Oct. 18, 1932. H. G. WARR 1,883,148

WHEEL FLANGE OILER

Filed Oct. 11, 1928

Fig. 5.

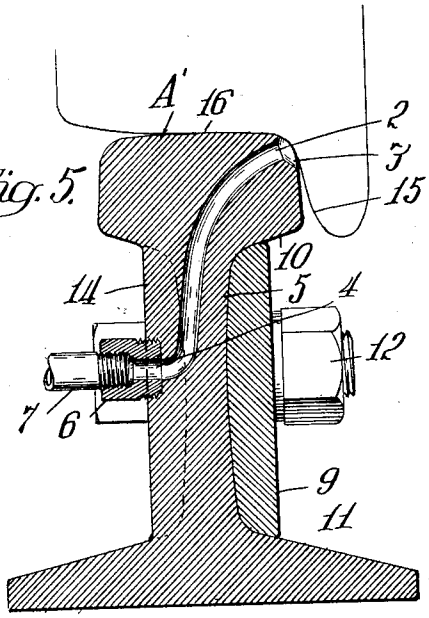


Fig. 3.

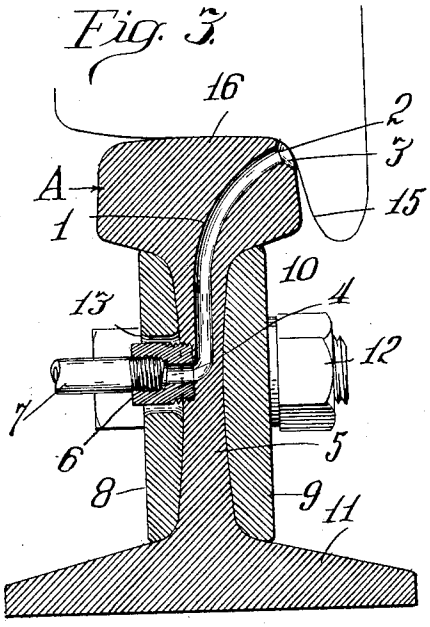


Fig. 4.

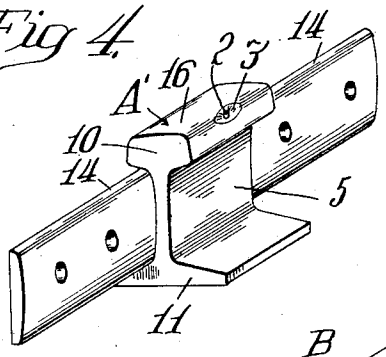


Fig. 2.

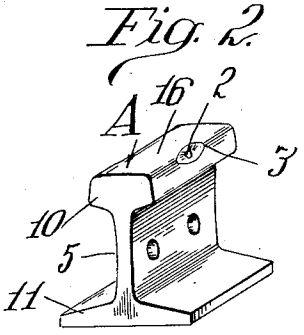
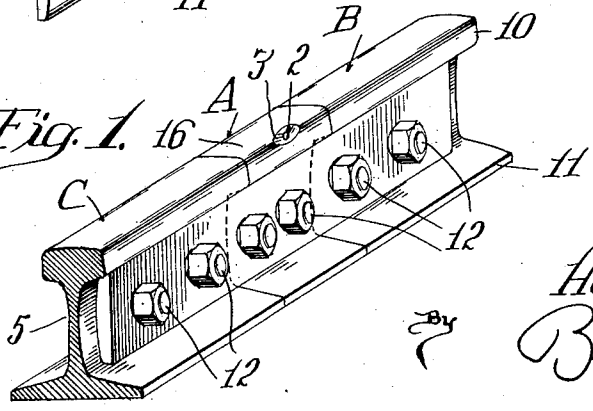


Fig. 1.



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UNITED STATES PATENT OFFICE

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WHEEL FLANGE OILER

Application filed October 11, 1928. Serial No. 311,873.

This invention relates to certain new and useful improvements in wheel flange oilers, and more particularly to an improved means for discharging the oil directly against the inside of the car wheel flange adjacent the crown of the rail.

More specifically, the invention contemplates the use of a relatively short rail section adapted to be interposed between and supported from the end portions of two adjacent rails so as to align therewith and form a portion of the trackway. This short, auxiliary rail section is formed internally with an oil conduit which terminates at its outlet in the side of the rail head adjacent the crown of the rail so that the oil will be projected directly against the inside of the wheel flange. The inlet to the conduit may be located in one side of the web portion of the rail, whereby connection may be made with any suitable form of means for forcing oil into and through the conduit. The auxiliary rail section is supported from the adjacent rails by means of fish plates overlapping the web portions of the three rail sections and bolted thereto. According to one form of the invention, one of the fish plates may be made integral with the short rail section.

The principal object of this invention is to provide an improved auxiliary rail section for use in wheel flange oilers, substantially as briefly described hereinabove and as disclosed more in detail in the description which follows.

Other objects and advantages of this invention will be more apparent from the following detailed description of certain approved forms of apparatus embodying the principles of this invention.

In the accompanying drawing:

Fig. 1 shows a perspective of a section of trackway, with one of the approved oiler rail sections installed therein.

Fig. 2 is a perspective view of the auxiliary rail section.

Fig. 3 is a transverse vertical section, on an enlarged scale, through the auxiliary rail section when installed, as shown in Fig. 1.

Fig. 4 is a perspective view, similar to Fig. 2, showing a modified form of auxiliary rail section with an integral fish plate for supporting same.

Fig. 5 is a transverse vertical section, similar to Fig. 3, through the modified form of rail section shown in Fig. 4.

The auxiliary rail section A, as shown in Figs. 1 and 2, has the same cross sectional form as that of a standard rail, and is adapted to be interposed between the adjacent ends of two standard rails B and C so as to form a continuous trackway. This auxiliary rail section A is relatively short, being only a few inches in length. Its length need be only sufficient to house the oil conduit hereinafter described, and to provide means for attachment of the fish plates or other supporting means whereby the auxiliary rail section is supported from the adjacent rails.

An oil conduit 1, of sufficient size to permit the passage of the rather heavy oil or other lubricant used for lubricating wheel flanges and rail curves, is formed within the body of the auxiliary rail section A, in any suitable manner, either by drilling or being cast therein. The outlet 2 of this conduit extends to a point in the inner side of the rail head adjacent the crown 16 of the rail, and terminates in a shallow recess 3 formed in the side of the rail head. The purpose of this recess 3 is to prevent the closing up of the conduit 1 by the wear or pounding to which the rail is subjected. The inlet 4 of conduit 1 may be located at any convenient point, preferably about the center of one side of web 5. Preferably an internally and externally threaded nipple or fitting 6 is screwed into the side of the web to form a means for connecting the oil discharge pipe 7 with the inlet 4 of conduit 1. Pipe 7 will lead from any suitable means for discharging oil from a reservoir against the wheel flange. Such devices usually involve means that is depressed by the tread or flange of a passing car wheel to automatically project oil from the reservoir through the conduit and against the wheel flange or the head of the rail. It is to be undertood that any such device, or any other suitable means for forcing oil through pipe 7 and conduit 1, may be utilized.

For supporting the auxiliary section A

from the adjacent rail sections B and C, and in alignment therewith, a pair of fish plates 8 and 9 which overlap the webs 5 of the three rail sections and fit between the head 10 and base flange 11 of the rails, are secured in place by a plurality of bolts 12 passing through the two fish plates and the webs of the rails. The fish plate 8 is provided with an enlarged opening 13 to permit the passage of the oil pipe 7 and nipple 6.

In the modified form of the invention shown in Figs. 4 and 5, the fish plate 8, previously described, is replaced by a fish plate 14 formed integrally with the auxiliary rail section A'. The central portion of this fish plate 14 serves to make the web of the rail section thicker and provides more space for the oil conduit 1, the inlet 4 and nipple 6 being located directly in the thickened portion of the web formed by the central part of fish plate 14. The fish plates 14 and 9 may be secured to the rails B and C by bolts 12, as in the form first described, but the bolt connections between the plate 9 and auxiliary rail section A' may be omitted. Since there is no necessity for providing bolt openings in the rail section A', this rail section may be made shorter than the section A, first described, and disclosed in Figs. 1, 2 and 3. The section A' need only be long enough to provide ample space for the oil conduit and the connections thereto.

By means of this improvement, involving the oil conduit formed directly within the rail, the oil may be projected directly against the inner surface of the rail flange 15 adjacent the crown 3 of the rail and the tread of the wheel, where the lubrication is most needed. In the ordinary system where oil is projected from below against the wheel flange or the rail head, much of the oil is necessarily lost. It is inconvenient and expensive to form an oil conduit in a portion of a standard rail section, but such a conduit may be much more conveniently and economically formed in one of the short auxiliary rail sections, such as disclosed in this application. Furthermore, this auxiliary rail section may be conveniently used in connection with any approved mechanism for feeding the oil from the reservoir or other source of supply.

It will be apparent that the conduit 1 formed in the auxiliary rail section may, if desired, be provided with a plurality of outlets 2 positioned at spaced intervals in the side of the rail-head and it is to be understood that the following claims contemplate covering the use of one or more such outlets.

I claim:

1. In a wheel flange oiling system, a relatively short rail section formed with an internal oil conduit having an outlet in one side of the rail head adjacent the crown of the rail, and means for supporting said rail section from the end portions of the adjacent rails, comprising a pair of fish plates overlapping the short section and the end portions of the adjacent rails.

2. In a wheel flange oiling system, a relatively short rail section formed with an internal oil conduit having an outlet in one side of the rail head adjacent the crown of the rail, a fish plate formed integrally with one side of the rail section and adapted to overlap the end portions of the adjacent rails, and means cooperating with the fish plate to support the rail section from the adjacent rails.

3. In a wheel flange oiling system, a relatively short rail section formed with an internal oil conduit having an outlet in one side of the rail head adjacent the crown of the rail, a fish plate formed integrally with one side of the rail section and adapted to overlap the end portions of the adjacent rails, the inlet to the conduit being formed in the integral fish plate, and means cooperating with the fish plate to support the short rail section from the adjacent rails.

4. In a wheel flange oiling system, a relatively short rail section formed with an internal oil conduit having an outlet in one side of the rail head adjacent the crown of the rail, a fish plate formed integrally with one side of the rail section and adapted to overlap the end portions of the adjacent rails, the inlet to the conduit being formed in the integral fish plate, the outlet of the conduit being expanded to form a shallow recess in the side of the rail head, and means cooperating with the fish plate to support the short rail section from the adjacent rails.

5. In a wheel flange oiling system, a member adapted to be interposed between the adjacent ends of a pair of track rails of standard form so as to form a continuation thereof and being of less length than the fish-plates which overlap both the member and the end portions of the adjacent rails to bind the assembly together, the member being formed internally with an oil conduit having its outlet in line with the crown of the rail at one side of the rail-head.

6. In a wheel flange oiling system, a member adapted to be interposed between the adjacent ends of a pair of track rails of standard form, said member being of similar cross-section to the rails so as to form a continuation thereof and being of less length than the fish-plates which overlap both the member and the end portions of the adjacent rails to bind the assembly together, the member being formed internally with an oil conduit having its outlet in line with the crown of the rail at one side of the rail-head.

7. In a wheel flange oiling system, a member adapted to be interposed between the adjacent ends of a pair of track rails of standard form, said member being of similar cross-section to the rails so as to form a continuation thereof and being of less length than the fish-

plates which overlap both the member and the end portions of the adjacent rails to bind the assembly together, the member being formed internally with an oil conduit having an inlet in the side of the web and an outlet in one side of the rail-head adjacent the crown of the rail, the outlet being expanded to form a shallow recess in the side of the rail-head.

8. In combination with a pair of adjacent track-rails of standard form, a member adapted to be interposed between the adjacent ends of the rails so as to form a continuation thereof and formed internally with an oil conduit having its outlet in line with the crowns of the rails at one side of the aligned rail-heads, and continuous means secured to the sides of the respective end portions of the rails and overlapping the member to bind the rails in alignment and support the interposed member.

9. In combination with a pair of adjacent track-rails of standard form, a member adapted to be interposed between the adjacent ends of the rails so as to form a continuation thereof and formed internally with an oil conduit having its outlet in line with the crowns of the rails at one side of the aligned rail-heads, and a pair of fish-plates overlapping the respective sides of the end portions of the rails and the interposed member, and secured to the rails and member so as to bind the rails in alignment and support the interposed member.

10. In combination with a pair of adjacent track-rails of standard form, a member adapted to be interposed between the adjacent ends of the rails so as to form a continuation thereof, said member being of similar cross-section to the rails and formed internally with an oil conduit having its outlet in line with the crowns of the rails at one side of the aligned rail-heads, and a pair of fish plates secured to and overlapping the respective sides of the webs of the aligned end portions of the rails and the interposed member between the rail-heads and base-flanges.

HAROLD G. WARR.