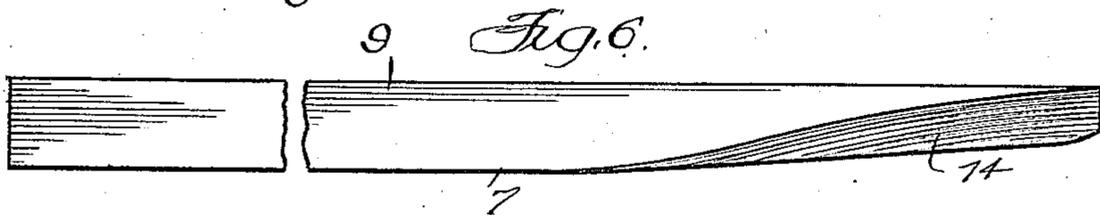
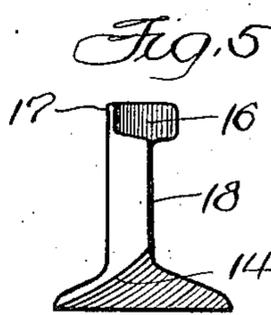
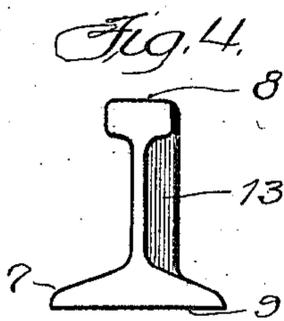
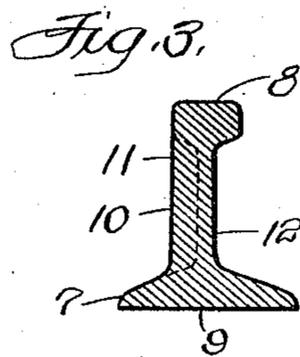
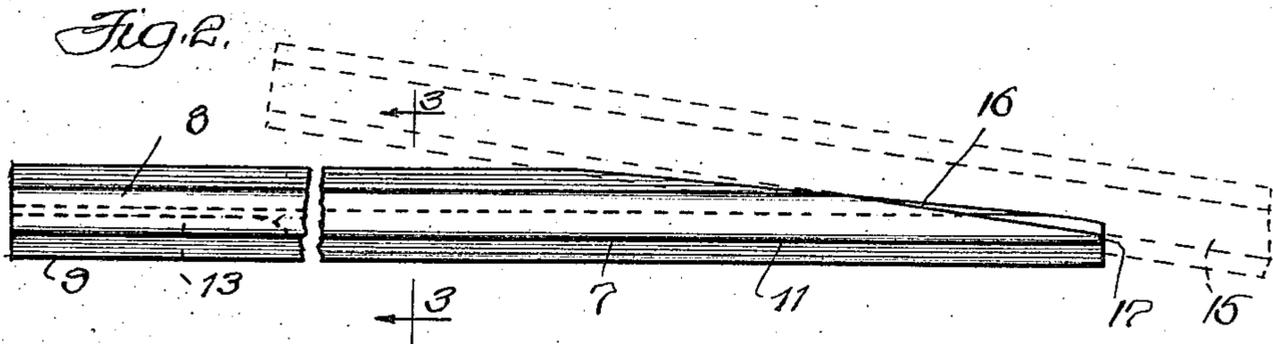
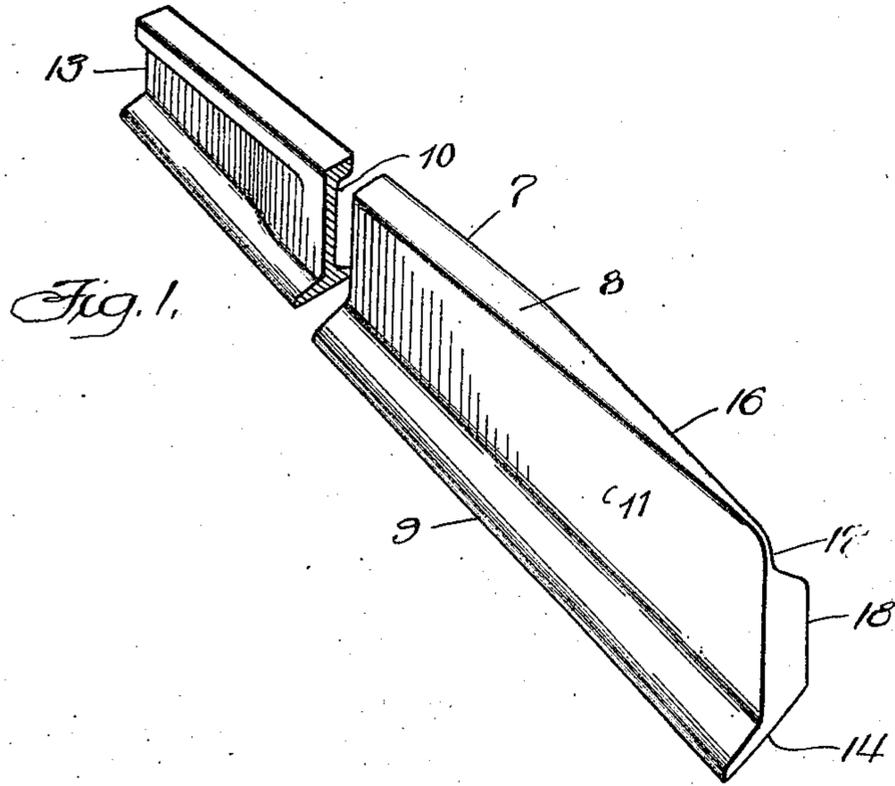


June 19, 1923.

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I. J. FERNEKES
RAILROAD SWITCH AND RAIL

Filed Nov. 21, 1921



WITNESS:

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UNITED STATES PATENT OFFICE.

IRVIN J. FERNEKES, OF CHICAGO, ILLINOIS.

RAILROAD SWITCH AND RAIL.

Application filed November 21, 1921. Serial No. 516,736.

To all whom it may concern:

Be it known that I, IRVIN J. FERNEKES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railroad Switches and Rails, of which the following is a specification.

Railroad switch points as ordinarily constructed are made of standard rails with reinforcing plates on one or both sides thereof, the plates on one side usually extending about the full length of the point and the plates on the opposite side being somewhat shorter. The sharpened or pointed ends of these rails are not adequately reinforced or protected by these plates and consequently are apt to become badly worn or broken off. Furthermore the fastening of the reinforcing plates to the rails requires a large amount of labor as well as a considerable number of bolts, rivets and the like. The present invention relates to an improvement in the switch points of railroad switches of this character, and also to a novel form of rail which is particularly adapted for making such points. The objects of the present invention are to provide an improvement in railroad switches; to provide an improved switch point and a rail of suitable section for making such switch points and to provide such other advantages as will appear from the following description.

In the accompanying drawings illustrating a preferred form of my invention—

Figure 1 is a perspective view of the complete switch point;

Figure 2 is a plan view of the point showing its engagement with a track rail;

Figure 3 is a section taken on the line 3—3 of Figure 2;

Figure 4 is an end view taken from the left hand end of Figure 1;

Figure 5 is an end view taken from the right hand end of Figure 1; and

Figure 6 is a bottom plan view.

In order to make my improved switch point, I provide a rail having a novel cross section such as shown in Figure 3. This rail is of the usual height as the track rail for which it is to be used and has substantially the same base and tread, but instead of having a thin web, the web is thickened at one side so that it comes substantially flush with the side of the ball. As shown

in the drawings the rail 7 has a ball or head 8 and a base or flange portion 9. The web 10 is sufficiently thick so that it extends from one side of the ball 8 to a short distance beyond the center of the rail, the side 11 of the web being flush with the corresponding side of the ball and the opposite side 12 of the web being positioned to correspond with the usual practice or standard specification for such rails.

My improved switch point is readily formed from this rail section by merely cutting away portions of the rail where necessary. The side 11 of the web is cut away as shown at 13 for a short distance from one end of the rail in order to apply the angle bars or splice bars for making the joint. At the opposite end of the switch point the base of the rail is beveled or cut away as shown at 14 so that it may rest upon the flange of the track rail 15 as indicated. The ball 8 is cut away as shown at 16 so that it will engage closely with the ball of the track rail 15 and will form the necessary point 17. It will be noted that at the extreme end, practically the entire ball is cut away so that the point is positioned over the side 11 of the web 10. This leaves the remainder of the flange extending outwardly from the point and such projection 18 is shaped so as to fit closely against the web between the ball and flange of the track rail 15. In other words, the end of the switch point 7 is made to conform to the side of the rail 15 so as to make close engagement therewith and be supported thereby. From this description it will be seen that my improved switch point may be readily and cheaply manufactured from the novel rail section. Furthermore the extreme point of the switch rail is supported and reinforced by the thickened web portion and the entire switch rail is sufficiently strong so that no additional reinforcing plates are necessary. It will also be noted that the entire rail may be made of suitable material so that the point may be properly hardened or tempered or the entire rail made of special steel which will not be apt to be readily broken or worn. These switch rails or points may be made in any desired size and length for different conditions and the switch may be varied, if necessary, for different standard rails and therefore I do not wish to be limited to the exact form shown and described, except as

specified in the following claims in which I claim:

1. A rail having a continuous web of sufficient thickness so that one side of the web is in alignment with one side of the ball while the other side of the web is in the usual position. 5
2. A rail of uniform cross section comprising a ball having a web with one side thereof in alignment with one side of the ball and the opposite side of the web being adjacent to the center of the ball and having a base extending laterally on both sides of the web. 10
3. A switch point for railroad switches formed of a single piece made in the form of a rail of uniform section with the depression in one side of the web filled substantially flush with the head of the rail, one end of the point having the side of the head beveled to engage with the head of the through rail and having the bottom of the flange beveled to engage with the flange of the through rail, the intermediate portion of the web being adapted to project into the space between the head and flange of the through rail. 15 20 25
4. A switch point rail comprising a base with an upwardly extending web portion and having a head projecting at one side of the web only, the web being of approximately the same thickness as one-half of the head, the web being cut away at one side for receiving the angle plates and the head being cut away on a bevel to form a point at the end of the rail, the remainder of the rail being cut away to conform to the side of the through rail and to engage therewith. 35
5. A rail point comprising a rail of uniform cross section and having flanges and head of substantially the same size as the track rail and having a web one side of which is coincident with the side of the head throughout substantially the full length of the rail point and the other side being at approximately the center of the head, the head being tapered at one end to form a point for engagement with the track rail, said point being supported by the web and the adjacent portions of the rail being shaped to conform with the track rail and to engage therewith when the switch is closed. 40 45 50
6. A rail for forming switch points, having a uniform cross section and having one side corresponding to the form of a standard rail while the opposite side is made with the web portion flush with the side of the ball portion, substantially as described. 55 60

IRVIN J. FERNEKES.