Sept. 29, 1936. W. H. GREENFIELD 2,055,839

PORTABLE HEATER FOR TRACKS AND SWITCHES

Filed March 23, 1935

Fig. 1.

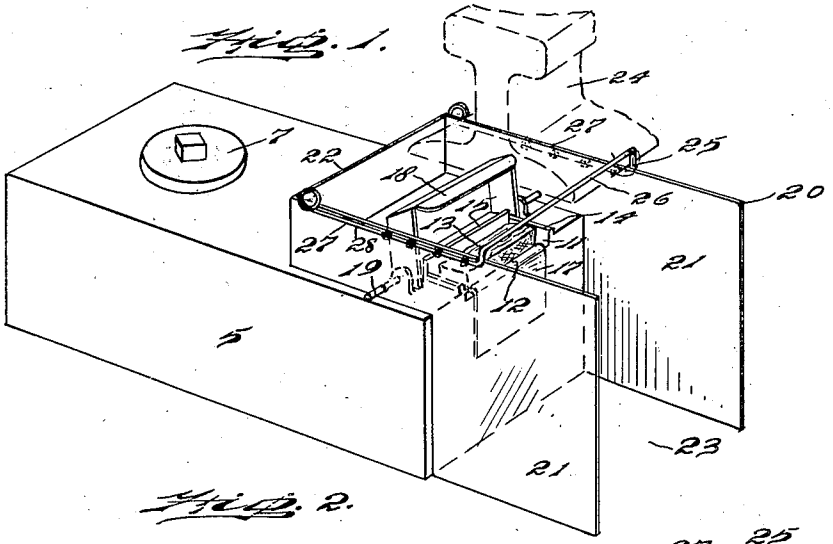


Fig. 2.

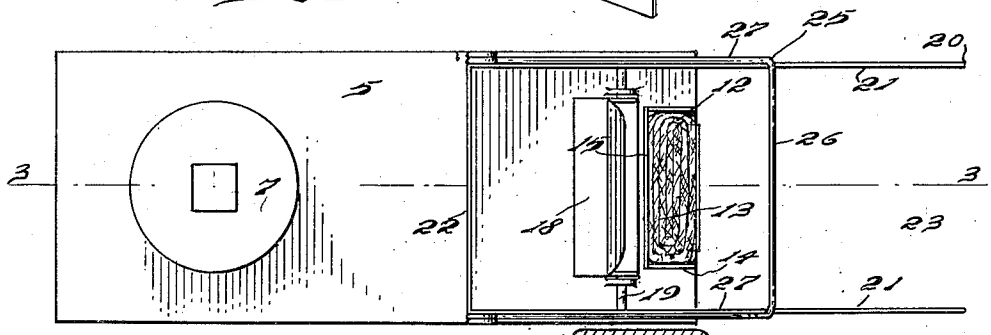


Fig. 4.

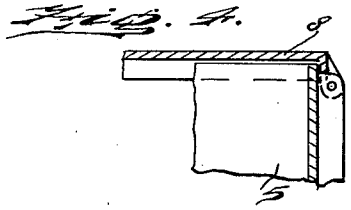


Fig. 3.

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PORTABLE HEATER FOR TRACKS AND SWITCHES

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11 Claims. (Cl. 246—428)

The object of my invention is to devise a novel portable heater operable with low grade fuel, which can readily be applied to tracks and switches to effect the melting of the snow and ice.

A further object of the invention is to devise a novel heater having ample fuel capacity, a novel wick arrangement and a novel construction and arrangement of a flame guard which will prevent the burning of the ties.

With the above and other objects in view as will hereinafter clearly appear my invention comprehends a novel heater for tracks and switches.

It further comprehends a novel portable heater which can be readily attached to a rail or positioned to direct the flame against the rail and a novel flame guard which may be fixed or movable relatively to the fuel box.

Other novel features of construction and advantage will hereinafter clearly appear in the detailed description and the appended claims.

For the purpose of illustrating the invention, I have shown in the accompanying drawing typical embodiments of it, which in practice, will give satisfactory and reliable results. It is, however, to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized, and my invention is not limited to the exact arrangement and organization of these instrumentalities as herein set forth.

Figure 1 is a perspective view of a portable heater embodying my invention.

Figure 2 is a top plan view.

Figure 3 is a sectional elevation, the section being taken on line 3—3 of Figure 2.

Figure 4 is a detail of another embodiment of my invention showing the fuel box as having a hinged cover.

Similar numerals indicate corresponding parts.

Referring to the drawing:

5 designates a fuel container which is shown in Figures 1 to 3 as consisting of a cored box having a filling opening 6 and a closure 7. The box may if desired have a removable cover 8 as shown in Figure 4. The closure 7 is in the form of a plug having an apertured extension and a wire secured to it so that the plug can be tilted over for the filling operation and will not accidentally become detached from the fuel container. The fuel container 5 has a side opening 11 which merges into a top opening 12 which receives the wick 13. The side walls 14 and the rear walls 15 of the opening 12 preferably extend above the upper face of the top of the fuel container.

The wick 13 is preferably formed of folds of asbestos wick material secured in folded condition by a fastening device 16, which also serves to retain a fastening strip 17 preferably metallic, in assembled condition with the wick. The upper end of the strip 17 is flexible and is bent downwardly over a wall of the box to retain the wick in its adjusted position.

For extinguishing the flame, I provide a recessed cover 18 hinged to the box by a rod 19.

20 designates a flame guard hinged to the container by the rod 19, although it may be rigidly fixed to the container if desired. This flame guard 20 consists of the side plates 21 connected by a closed rear wall 22 and has the general form of a U with the forward end open as at 23. The side plates 21 are angularly cut away so that they will rest on the container, and the forward portions of the plates depend downwardly below the top of the container to form a flame guard which will prevent the flame from setting fire to the wooden ties which carry the rails.

The flame guard is provided with means for clamping it and the fuel container to a rail 24. The clamping means 25 is illustrated as a wire having an upwardly bent stretch 26 to extend longitudinally of the base flange of the rail with spaced longitudinally extending stretches 27 welded to the side plates of the flame guard as at 28. The free ends of the wire are coiled and can be bent around the base flange to securely hold the heater against the rail irrespective of the vibrations to which the rail is subjected.

The operation will now be apparent to those skilled in this art and is as follows: The flame guard is clamped to the base flange of the rail, and, assuming that the fuel container has been filled with fuel, the cover 18 is raised and the wick 13 is lighted. The flame from the wick is projected forwardly and upwardly between the side plates of the flame guard against the movable rail of the switch.

The flame also passes upwardly between the flue formed between the rear wall of the flame guard and the base of the rail, thus providing for the effective heating of the rail and confining to the rail the heat which otherwise would be wasted.

It will now be apparent that I have devised a new and useful portable heater for tracks and switches which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described preferred embodiments thereof which will give in practice satisfactory and reliable re-

sults, it is to be understood that these embodiments are susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A fuel heater for rails, comprising a fuel container having at the upper portion of its front end wall an opening which merges into a wick receiving opening which opens through the top wall of the container, a wick adjacent said side opening and extending into the container, and means to clamp the container to a rail.

2. In a fuel heater for rails, a closed fuel container, having a filling opening, a wick exposed below the top of the front end wall and through the top of the container, a closure for said filling opening, and means to clamp the container to a rail.

3. In a fuel heater for rails, a fuel container, having in its front end wall an opening which opens through its top, a wick adjacent said opening and extending into the container, a flame extinguisher for said wick hinged to the container, and clamping means for securing the fuel container to a rail.

4. In a fuel heater for rails, a closed fuel container having a wick receiving opening in its top and an end opening merging into the wick receiving opening, a wick, and a flame guard connected with the casing and having spaced side plates extending beyond the fuel container to prevent burning of the ties.

5. In a fuel heater for rails, a closed fuel container having a filling opening and a wick receiving opening at one end of the container, a wick, a flame guard detachably connected with the fuel container at said end and having side plates extending beyond the container, and means to clamp the heater to a rail.

6. In a fuel heater, a fuel container having a wick receiving opening at one end thereof, a flame guard detachably connected with the container at said end having a rear wall above the container and side walls extending in advance of the container, and means to fasten the heater to a rail.

7. In a fuel heater, a closed fuel container having a filling opening, a wick extending through the top of the container at one end, and a flame guard extending over the top of the container provided with a rear wall above the container and having spaced members extending beyond the container at said end to prevent lateral spreading of the flame.

8. In a fuel heater for rails, a closed fuel container having a wick receiving opening and a side opening at the upper end of the wick receiving opening, a wick, a bendable member connected with said wick and bendable over a wall of said opening to retain the wick in any position to which it has been adjusted in the container, and a flame guard having a closed rear wall and spaced side walls.

9. In a fuel heater for rails, a closed fuel container, a wick therefor, a hinged wick extinguisher for said wick which when open directs the flame forwardly, a flame guard connected with the container, and rail clamping means on the flame guard.

10. In a fuel heater for rails, a fuel container, a wick therefor, and a flame guard having a rear wall above the container and spaced side walls, said rear wall being spaced from the rail to form a flue for the flame and the side walls serving to direct the flame under the switch point in both closed and open position of the switch point.

11. In a fuel heater for rails, a container having an oil receiving chamber, and an opening in its front wall near the top which merges into a wick receiving opening in the top, a wick in the wick receiving opening, a wick extinguisher hinged to the container, and a flame guard connected with the container having a rear and side walls extending above the container with the side walls extending in advance of the container to form a flue to direct the flame towards the rail and prevent the flame from igniting the ties.

WILLIAM H. GREENFIELD.