Nov. 25, 1930. H. MILLER ET AL 1,783,164

HEATING DEVICE FOR RAILROAD SWITCHES

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Fig. 1.

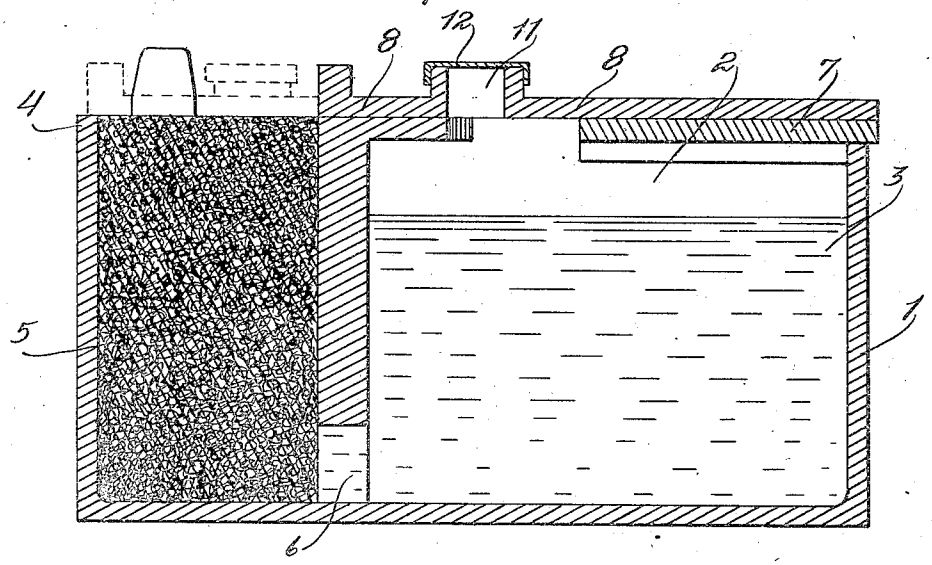
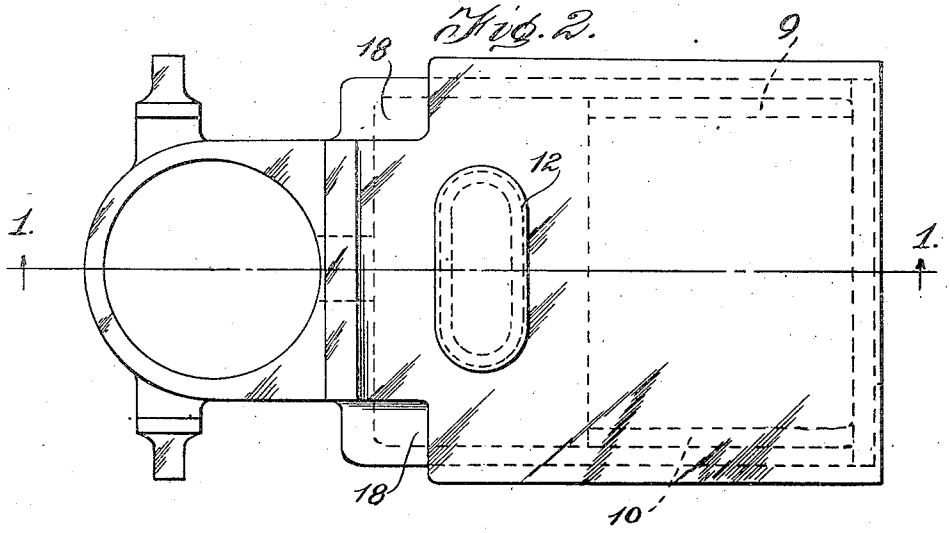


Fig. 2.



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Fig. 3.

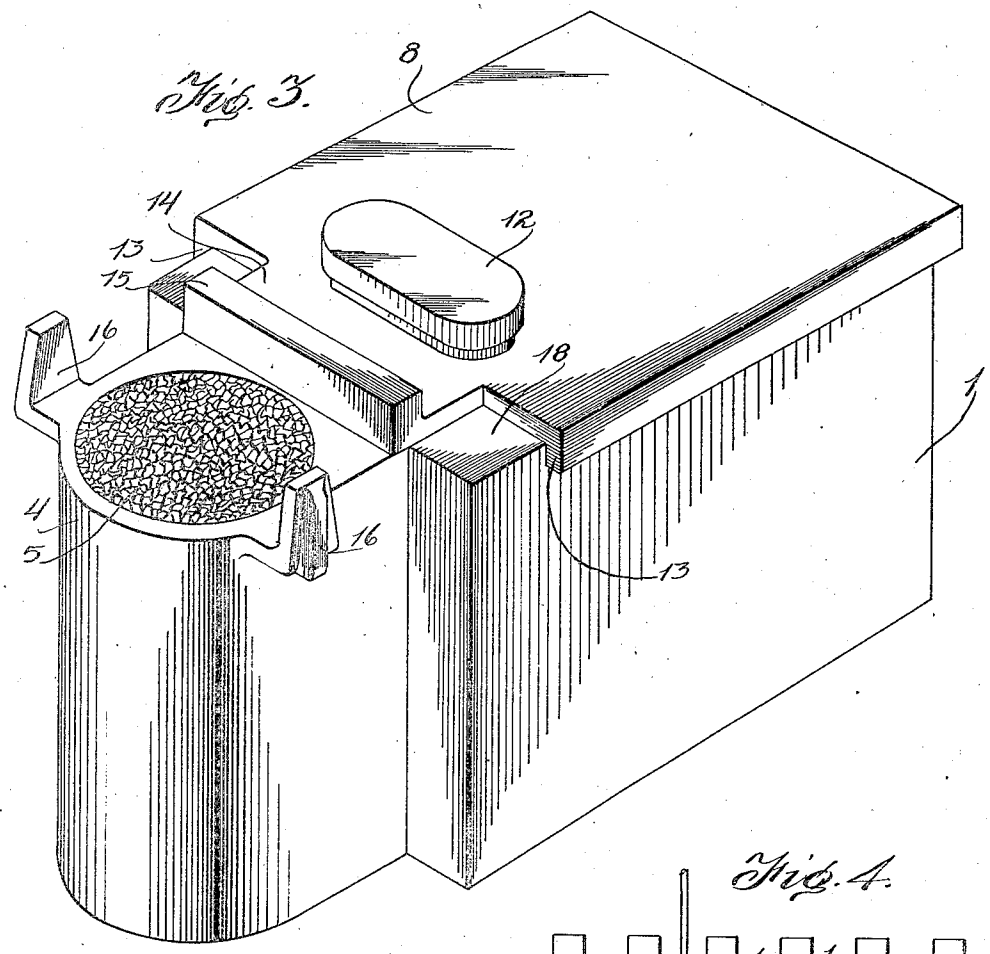


Fig. 4.

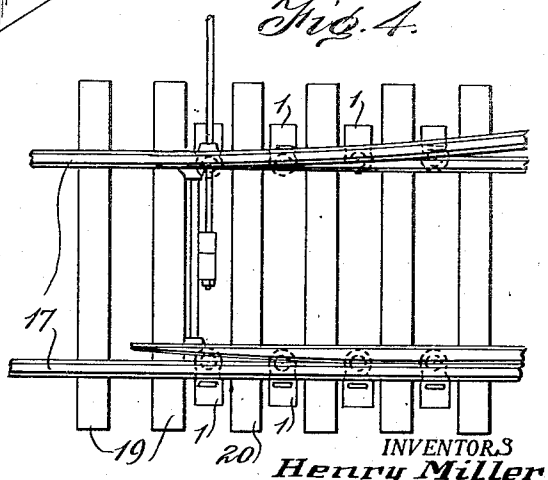
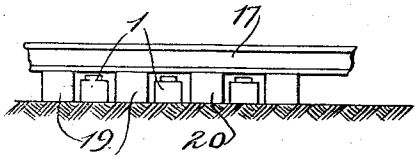


Fig. 5.



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UNITED STATES PATENT OFFICE

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HEATING DEVICE FOR RAILROAD SWITCHES

Application filed April 18, 1928. Serial No. 270,982.

This invention relates to improvements in devices for heating switch members on railroad turns during cold weather, or for any other suitable purpose.

An object of this invention is to provide a heating device which may be applied to certain portions of switches, rails, plates, detector parts, and the usual appliances of switch mechanism, in such a manner that the temperature of these portions may be kept above the freezing point, and snow and sleet, if any, melted away, thereby eliminating the necessity of using salt or brooms by attendants, and insuring at all times that the switches may be safely operated for the efficient and quick movement of trains.

Other objects of this invention will appear from the following detailed description of the device and as disclosed in the two sheets of drawings which are herewith made a part of this application.

In the drawings—

Fig. 1 illustrates a sectional side elevational view of the heating device, disclosing the different members in assembled relationship.

Fig. 2 represents a top plan view of the heating device.

Fig. 3 illustrates a perspective view of the heating device.

Fig. 4 represents a plan view of a section of railroad track having a turn out or switch portion, and a number of heating devices herewith described and claimed arranged in operative relationship therewith.

Fig. 5 illustrates a side elevational view of Fig. 4 disclosing a plurality of heating devices arranged in operative relationship with a rail member.

In the heating device according to this invention, numeral 1 designates a main body portion, made of any suitable material such as cast iron or steel, and provided with a compartment 2 for holding a suitable liquid such as a volatile fuel 3, and a compartment 4, for receiving a quantity of porous refractory material 5, such as asbestos fiber, pumice stone, or a mixture of the two, or other like material.

An orifice 6 is provided to bring the compartments 2 and 4 in open communication with each other. The liquid fuel 3 is adapted to pass through the orifice 6 and saturate thoroughly the material 5. The upper, or open end of body 1, is preferably provided with two lid portions 7 and 8.

The lid portion 7 is removable, but stationary while in position, and is provided with downwardly extending side flanges 9 and 10 for the purpose of holding the lid 7 in position. The lid portion 8 is preferably formed having an opening 11 through which the liquid 3 may be delivered to the compartment 2. The opening 11 may be oval in shape and fitted with a removable cap portion 12.

The lid 8 is arranged to slide in a horizontal direction and is held and guided into position by downwardly extending side flanges 13. The lid 8 is reduced in width at its forward end, as clearly disclosed at 14, the extreme forward edge being provided with an upwardly extending rib 15, for the purpose of convenience in sliding the lid 8 backward or forward.

The lid 8 is made shorter than the combined lengths of the burner and fuel compartments so that when the burner is open the lid will not project beyond the opposite end of the device, in which position it could be readily displaced by having the projecting portion stepped upon by a person walking along the right of way.

Lug portions 16 are cast integrally with the compartment section 4, for the purpose of serving as a stop for lid 8 in its forward movement, and also by virtue of the height of the lugs 16, they function to prevent the upper side of compartment 4 from coming too close to the rail 17 when in operative position therewith, thereby insuring sufficient space for the proper burning of the flame and for supporting the device which may tend to tilt due to the sloping contour of the ballast upon which it may be set.

In order to completely cover the compartment 2 when the lid 8 is shoved backward for the purpose of uncovering compartment 4, as clearly disclosed in Figure 3, a flange portion 18 is integrally cast with the main body section 1.

In operation this invention provides a heating device which may be utilized in a number of directions, being particularly adapted for service in connection with the heating of railway devices in cold weather. The heater may be located between two switch ties 19 and 20, as clearly disclosed in Figures 4 and 5, the compartment 4, holding the porous refractory material 5, is adjusted under the switch rail 17. A plurality of the devices may be utilized in a similar manner, as clearly disclosed in the drawings, and throughout the length of the switch system.

Normally, the lid 8 is pulled into a forward position covering compartment 4, and when snow or sleet occurs the lid 8 is shoved back, as clearly disclosed in Figure 3, uncovering the porous refractory material, which is saturated with the oil from the chamber 2. The oil is then ignited and allowed to burn as long as the weather conditions require. The oil in the compartment 2 is replaced from time to time as it is consumed through the orifice 11. The flame is then extinguished and the porous refractory material protected from moisture and dirt by sliding the lid 8 back again over the compartment 4. The lid 7 having guide ribs 9 and 10, may be easily removed for cleaning the compartment 2.

It is to be understood that substitutions and alterations may be made in the above disclosure, both in the specification and drawings, within the scope of the appended claim without affecting the merits of this invention.

What we claim is:

A switch heating device comprising a receptacle having communicating compartments, one being a reservoir for liquid fuel and the other constructed as a burner, a slidable cover closing top openings of both compartments, the length of which does not substantially exceed the length of the fuel reservoir, and a removable under-cover over that part of the reservoir exposed when the sliding cover is moved to a position covering the burner.

In testimony whereof we affix our signatures.

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