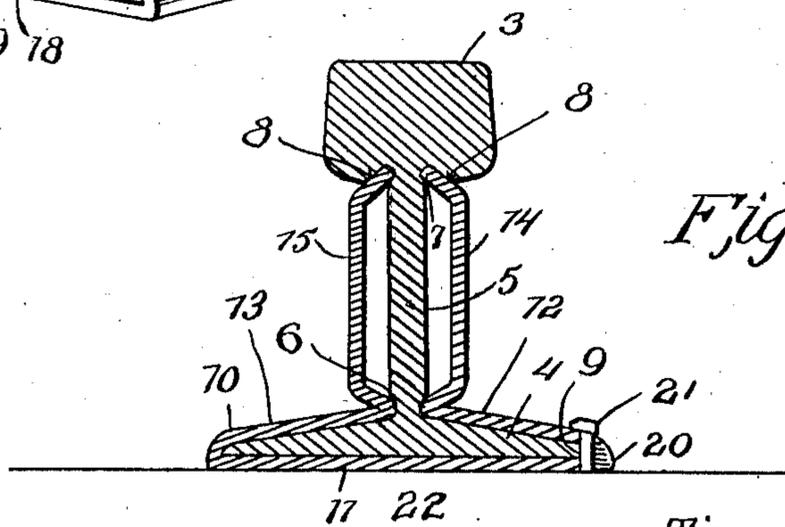
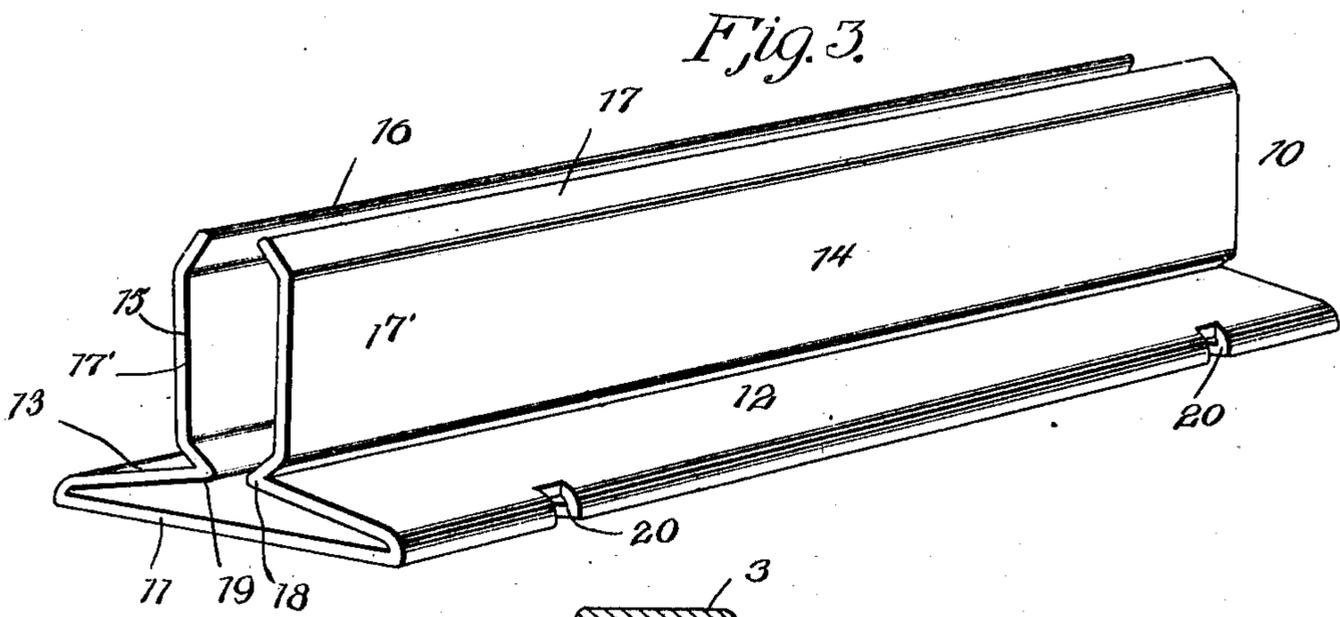
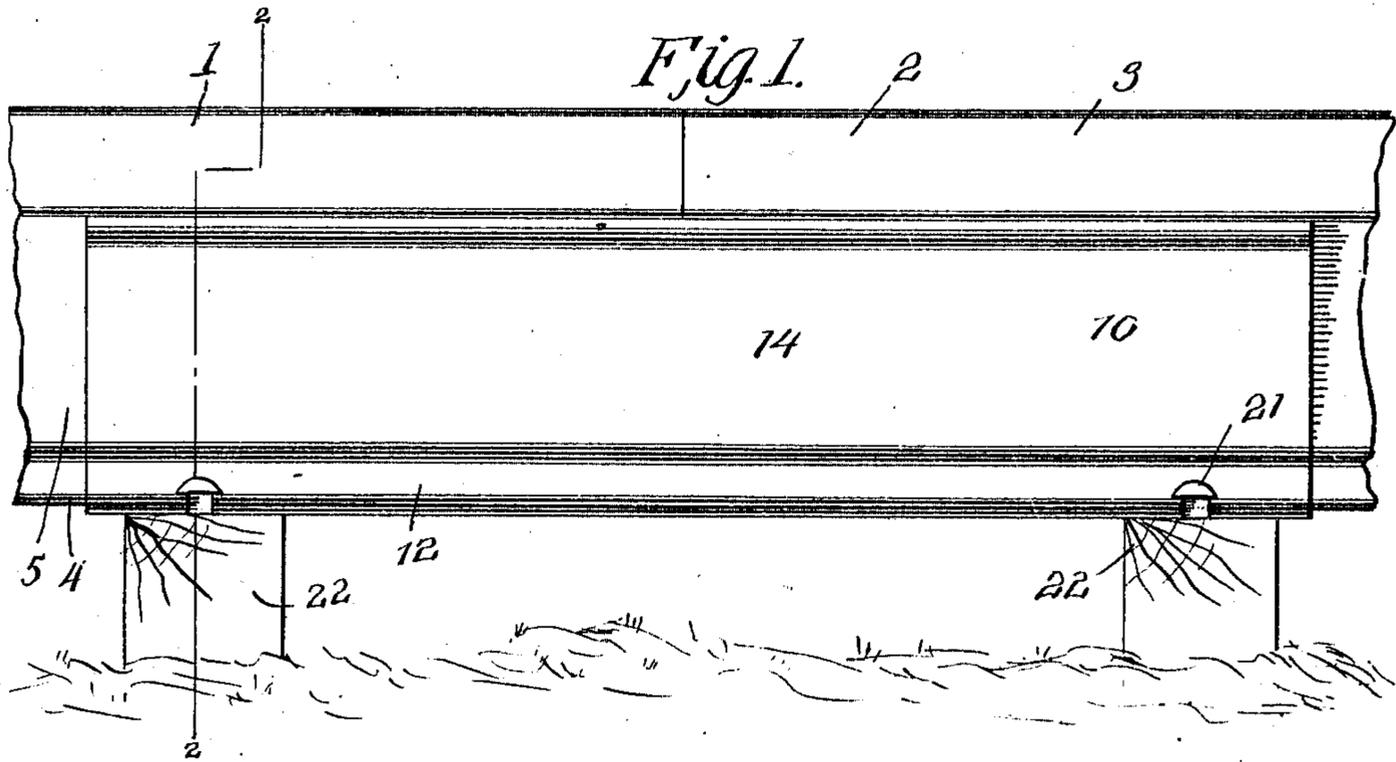


Fig. 2.

Inventor

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Witnesses

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# UNITED STATES PATENT OFFICE.

TIMOTHY HUNTER, OF KILLBUCK, OHIO.

## RAIL-JOINT.

990,136.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed December 31, 1910. Serial No. 600,330.

*To all whom it may concern:*

Be it known that I, TIMOTHY HUNTER, a citizen of the United States, residing at Killbuck, in the county of Holmes and State of Ohio, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to improvements in rail joints and the primary object of the invention is to provide a device of this character which is extremely simple in construction, which will allow the rails a limited yieldable movement, which may be easily and quickly applied and which will so connect the rail ends as to provide a substantially continuous rail, thus obviating the thumping of the rails at their point of connection due to the rolling stock passing thereover, and so adding to the life of the rails as well as to the comfort of the traveling public.

Another object of the invention is to provide a device of this character wherein the employment of bolts or analogous securing devices which pass through the webs of the rails, and thereby have a tendency to weaken the same, is entirely obviated.

With the above and other objects in view which will appear as the description progresses, the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of the meeting ends of a pair of railway rails connected in accordance with the present invention. Fig. 2 is a transverse sectional view upon the line 2—2 of Fig. 1. Fig. 3 is a perspective view of the rail chair.

In the accompanying drawings the numerals 1 and 2 designate the meeting ends of a pair of rails. These rails are of the ordinary construction excepting that the heads 3 thereof are preferably of a greater width than the common rail. The rail also comprises a base flange 4 and connecting web 5. The base flange 4 at its point of junction with the web 5 may be, if desired provided with a small longitudinal depressed portion 6, and the under face of the head or ball of the rail adjacent its point of connection with the connecting web 5 is provided with longitudinally extending depressions or pockets 7.

By reference to Fig. 2 of the drawings,

it will be noted that the inner walls of the pockets are formed by the sides of the web 5 and the opposite walls formed by the ball or head proper are both inclined toward the longitudinal face of the head as designated by the numerals 8. Each of the rails 1 and 2 is, of course, of a similar construction and each of the said rails has its base flange 6 formed at its longitudinal edge with a depression or cut away portion 9.

The numeral 10 designates the chair for the rails. The chair 10 is constructed of some strong, yet partially yieldable material, such as steel and the said chair comprises a base portion 11 which is horizontally straight and which is adapted to underlie the base flanges of the base sections 1 and 2. Rising from each of the longitudinal edges of the base plate 11 are what I term overlying flanges 12 and 13. These flanges are adapted to engage with the upper face of the base flanges 4 of the rails, and integrally formed with the said flanges 12 and 13 are the longitudinally extending fish plates 14 and 15. The metal comprising the fish plates 14 and 15 is sufficiently resilient or springy as to normally force the upper portions of the fish plates toward each other. The upper portions of the said fish plates are beveled and inclined toward each other as clearly illustrated in the figures of the drawings and as designated by the numerals 16 and 17. The flattened faces 17 of each of the fish plates are inclined or beveled inwardly as at 18 and 19 at their points of junction with the overlying flanges 12. The longitudinally extending beads formed by the said inturned portions are adapted to engage with the rails at the points of juncture of the webs and base flanges while the upper inclined portions 16 and 17 exert an outward pressure away from each other to engage the inclined walls formed by the longitudinal depressions beneath the balls of the rails. This construction, it will be noted, firmly forces the beads of the chair within the depressions 6 and the said rails are effectively and securely engaged upon all of its faces and at the under surface of the heads of the rails by the chair.

The longitudinal edges of the chair 10 are each provided with cut away portions 20, the latter being of a lesser width than the openings 9 of the rails with which they are adapted to register. These openings 20 and

9 are adapted for the reception of securing spikes 21, whereby the rail joint is effectively sustained upon the rail ties 22.

From the above description, taken in connection with the accompanying drawings, the simplicity and advantages of the device will, it is thought, be perfectly apparent to those skilled in the art to which the invention appertains. In the drawings the most approved form of the device as it appears to me has been illustrated, but it is to be understood that I do not limit myself to the precise structure therein shown as changes in the minor details within the scope of the appended claim may be made, if desired.

Having thus fully described the invention, what I claim as new, is:—

In a rail joint, the combination with a pair of rails, each of said rails being formed upon the under faces of the balls thereof with longitudinally extending depressions, the outer walls of said depressions being in-

clined toward the center of the balls, a chair for the rail ends, said chair comprising a base flange, overlying flanges connected with the longitudinal edges thereof and integrally formed longitudinally extending fish plates, the fish plates being formed with a bead at their juncture with the overlying flange, the upper longitudinal edges of the fish plates being inclined to correspond with the inclined walls of the depressions in the rails, and the said upper portions of the fish plates adapted to exert pressure to tightly engage the inclined walls of the rails and to force their beads into engagement with the rails at the juncture of the webs and base flanges.

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

TIMOTHY HUNTER.

Witnesses:

GEORGE M. EINSEL,  
Z. T. DUER.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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