UNITED STATES PATENT OFFICE

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DEVICE FOR PREVENTING RAILROAD SWITCHES FROM FREEZING

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This application is a continuation in part of my application Serial No. 270,982, filed April 18, 1928, for Heating devices for railroad switches, which resulted in Patent No. 1,783,164.

The object of the present invention is to provide an extremely simple and rugged heater adapted to be applied to the lower faces of switch rails and interlocking rails and between the ties supporting said rails, for the purpose of preventing the formation of ice or snow between the parts of the switch or interlocking rails which frequently make it impossible to move the switch points.

Another object of the invention is to provide a heater of the type referred to with flanges or guards which are adapted to contact with the bottoms of the switch points in order to maintain a proper distance between the heater and such points and also to form guards to protect the ties on either side of the heater.

Other objects of the invention will become apparent as the detailed description thereof proceeds.

In the drawings:

Figure 1 is a perspective view of the switch heater, with parts broken away and shown in sections to illustrate details of construction.

Figure 2 is a plan view of a switch point with a series of heaters forming the present invention arranged in operative position in contact with the bottoms of said point; and

Figure 3 is a side elevation of the switch, with the heater shown in position between the ties thereof and with their guards in contact with the bottoms of the switch points.

As shown in the drawings, the switch heater comprising the present invention consists of a casing divided into two compartments by a partition. The rear compartment is adapted to receive a heating fluid, preferably a good grade of kerosene with a flash of about 140 degrees. The other compartment is filled with any suitable refractory absorbent material such as asbestos fibre, pumice stone or a mixture of the two. The lower end of the partition is spaced apart from the bottom of the casing to form an aperture through which the liquid fuel may contact with the said absorbent material in order to be saturated thereby and to be utilized for the purpose of heating the switch points under which the invention may be arranged.

The casing immediately above the wick compartment is provided with an upstanding rectangular flange adapted to receive a closely fitting cover which may be secured to the top wall of the casing by a chain or cable. The top wall of the casing at its rear end is provided with a filling aperture formed by a flange extending upwardly from the top of said casing; and a tightly fitting cover is adapted to close said aperture and is also secured to the cable in order to prevent loss thereof.

As shown in Figure 2 the heating aperture is large enough to extend across the bottoms of the switch points even when one of said points is separated from the stock rail. In order to maintain the heating wick properly spaced from the bottom of the switch points, the top of the casing is provided with guard flanges and, having their upper edges adapted to contact with the bottoms of the points and stock rails. These guard flanges also extend lengthwise of the casing and on opposite sides of the heater wick a sufficient length to protect the ties between which the heaters are arranged.

In order to facilitate the handling of the heaters, the fuel chamber end of the casing is provided with a handle which may be suitably secured to said end.

The present invention is not particularly concerned with the details of construction of the fuel and combustion chambers nor is it concerned with the particular ingredients of the wick which may be used in the combustion chamber. Primarily the invention resides in the combination with the switch heater as a whole and the points of the switch and interlocking rails in which combination the guard flanges of the heater serve not only as a gauge to regulate the distance between the bottoms of the switch points and the heating element but also serve as guards to prevent injury to the ties on opposite sides of the switch heater.
While the invention is shown and described in connection with a railroad switch point it is not necessarily limited to such combinations as it may be used anywhere with similar devices where a definite spacing from the rails to be protected is desired and where lateral protection from the heater is also necessary or desirable.

What we claim is:

10. A railroad switch heater comprising an elongated closed container having a filler aperture and a burner aperture located at opposite ends of its top, and guard flanges positioned one on each side of the burner aperture and extending above said top and parallel with the long sides of the container a substantial distance to either side of said burner aperture, said flanges when the heater is in operative position below a switch point being in contact with the bottom of said point and forming a gauge to position the burner aperture at a fixed distance from said bottom and also serving as guards to prevent access of the burner flame to the railroad ties on opposite sides of the heater.

In testimony whereof we affix our signatures.

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