B. T. MARTINEZ.

RAIL JOINT.

APPLICATION FILED DEC. 28, 1909.

969,713. Patented Sept. 6, 1910.

Fig. 1.

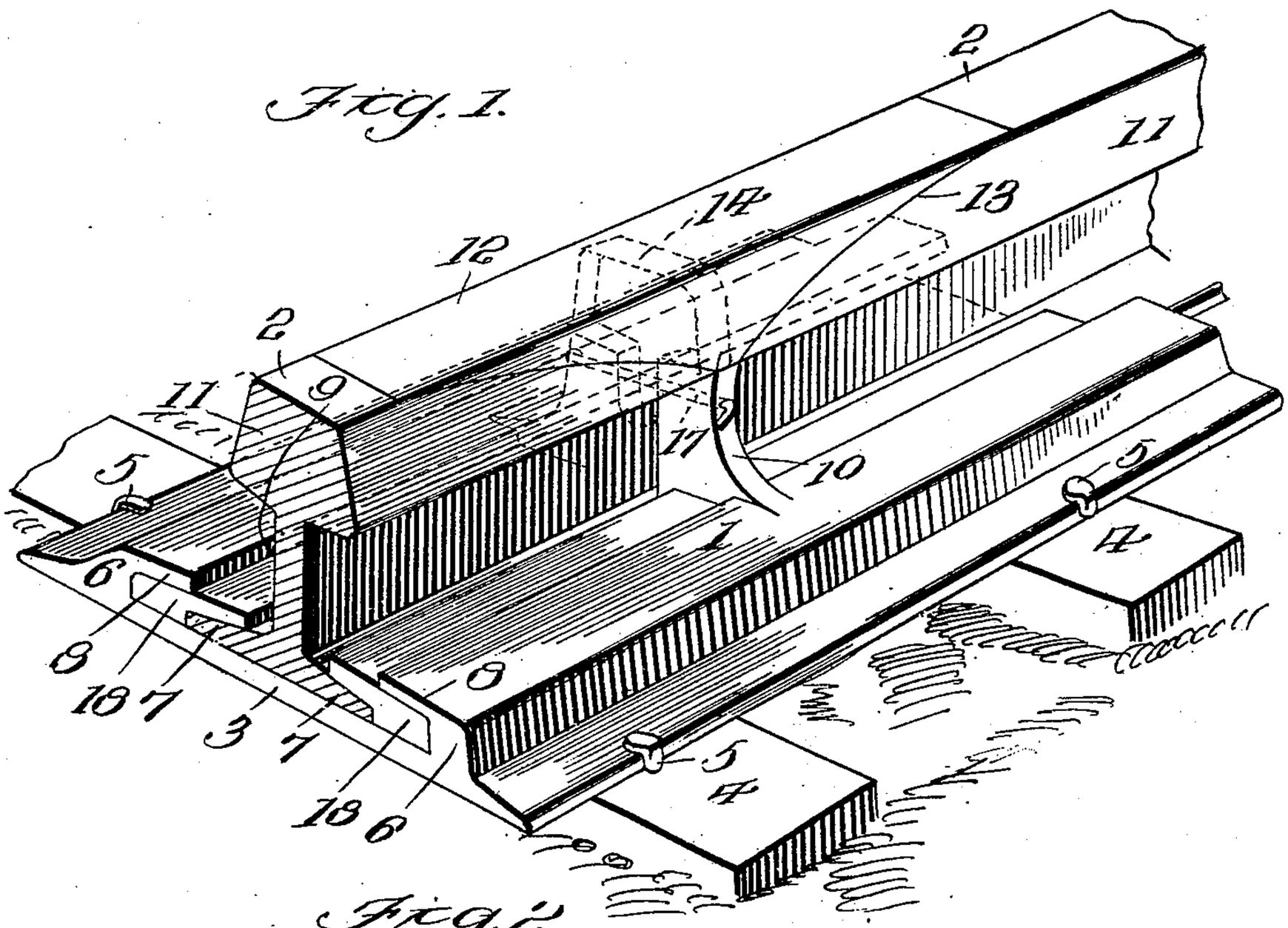
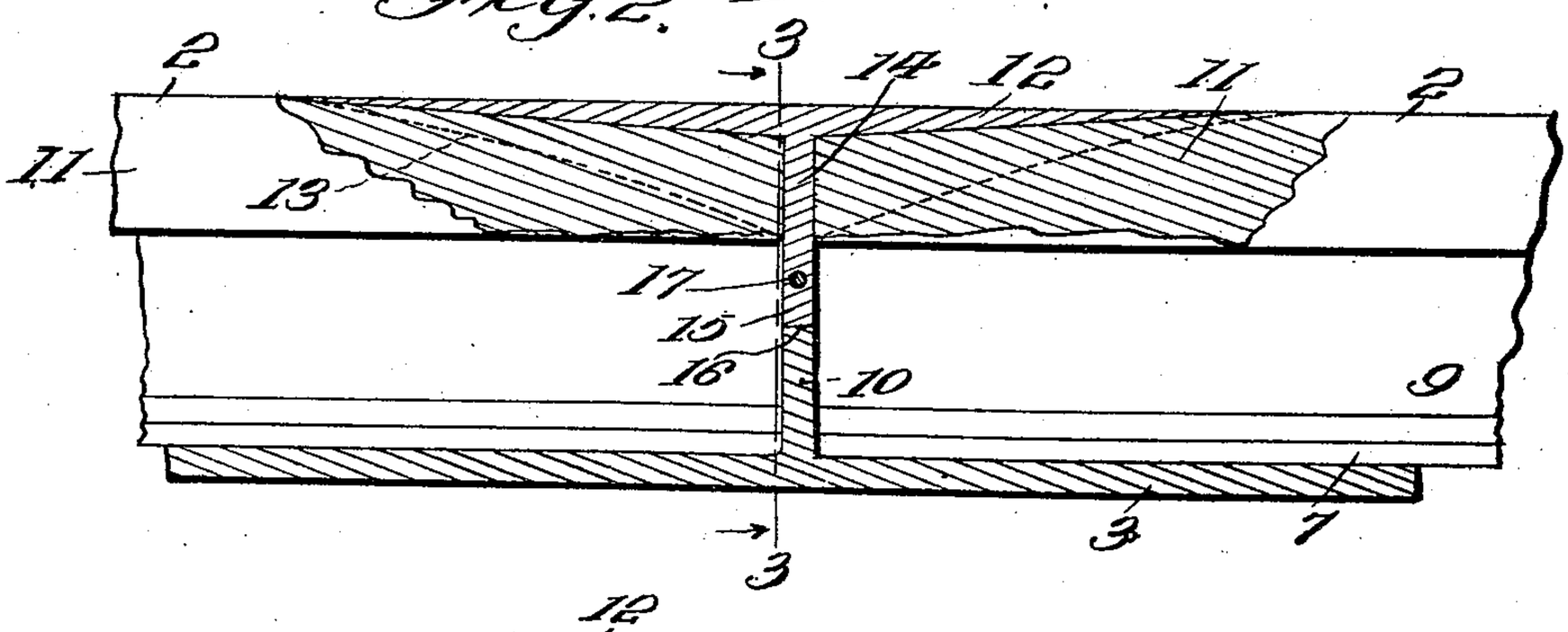


Fig. 2.



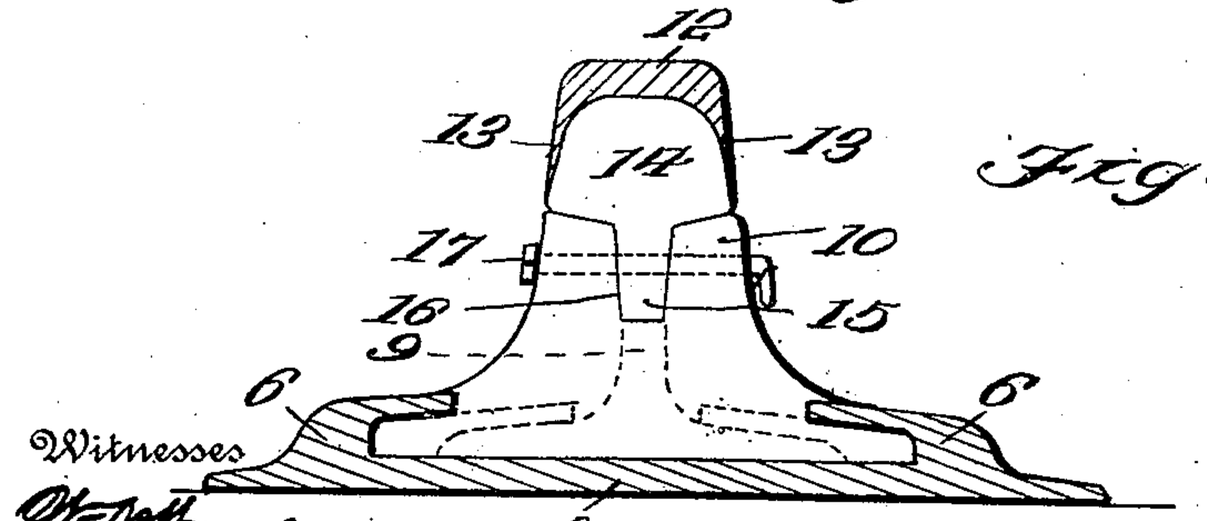


Fig. 3.

Witnesses

O. E. Hardesty,

Juana M. Fallin,

Inventor

B. T. Martinez.

By H. A. B. Racey. Attorneys.

UNITED STATES PATENT OFFICE.

BENJAMIN T. MARTINEZ, OF PETACA, TERRITORY OF NEW MEXICO.

RAIL-JOINT.

969,713. Specification of Letters Patent. Patented Sept. 6, 1910.

Application filed December 28, 1909. Serial No. 535,318.

To all whom it may concern:

Be it known that I, BENJAMIN T. MARTINEZ, a citizen of the United States, residing at Petaca, in the county of Rio Arriba and Territory of New Mexico, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

The present invention comprehends certain new and useful improvements in railway tracks, and the invention has for its object an improved rail joint by means of which the meeting ends of the rails are effectually connected together without the use of the customary bolts, the necessity for forming bolt holes in the ends of the rails being thus obviated and the cost of construction of the track being reduced to a minimum.

Another object of the invention is a rail joint including a cap which bridges the joint and fits snugly over the meeting ends of the rails in order to afford a continuous and substantially smooth tread surface and eliminate the disagreeable pounding of the wheels of the rolling stock at the joint.

A further object of the invention is a rail-joint member or chair formed with an intermediate abutment which is positioned between the meeting ends of the rails and forms a support for the cap.

With these and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and then point out the novel features of in the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a sectional perspective view of a rail joint constructed in accordance with my invention; Fig. 2 is a longitudinal section thereof, partly in elevation; and, Fig. 3 is a transverse section on the line 3—3 of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

In carrying out my invention I employ an integral metallic joint member or chair 1 which is formed to receive the meeting rail ends 2. The chair comprises a substantially horizontal base 3 that rests upon and bridges adjacent cross ties 4 and is rigidly secured thereto in any suitable manner, as by means of spikes 5 embedded in the ties and engaging the longitudinal edges of the base. On opposite sides of the rail ends the base is formed with longitudinal side members 6 that upstand therefrom in opposed relation, each side member being spaced apart transversely from the longitudinal edges of the adjacent base flanges 7 of the rails, so that a seat is provided between the side members which is of greater width than the bases of the rails. The upper portions of the side members are deflected inwardly, as indicated at 8, and extend over the base flanges 7 in spaced relation thereto and with their inner edges terminating short of the webs 9 of the rails (see Fig. 1). An integral abutment 10 upstands from the base between the meeting ends of the rails and extends transversely between the side members 6 in order to divide the chair into separate seating portions into which the respective rail ends are inserted longitudinally. The abutment projects upwardly between the deflected portions 8 of the side members and supports at its upper end a cap that is formed to fit over the extremities of the heads 11 of the rails and to bridge the joint therebetween. This cap comprises a smooth and substantially flat top 12 which rests upon and conforms to the contour of the tread surfaces of the rails. At its side edges the top is formed with depending side flanges 13 that embrace the heads of the rails and fit snugly against the sides thereof to maintain the cap against lateral displacement, the side flanges preferably tapering upwardly toward their opposite ends, so as to be of greatest width at their middle points. The cap is formed at its middle point with a central transverse web 14 which is interposed between and conforms to the cross sectional contour of the heads 11 and serves to prevent the cap from creeping longitudinally of the rails out of operative position. In addition to this function the web connects the side flanges and the top, whereby to reinforce the parts and materially increase the strength and durability of the cap. Inasmuch as the cap fits over the meeting extremities of the heads of the rails, it will be noted that the same are prevented from being worn away

at the joint in the customary manner, while by virtue of the fact that the cap bridges the joint. a continuous tread is afforded. Attention is here directed to the fact that the extremities of the heads of the rails are decreased in cross sectional area to compensate for the thickness of the material forming the cap (see Fig. 2), whereby to render the continuous tread surface substantially smooth and thus effectively preclude the disagreeable and injurious pounding of the wheels of the rolling stock at the joint.

Depending from the web 14 of the cap is a stem 15 which is removably seated in a suitable socket 16 opening through the upper end of the abutment 10. One or more pins 17 are passed transversely through registering apertures in the abutment and stem, one end of each pin being headed and the opposite end being bent, as shown, to maintain the pin against accidental displacement. The cap is thus firmly attached to the abutment in such a manner as to be rendered susceptible of being easily and quickly removed when worn out to admit of its replacement by a new cap. The stem 15 is substantially of the same thickness as the webs 9 of the rails, while the abutment is, of course, considerably thicker than such webs, so as to extend on opposite sides of the stem. The abutment is extended upwardly on opposite sides of the stem to fit snugly under the web 14 of the cap, as is manifestly desirable, so as to provide a broad bearing for the cap and to relieve the stem of excessive strain.

As the preferred means for retaining each rail in the corresponding seating portion of the chair, a pair of longitudinal keys 18 are employed and are inserted longitudinally on opposite sides of the rail and against the abutment. When in place, each key rests upon the base 3 of the chair and fits snugly between the corresponding side edge of the rail base and the adjacent side member 6. The keys are cut-away longitudinally in their lower faces in proximity to their inner edges, so as to be adapted to extend over the respective base flanges 7 and between the same and the deflected portions 8 of the side members. Inasmuch as the pairs of keys engaging the respective rail ends, are entirely independent of each other, it is to be noted that it is possible to release and remove one of the rail ends without disturbing the other.

From the foregoing description in connection with the accompanying drawing it will be apparent that I have provided an improved rail joint in which an intermediate abutment divides the chair into separate seating portions and also holds the rails against creeping movement in one direction; in which the rail ends are effectually held in the respective seating portions and are firmly connected together without the use of the customary bolts; which includes a cap bridging the joint and detachably supported on the abutment; which is simple, durable and efficient in construction; and which may be easily and cheaply manufactured and readily applied.

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

1. As a new article of manufacture, a cap for bridging a rail joint, comprising a top, and side flanges depending from the longitudinal edges of the top and arranged to embrace the meeting ends of the heads of the rails.

2. As a new article of manufacture, a cap for bridging a rail joint, comprising a top, and side flanges depending from the longitudinal edges of the top and arranged to embrace the meeting ends of the heads of the rails, the cap conforming to the cross sectional contour of the heads of the rails and being formed to fit snugly thereon.

3. As a new article of manufacture, a cap for bridging a rail joint, comprising a top adapted to rest upon and extend between the tread surfaces of the rails, a transverse web depending from the top intermediate of the ends thereof and conforming to the cross sectional contour of the heads of the rails, and a stem depending from the web.

4. As a new article of manufacture, a cap for bridging a rail joint, comprising a top, side flanges depending from the top and arranged to embrace the meeting ends of the rails, and an internal web extending transversely of the cap intermediate of the ends thereof.

5. As a new article of manufacture, a cap for bridging a rail joint, comprising a central member conforming to the cross sectional contour of the heads of the rails, and circumferential flanges extended on both sides of the said central member and adapted to fit over the meeting ends of the heads of the rails.

6. A joint member including a base adapted to support the meeting ends of the rails, an intermediate transverse abutment upstanding from the base, and a member supported at the upper end of the abutment and extended longitudinally of the base on both sides of the abutment to bridge the joint between the rail ends.

7. A joint member including a base adapted to support the meeting ends of the rails, an intermediate abutment upstanding from the base, and a member separate from the abutment and removably supported thereon for bridging the joint between the rail ends.

8. A joint member including a base adapted to support the meeting ends of the rails, an intermediate abutment upstanding from the base and formed with a socket opening

through its upper end, and a member adapted to bridge the joint between the rail ends and separate from the abutment and formed with a depending stem removably seated in the socket.

9. A joint member including a base adapted to support the meeting ends of the rails, an intermediate abutment upstanding from the base and formed with a socket opening outwardly through its upper end, and a bridging member conforming to the cross sectional contour of the heads of the rails and separate from the abutment and formed with a relatively narrow stem removably seated in the said socket, the abutment being extended upwardly on opposite sides of the stem and fitting snugly under the member, as and for the purpose specified.

10. A joint member including a base adapted to support the meeting ends of the rails, an intermediate abutment upstanding from the base, and a cap disposed at the upper end of the abutment and formed to fit over the meeting ends of the rails and to span the joint therebetween.

11. A joint member including a base adapted to support the meeting ends of the rails, an intermediate abutment upstanding from the base, and a cap mounted at the upper end of the abutment and adapted to span the joint between the meeting ends of the heads of the rails, the cap comprising a top, side flanges depending from the top, and a web extending transversely of the cap at an intermediate point and connecting the side flanges.

12. In a rail joint, the combination with the meeting ends of the rails, of a cap embracing the meeting ends of the heads of the rails and fitting snugly thereon and bridging the joint therebetween.

13. In a rail joint, the combination with the meeting ends of the rails, of a cap comprising a top resting upon the heads of the rails and bridging the joint therebetween, side flanges depending from the top and embracing the meeting ends of the heads of the rails, and a web extending transversely of the cap at an intermediate point and interposed between the meeting rail ends.

14. In a rail joint, the combination with the meeting ends of the rails, of a joint member including a base adapted to support said rail ends, a transverse abutment upstanding from the base and interposed between the rail ends, and a member mounted on the abutment and bridging the joint between the meeting rail ends.

15. In a rail joint, the combination with the meeting ends of the rails, of a rail chair comprising a base positioned beneath and supporting the rail ends, side members upstanding from the base on opposite sides of the rails, and an abutment upstanding from the base intermediate of the rail ends and extending transversely between the side members to divide the chair into separate seating portions for the respective rail ends; and pairs of keys inserted longitudinally in the chair on opposite sides of the abutment to hold the rail ends in place, the keys of each pair being arranged on opposite sides of the corresponding rails and fitting snugly between the same and the adjacent side members.

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

BENJAMIN T. MARTINEZ. [L. S.]

Witnesses:
EN CAREZOSION GALLEGOZ,
MAISES LUCERO.