E. J. CLARK.

SUPPORT FOR RAILROAD RAILS.

APPLICATION FILED OCT. 10, 1908.

945,376. Patented Jan. 4, 1910.

Fig. 1.

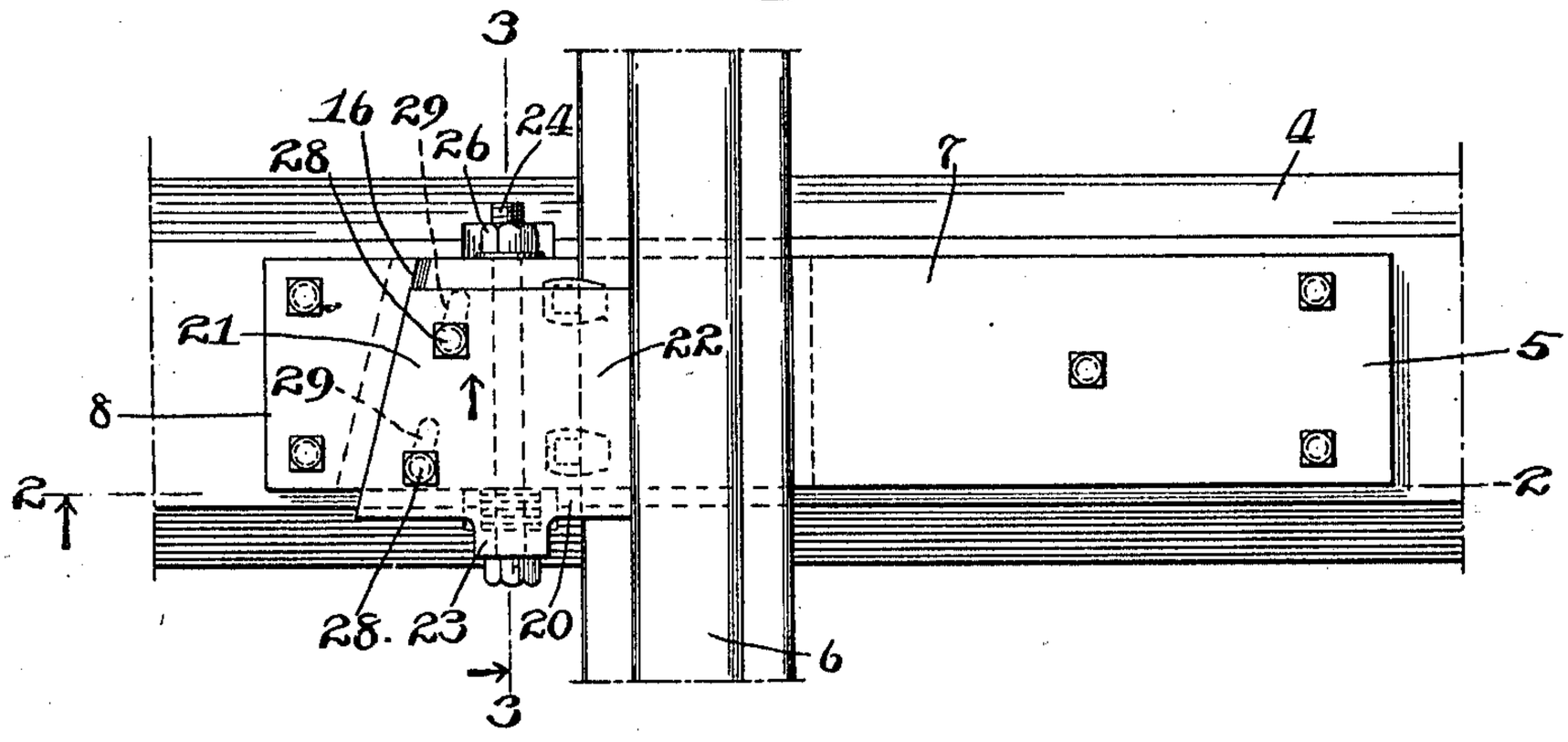


Fig. 2.

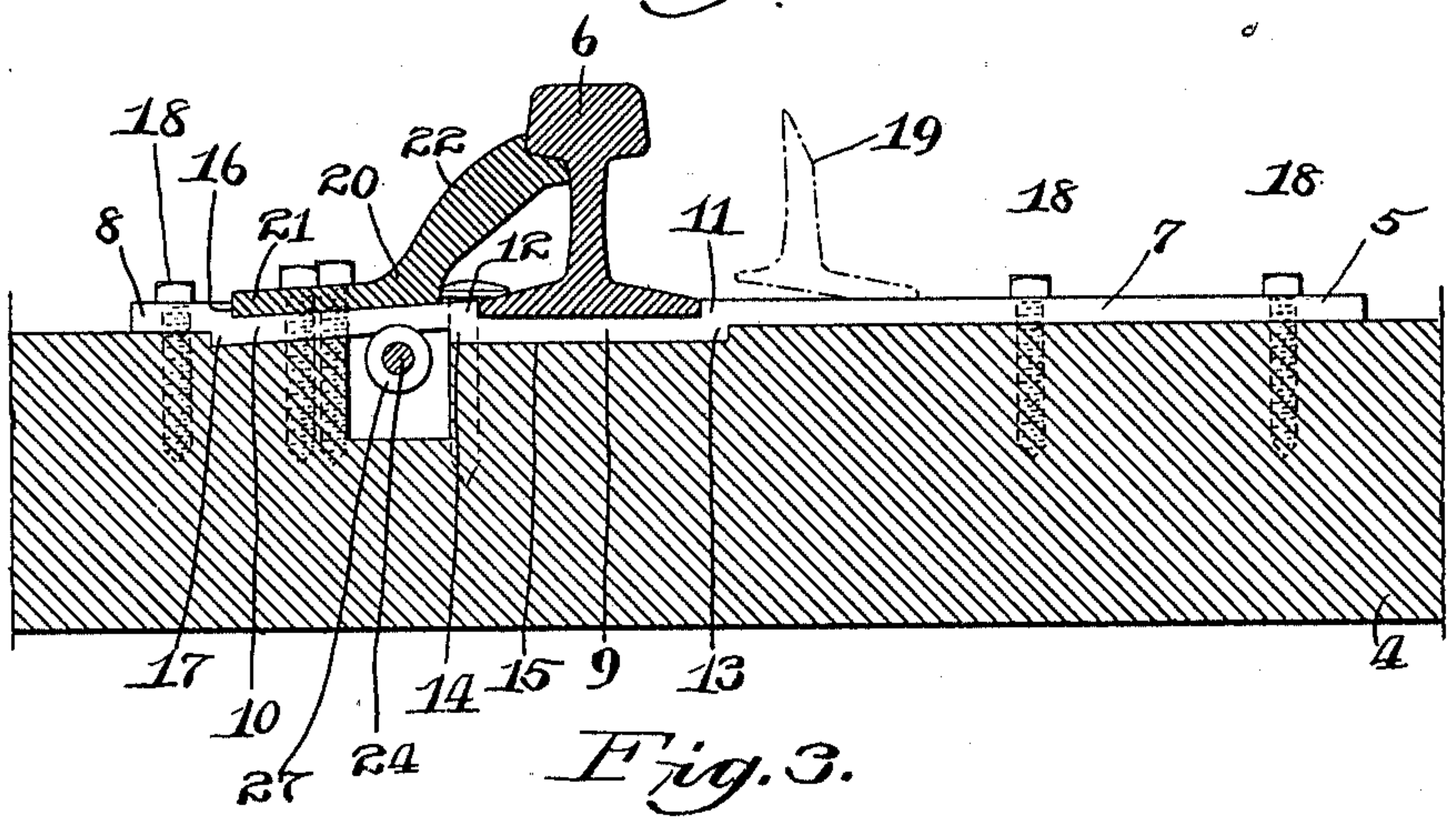
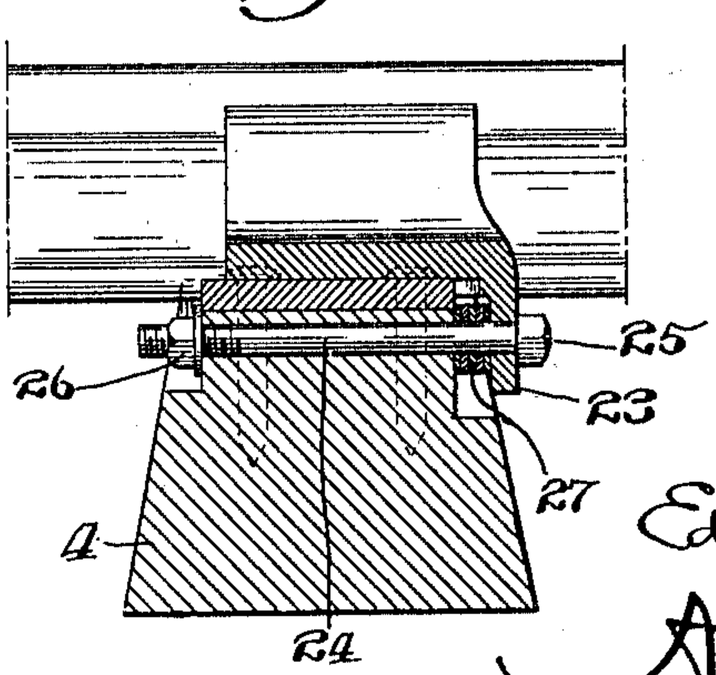


Fig. 3.



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SUPPORT FOR RAILROAD-RAILS.

945,376. Specification of Letters Patent. Patented Jan. 4, 1910.

Application filed October 10, 1908. Serial No. 457,120.

To all whom it may concern:

Be it known that I, EDWARD J. CLARK, citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Supports for Railroad-Rails, of which the following is a full, clear, and exact description.

This invention relates to supports for railroad rails.

The object of the invention, as generally stated, is to provide a simple and efficient means for supporting a railroad rail upon an underlying cross-tie in combination with a rail brace and means for adjusting the rail brace toward and from the rail; and a further object of the invention is to provide the rail support with means to prevent displacement thereof upon the cross tie in a direction laterally of the rail.

The invention consists in the novel construction and combinations of parts which will be hereinafter fully described and claimed.

In the drawings:—Figure 1 is a plan view of a portion of a railroad rail, my improved support therefor, and a portion of an underlying cross-tie. Fig. 2 is a vertical section, as on the line 2—2 of Fig. 1. Fig. 3 is a vertical section as on the line 3—3 of Fig. 1.

4 designates a portion of a railroad cross-tie, 5 a rail supporting plate thereon, and 6 a portion of a railroad rail supported upon the plate 5. The plate 5 comprises the end portion 7 which rests upon the top of the cross tie 4 inwardly of the rail 6, and the end portion 8 which rests upon the top of the cross tie outwardly of the rail 6; the depressed portion 9 beneath the base of the rail 6, and the inclined portion 10 extending between the depressed portion 9 and the end portion 8.

The depressed portion 9 is fitted to a depression 15 in the tie 4. The depressed portion 9 of the plate 5 provides shoulders 11 and 12 which engage the edges of the base of the rail 6; and it also provides shoulders 13 which engage the ends of the depression 15 in the cross tie to prevent displacement of the plate 5 in a direction laterally of the rail 6.

The inclined portion 10 of the plate 5 provides an upper shoulder or surface 16, hereinafter referred to, and a lower shoulder 17 which is depressed into the tie 4 and serves to still further prevent displacement of the plate 5 upon the tie in a direction laterally and outwardly of the rail 6. The plate 5 is held in place upon the cross tie 4 by suitable screws 18 which extend through openings in the plate 5 and are screwed into the tie 4.

The invention is especially adapted for use in connection with railroad switches, to support not only the main rail but also the switch rail which is movable toward and from the main rail, the inner end portion 7 of the plate being adapted to support the switch rail 19, indicated by dot-and-dash lines in Fig. 2, and form a bearing therefor to permit its movement toward and from the main rail 6.

20 designates a rail brace adapted to support the upper portion of the rail 6 against outward displacement. This brace 20 comprises a flat base 21 resting upon the inclined portion 10 of the plate 5, and an arm 22 rising from the inner portion of the base 21 and into engagement with the head of the rail 6. The outer face of the base 21 is fitted against the shoulder or surface 16, and said surface and said outer face are inclined away from a line parallel to the rail 6, as shown in Fig. 1, whereby, when the rail brace 20 is adjusted in a direction longitudinally of the rail 6, in the direction indicated by the arrow in Fig. 1, the outer face of the base will engage the shoulder or surface 16 and force the brace inwardly toward the rail 6, the purpose of this adjustment being to take up wear and adjust the gage between the two railroad rails.

One side of the rail brace 20 is provided with a downwardly extending lug 23, through which and the cross tie 4, a bolt 24 extends parallel to the rail 6. One end of the bolt 24 is provided with a head 25 engaging the lug 23, and the other end of the bolt 24 is provided with an adjustable nut 26 which engages the cross tie 4. Interposed between the lug 23 and the face of a cut-away part of the tie 4 is a series of washers 27 which surround the bolt 24. By re-

moving one of the washers 27 and then tightening the nut 26 upon the bolt 24, the head 25 will engage the lug 23 and force the rail brace 20 in the direction of the arrow in Fig. 1, thus forcing it at the same time toward the rail 6, to take up any wear that might occur. One or more of the washers 27 may be removed, the same being controlled by the amount of wear desired to be taken up.

After the rail brace 20 has been adjusted to its proper position in engagement with the rail 6, it is held in such position by screws 28 which extend through the base 21 of the brace and through slots 29 in the underlying inclined portion 10 of the plate 5, and are screwed into the cross tie 4.

When it is desired to adjust the rail brace 20, the screws 28 are removed, the holes in the cross tie 4 occupied thereby are plugged up, and new holes are made for the screws 28 in accordance with the position to which the rail brace has been adjusted by the bolt 24.

I claim:—

1. The combination of a cross tie, a rail, a plate upon the cross tie and supporting the rail and having a surface inclined away from a line parallel to the rail, a rail brace engaged with said surface and the head of the rail, and means for adjusting the brace longitudinally of the rail while in engagement with said surface and said rail.

2. The combination of a cross-tie, a rail, a plate upon the cross-tie and supporting the rail and having a surface inclined away from a line parallel to the rail, a rail brace engaged with said surface and the head of the rail, means for adjusting the brace longitudinally of the rail while in engagement with said surface and said rail, and means for securing the brace in its positions of adjustment.

3. The combination of a cross tie, a rail, a plate upon the cross tie and supporting the rail and having a surface inclined away from a line parallel to the rail, a rail brace engaged with said surface and the head of the rail, and a screw arranged to adjust the brace longitudinally of the rail while the brace is in engagement with said surface and said rail.

4. The combination of a cross tie, a rail, a plate upon the cross tie and supporting the rail and having a surface inclined away from a line parallel to the rail, a rail brace engaged with said surface and the head of the rail, a screw arranged to adjust the brace longitudinally of the rail while the brace is in engagement with said surface and said rail, and means for securing the brace in its position of adjustment.

5. The combination of a cross tie, a rail, a plate upon the cross tie and supporting the rail and having a surface inclined away from a line parallel to the rail, a rail brace engaged with said surface and the head of the rail, a screw arranged to adjust the brace longitudinally of the rail while the brace is in engagement with said surface and said rail, and screws engaged with the brace and the cross tie and holding the brace in its position of adjustment.

6. The combination of a cross tie, a rail, a plate upon the cross tie and supporting the rail and having a surface inclined away from a line parallel to the rail, a rail brace engaged with said surface and the head of the rail, said brace having a downwardly extending lug; and a screw engaged with the lug and arranged to adjust the brace longitudinally of the rail.

7. The combination of a cross tie, a rail, a plate upon the cross tie and supporting the rail and having a surface inclined away from a line parallel to the rail; a rail brace comprising a flat base resting upon the plate and engaged with said surface, and an arm extending upwardly from the base and engaging the head of the rail; means for adjusting the brace longitudinally of the rail while in engagement with said surface and said rail, and screws engaged with the base of the brace and the cross tie and holding the brace in its position of adjustment.

8. The combination of a cross tie, a rail, a plate upon the cross tie and supporting the rail and having a surface inclined away from a line parallel to the rail; a rail brace engaged with said surface and the head of the rail, said brace having a downwardly extending lug; a screw extending through the cross tie and engaged with the lug and arranged to adjust the brace longitudinally of the rail, and washers interposed between the lug and the cross tie.

9. The combination of a cross tie, a rail, a plate upon the cross tie and supporting the rail and having a surface inclined away from a line parallel to the rail; a rail brace comprising a flat base resting upon the plate and engaged with said surface, an arm extending upwardly from the base and engaging the head of the rail, and a downwardly extending lug; a screw extending through the cross tie and engaged with the lug and arranged to adjust the brace longitudinally of the rail, washers interposed between the lug and the cross tie, and screws engaged with the base of the brace and the cross tie and holding the brace in its position of adjustment.

10. The combination of a cross tie, a rail, a plate upon the cross tie and supporting the rail, said plate having a depressed portion fitted to a depression in the tie, a rail brace engaged with the rail and a shoulder of the depressed portion of the plate, and

means for adjusting the brace toward the rail.

11. The combination of a cross-tie, a plate upon the cross-tie and having two separate depressions formed therein and fitted to two separate depressions in the tie, a rail supported within one of the depressions in said plate, and a rail brace engaged with a shoulder of the other depression and with the rail.

In testimony whereof, I have hereunto affixed my signature.

EDWARD J. CLARK.

Witnesses:

HARRY R. SCOTT,

F. G. CRAIGHEAD.