Feb. 28, 1939. C. F. HAMMER 2,148,745

RAIL SANDING DEVICE

Filed Nov. 24, 1937

Fig. 1.

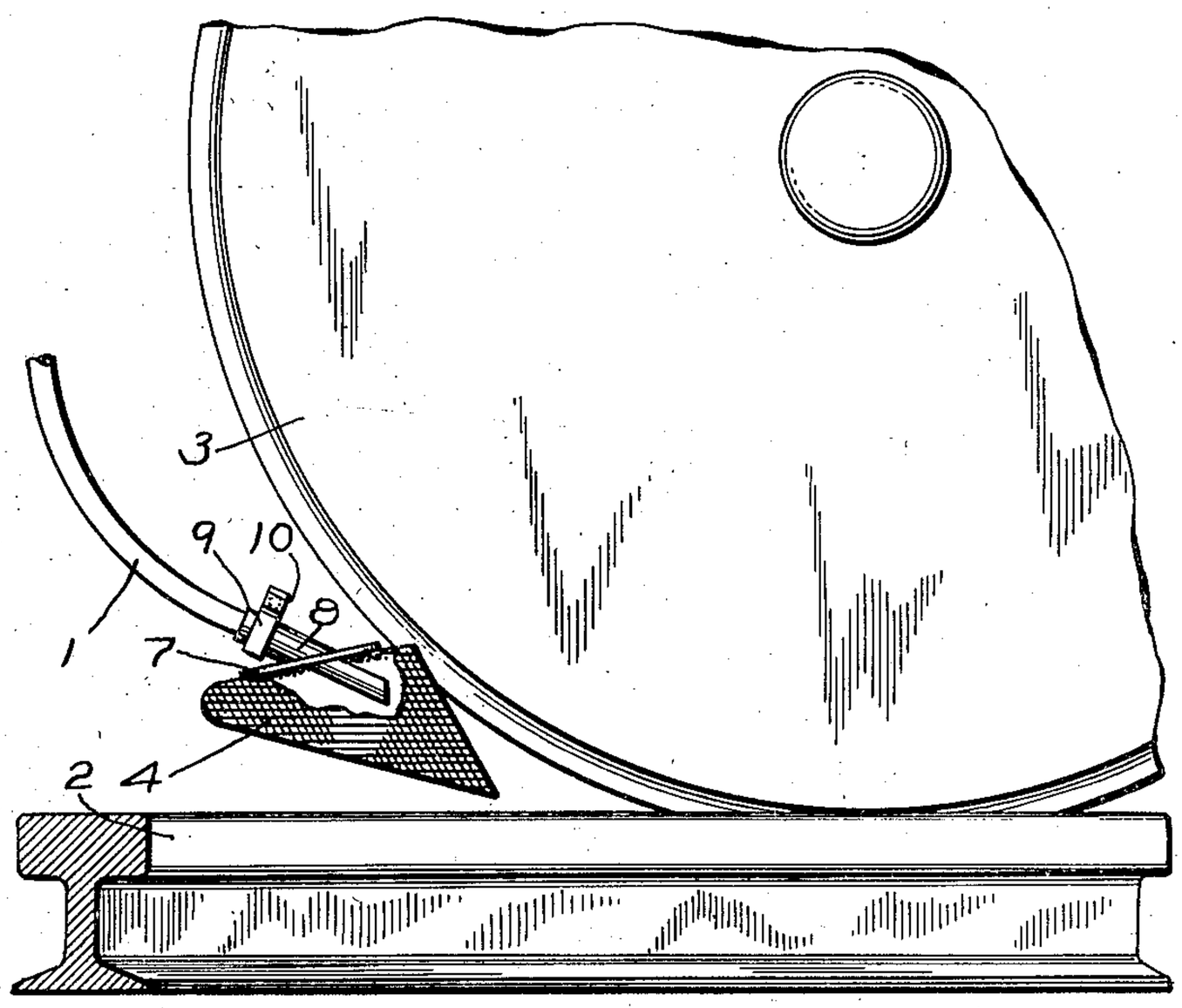


Fig. 2.

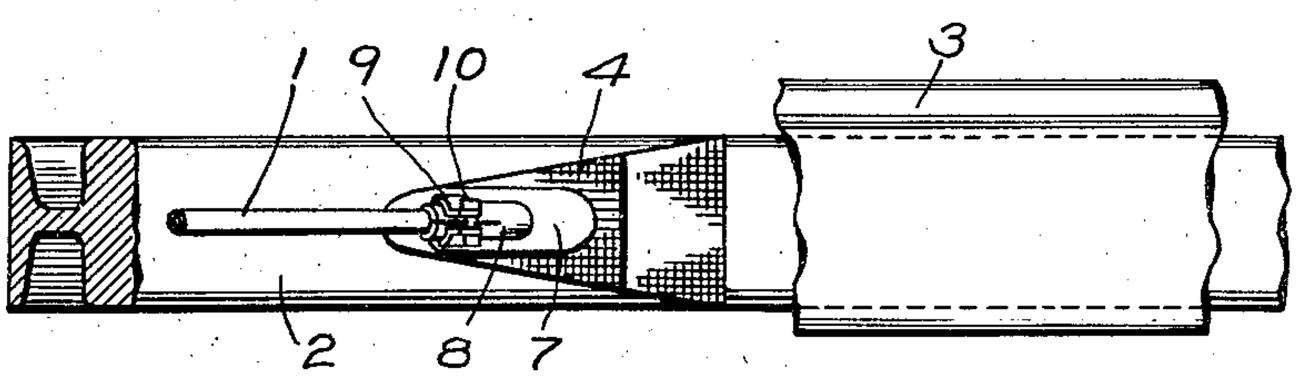
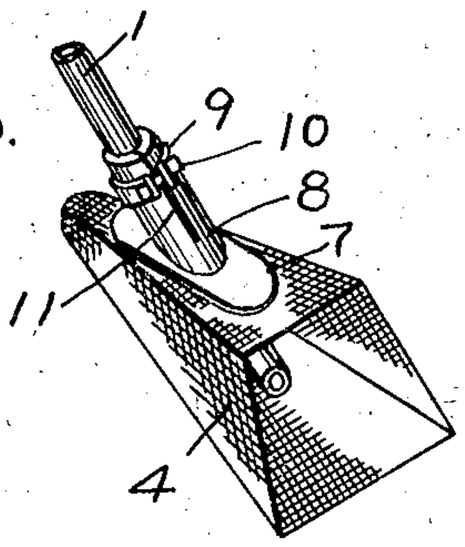


Fig. 3.



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RAIL SANDING DEVICE

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2 Claims. (Cl. 291—46)

This invention relates to sanding devices, and more particularly to sand discharging means for a high speed vehicle which is adapted to deposit sand on the rail surface over which the vehicle wheels travel.

One object of my invention is to provide a wind deflecting shield adapted to be mounted on the end of a sanding pipe for ensuring that a maximum amount of the sand discharged from the pipe will be deposited on the rail.

Another object of my invention is to provide a shield of the above type adapted for attachment to the end of a sanding pipe, which shield is made of a light collapsible material, so that in case the shield should accidentally become detached from the sanding pipe while the vehicle is in motion the shield would readily pass beneath the vehicle wheels without appreciable effect.

A further object of the invention is to provide a streamlined shield for the end of a sanding pipe, which shield is constructed of a durable but inexpensive material, such as wire gauze.

In the accompanying drawing, Fig. 1 is a fragmentary elevational view of a vehicle carried sand pipe having my invention associated therewith; Fig. 2 is a vertical view of the apparatus shown in Fig. 1; and Fig. 3 is an enlarged detail view of the wind deflecting shield and the portion of the sanding pipe to which it is secured.

As shown in Fig. 1 of the drawing, a sanding pipe 1 is provided, which is adapted to be supplied in the usual manner with sand by operation of suitable sanding apparatus, not shown, the lower open end of the sand pipe being disposed directly above the rail 2 in advance of the vehicle wheel 3.

According to the invention there is secured the end of the sand pipe 1 a wind deflecting device or shield 4, which is adapted to prevent sand discharged from the sand pipe 1 from being blown out of the path of the wheel by the turbulent air currents usually set up while the vehicle is traveling at high speed. As is best shown in Fig. 3 of the drawing, the shield is made of a light collapsible material, such a wire gauze or fine mesh wire screen, and is constructed substantially in the form of a pyramid, the somewhat rounded apex of which is pointed in the direction of travel of the vehicle, and the inclined base of which is open for providing a quadrilateral opening disposed adjacent the rim of the wheel somewhat in advance of the point of the engagement of the wheel with the track, as is best shown in Fig. 1. The sides of the shield may be secured together in any suitable manner, such as by means of soldering.

For securing the wind deflecting shield to the end of the sand pipe, there is provided a clamping means which comprises a suitably formed plate portion 7 which is soldered to the upper surface of the shield 4, and an inclined sleeve portion 8, which is adapted to surround the sand pipe 1 as shown in the drawing. If desired, a suitable slit such as 11 may be provided in the sleeve portion for enabling it to be readily fitted into place on the sanding pipe. An annular clamping member 9 is disposed around the sleeve member 8 for clamping the sleeve member tightly against the sand pipe 1, the adjacent ends of the clamping member 9 being drawn together by means of a bolt 10.

Assuming that the vehicle is traveling toward the left-hand, as viewed in Fig. 1 of the drawing, if sand is supplied in the usual manner to the sand pipe 1, the sand will be permitted to flow from the open end of the sand pipe without being subjected to the turbulent air currents usually present in the region of the vehicle wheel, so that substantially all of the sand is deposited on the rail 2, due to the functioning of the pyramidal shield 4 for forcing the air currents away from the path of the sand falling from the sand pipe 1 toward the rail. It should be understood that the wire gauze of which the shield is constructed is of such a fineness that, while of course some air may flow through it, a violent current of air will be largely broken up or deflected when impinged against the shield.

It will be apparent that, if due to an accident the wind deflecting shield should become dislodged from the sand pipe 1 and fall to the rail 2 while the vehicle is moving, the vehicle wheel 3 would pass over the shield without damage or danger of being derailed, since the fine mesh wire gauze of which the shield is made is adapted to be readily crushed and flattened under the weight of the vehicle.

Although I have described one illustrative embodiment of the invention in detail, it is not my intention to limit its scope to that embodiment or otherwise than by the terms of the appended claims.

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

1. A wind deflecting shield for protecting the discharge orifice of a vehicle carried sand pipe, comprising a hollow body portion of relatively light gauge wire gauze made substantially pyramidal in form and having a single aperture formed in the end thereof opposite the apex of said body portion, said shield being adapted on the one hand to break up and deflect air currents approaching

said end of the pipe, and on the other hand to yield or collapse without appreciable resistance if accidentally overridden by the wheel of the vehicle.

2. A protective shield adapted to be secured to the discharge end of a vehicle carried sand pipe comprising a clamping element having an aperture for receiving said end of the pipe, and a hollow body secured to said clamping element having a closed leading portion and an outwardly flared trailing portion provided with an opening through which sand discharged from said sand pipe may flow, said body being constructed of light foraminated material having sufficient strength on the one hand to break up and deflect air currents approaching said end of the sand pipe, and being flexible on the other hand so as to yield or collapse without appreciable resistance if accidentally overridden by the wheel of the vehicle.

CHARLES F. HAMMER.