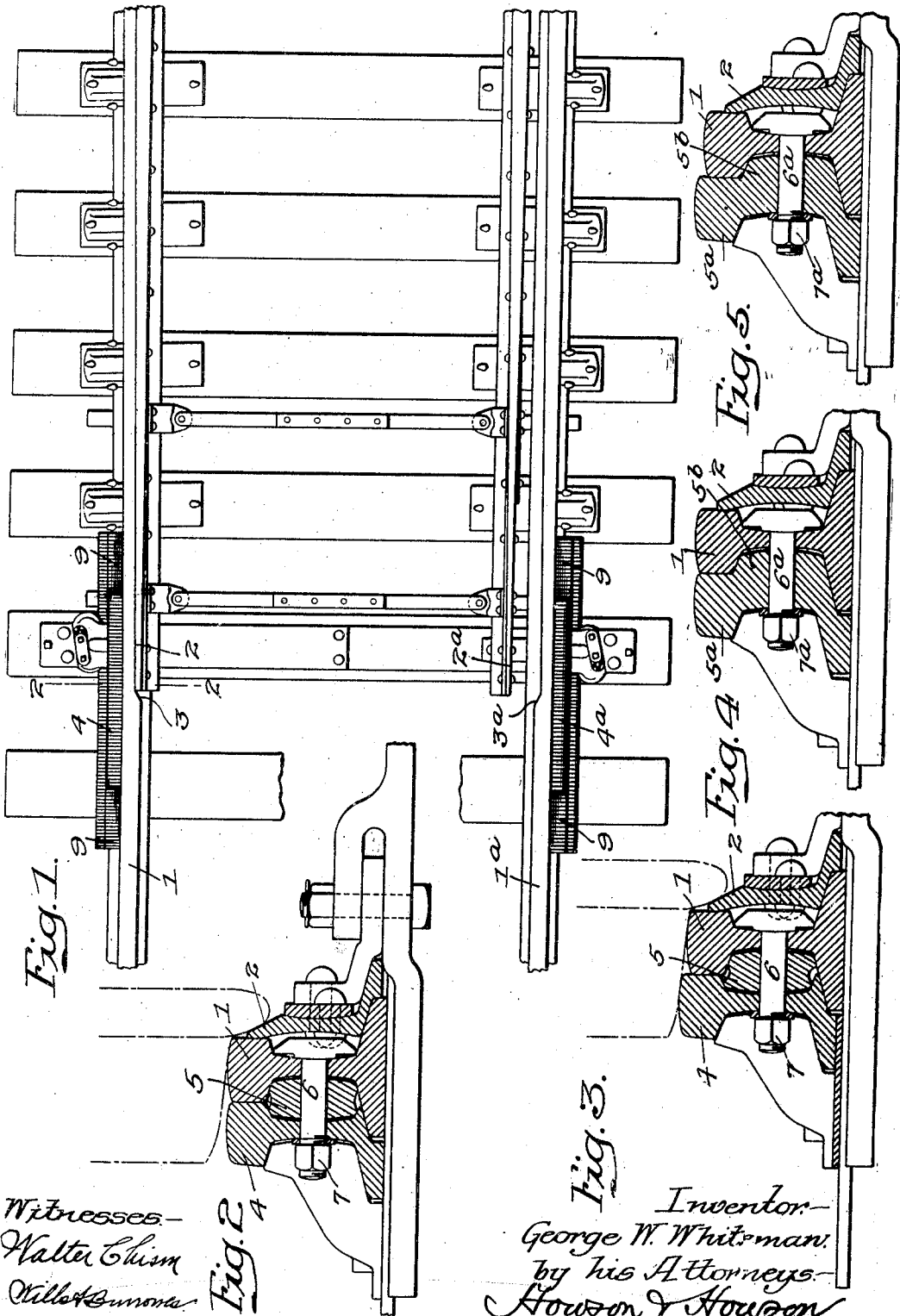


G. W. WHITEMAN.
RAILROAD SWITCH.
APPLICATION FILED MAY 19, 1914.

1,103,720.

Patented July 14, 1914.



Witnesses—
Walter Chism
Oillet & Sumner

Inventor—
George W. Whiteman
by his Attorneys—
Houson & Houson

UNITED STATES PATENT OFFICE

GEORGE W. WHITEMAN, OF PHILADELPHIA, PENNSYLVANIA.

RAILROAD-SWITCH.

1,103,720.

Specification of Letters Patent. Patented July 14, 1914.

Application filed May 19, 1914. Serial No. 339,522.

To all whom it may concern:

Be it known that I, GEORGE W. WHITEMAN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain improvements in Railroad-Switches, of which the following is a specification.

My invention relates to railroad switches; and the object of my invention is to provide an improved structure whereby I am enabled to thicken the end of the point switch and to provide, for the recess in the head of the stock rail accommodating such thickened end of the point switch, a reinforce therefor that will amply support said stock rail and protect the same against any damage or failure by reason of the extra recessing demanded by the thickened end of the point switch. The supplemental member or rail section reinforcing the stock rail may be raised to conform to the coning of the car wheel tread.

These and other features of my invention will be more fully described hereinafter, reference being had to the accompanying drawings, in which:

Figure 1, is a plan view of a switch constructed in accordance with my invention; Fig. 2, is a sectional view on the line 2-2, Fig. 1; Fig. 3, is a similar sectional view illustrating a detail of my invention; Fig. 4, is a sectional view, similar to Fig. 1, illustrating a modified construction within the scope of my invention, and Fig. 5, is a sectional view similar to Fig. 4, illustrating a further detail of my invention.

Railroad practice at the present time includes the use of heavy section rails. In the use of such rails, however, the ordinary practice of planing the point switches to one-eighth inch on the point is not an economical proposition and conditions demand that the end of the point switch be much thicker. To accommodate such a switch point, however, it is necessary that the stock rail be recessed to a much greater extent than the usual practice or conditions heretofore have demanded, and in such extra recessing of the rail, which would have a material tendency to weaken the same, ample protection against all danger of breakage must be provided. In fact, there has been no general practice of recessing the rail owing to the weakening effect upon the section for fear of the rail breaking under traffic. In order to compensate for the por-

tion cut from the stock rail in recessing the same, I propose to reinforce the stock rail, thereby giving additional strength at such point and also providing a greater wearing area for the tread of a car wheel as it leaves the incline of the switch point. If desired, this reinforcing section may be set level with the top of the stock rail, or it may be elevated to an extent sufficient to conform to the coning of the wheel tread.

In the drawings, 1, 1^a represent the stock rails on opposite sides of a switch, and 2, 2^a represent the thickened switch points; the rails being recessed at 3, 3^a on the inner sides of the heads, as clearly illustrated in the drawings, to receive the ends of said switch points. The recessing at its deepest point, it will be noticed, extends nearly to the center of the rail head, and in general may extend to the face of the central web supporting the head of the rail.

In order to compensate for this recessing and strengthen and support the stock rails, I provide reinforcing means outside the latter, which reinforcing means may be in the form of short rail sections 4, 4^a, having preferably a section equal to the ordinary stock rail; with a suitable block 5 interposed between the webs of the stock rails and the reinforcing rail sections, which members are then secured together by the use of bolts 6 and nuts 7, or similar suitable securing means passing through said webs and the filling blocks.

In lieu of the use of short rail sections, the length of which moreover may be anything desired to fully protect the switch, I may provide a block 5^a of suitable cross section which will have a suitable head portion and a lateral filler portion 5^b to engage the web of the stock rail and substantially fill the space between the head and base of the same; such block being held in place and to the stock rails by bolts 6^a and nuts 7^a. The ends of the rail sections 5, or of the special blocks 5^a may be beveled, as indicated at 9.

The reinforcing rail sections 5, or the reinforcing block members 5^a, may have their upper surface on the same plane as the upper surface of the head of the stock rail, as shown in Figs. 2 and 4, or they may be raised with relation to said stock rails so as to provide with the latter a surface conforming to the coning of a car wheel tread, as shown in Figs. 3 and 5.

By employing recessed stock rails such

as I propose, with a thickened switch point, the splitting of the latter at the point will be prevented even when said point is not held tightly to the stock rail. Under present practice, it is quite difficult to hold the point close to the stock rail owing to the size of the sections and their increased stiffness which greatly limits their ability to bend in effecting the necessary lateral displacement of the same.

I claim:

1. In railroad construction, the combination of a main rail, a tapering switch rail adjacent the main rail and movable toward and from the same, said main rail being recessed to accommodate said switch rail when the latter is in engagement therewith, and reinforcing means outside the main rail and extending longitudinally of the same adjacent the recessed portion thereof.
2. In railroad construction, the combination of a main rail, a tapering switch rail having a thickened point adjacent the main rail and movable toward and from the same, said main rail being deeply recessed to accommodate the thickened point of said switch rail when the latter is in engagement therewith, and reinforcing means outside the main rail and extending longitudinally of the same adjacent the recessed portion thereof.
3. In railroad construction, the combination of a main rail, a tapering switch rail adjacent the main rail and movable toward and from the same, said main rail being recessed to accommodate said switch rail when the latter is in engagement therewith, reinforcing means outside the main rail and extending longitudinally of the same adjacent the recessed portion thereof, and means for securing said reinforcing means to said main rail.
4. In railroad construction, the combination of a main rail, a tapering switch rail

adjacent the main rail and movable toward and from the same, said main rail being recessed to accommodate said switch rail when the latter is in engagement therewith, and reinforcing means outside the main rail and extending longitudinally of the same adjacent the recessed portion thereof, said reinforcing means being raised above the main rail to form therewith a contacting surface conforming to the coning of a car wheel.

5. In railroad construction, the combination of a main rail, a tapering switch rail adjacent the main rail and movable toward and from the same, said main rail being recessed to accommodate said switch rail when the latter is in engagement therewith, and a short rail section forming reinforcing means secured outside the main rail and extending longitudinally of the same adjacent the recessed portion thereof, said reinforcing rail section being raised above the main rail to form therewith a contacting surface conforming to the coning of a car wheel.

6. In railroad construction, the combination of a main rail, a tapering switch rail adjacent the main rail and movable toward and from the same, said main rail being recessed to accommodate said switch rail when the latter is in engagement therewith, a short rail section forming reinforcing means disposed outside the main rail and extending longitudinally of the same adjacent the recessed portions thereof, means for securing said reinforcing rail sections to the main rails, and filler blocks interposed between said main rails and the reinforcing rail sections.

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

GEORGE W. WHITEMAN.

Witnesses:

MURRAY C. BOYER,
WM. A. BARR.