April 16, 1929. E. G. LANG 1,709,270

VEGETATION, SNOW, AND ICE DESTROYER

Filed Dec. 30, 1925 2 Sheets-Sheet 1

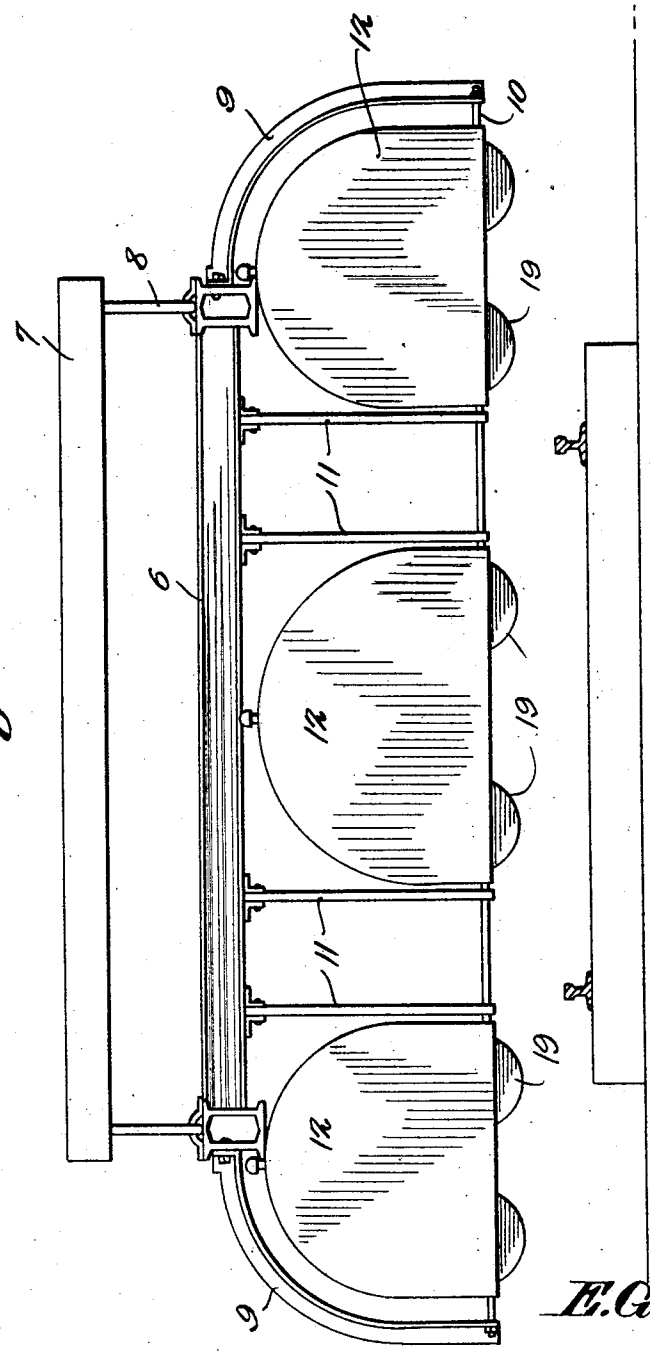


Fig. 1.

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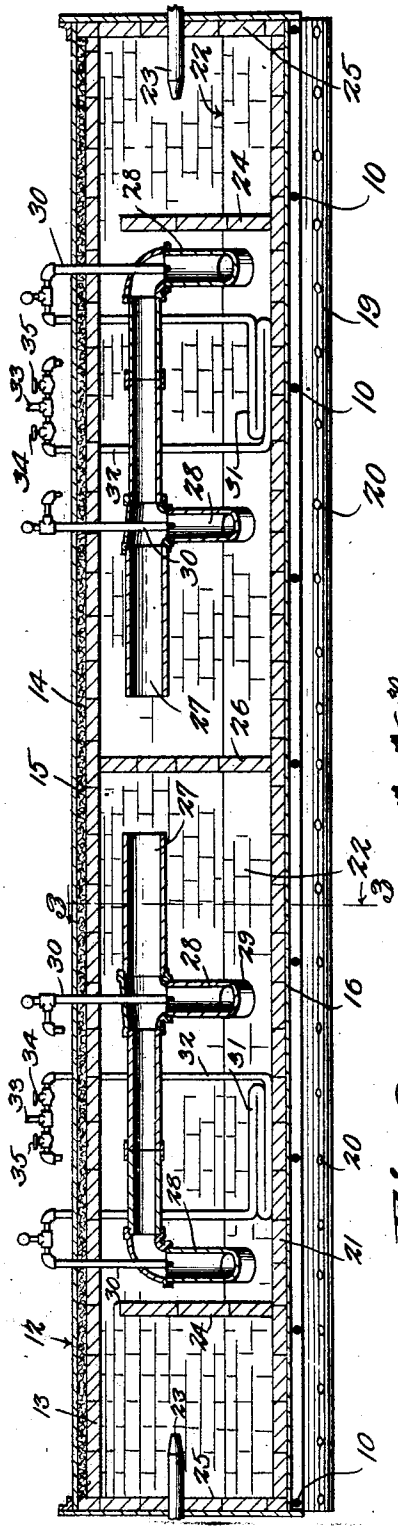


Fig. 2.

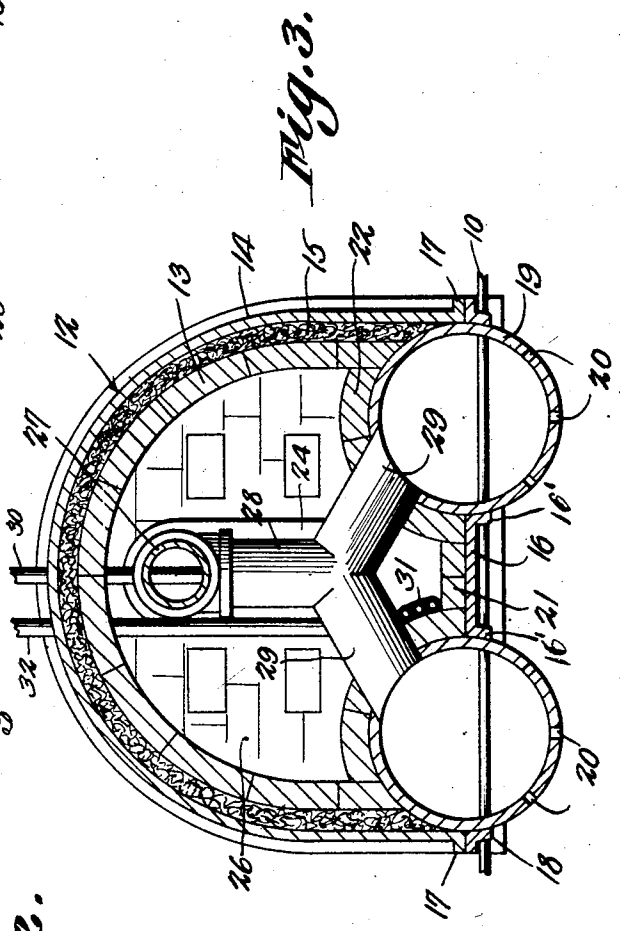


Fig. 3.

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Patented Apr. 16, 1929. 1,709,270

UNITED STATES PATENT OFFICE.

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VEGETATION, SNOW, AND ICE DESTROYER.

Application filed December 30, 1925. Serial No. 78,439.

This invention relates to a device for destroying vegetation on electric and steam railway tracks or other such places as it may be practical to transport same over, and aims to provide a device especially designed for attachment to railway rolling stock, motor trucks, trailers or tractors.

Another object of the invention is to provide a device of this character wherein the flames from the burners will not come in direct contact with the vegetation, but the heat from the burners will be so directed to the vegetation that it will be scorched and withered to prevent its growth.

Another important object of the invention is to provide a device of this character which will operate efficiently as a snow and ice remover, thereby eliminating the use of plows or the like for removing snow and ice from tracks or streets.

A still further object of the invention is to provide a device of this character which may be readily and easily installed on a car, obviating the necessity of making extensive alterations in the car structure to mount the same.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawings:

Figure 1 is a front elevational view illustrating a device constructed in accordance with the invention.

Figure 2 is a longitudinal sectional view through the device.

Figure 3 is a transverse sectional view through one of the furnaces forming a part of the invention.

Referring to the drawings in detail, the device includes a supporting frame embodying bars 6 which are hung from a beam of a car, which in the present showing is indicated at 7, by means of the links 8.

At the ends of bars 6 are arranged curved supporting arms 9 that have their lower ends connected with the rods 10 which extend transversely across the device and have connection with the vertical supporting arms 11 which are arranged in pairs at opposite sides of the device.

Supported by the frame are furnaces 12 each of which includes a body portion formed of fire brick 13, an outer casing 14 and an insulating material 15 disposed between the casing 14, and fire brick 13.

Rods 10 are also disposed throughout the lengths of the furnaces as shown by Figure 2, and pass through the angle bars 18 and through the discharge pipes 19, the rods being relatively long to also provide means for connecting several furnaces and supporting them, as shown by Figure 1.

Disposed centrally of each furnace and arranged as a part of the bottom thereof, is a plate 16 which is formed with downwardly extended flanges 16′ that are slightly curved to conform to the shape of the discharge pipes 19, which are shown as supported thereby. Angle bars 18 are secured adjacent to the outer lower edges of the furnace and contact with the outer surfaces of the furnaces to hold the heating tubes at the outer side edges thereof.

Openings 20 are provided in the heating tubes and are adapted to permit the hot air to pass from the tubes and be forced against the snow, ice, or vegetation to be destroyed.

Fire bricks indicated at 21 are positioned on the lower wall 16 while the fire bricks 22 are positioned on the upper portions of the heating tubes 19 so that the tubes which are formed preferably of metal, will be protected against the direct heat from the flames of the burners.

The burners are indicated at 23 and extend into the ends of the furnaces, there being provided narrow vertical walls 24 arranged adjacent to the end walls 25 of the furnaces, the upper ends of the walls 24 being spaced from the top of the furnaces. These walls 24 are however, sufficiently high to extend above the burners and protect the pipes from the direct heat of the burners.

Located intermediate the ends of each of the furnaces is a vertical partitioning wall 26 which divides the furnace into compartments as shown by Figure 2.

Pipes indicated at 27 are arranged in each of the compartments defined by the partitioning wall 26, which pipes have communication with pipes 28 that in turn communicate with the laterally extended pipes 29 designed to supply heated air to the discharge pipes 19,

as clearly shown by Figure 3 of the drawings.

Disposed above each pipe 28 and extending thereinto, is an air or steam supply pipe 30, which air or steam pipes communicate with the coils 31 associated therewith, which coils rest on the lower wall of the furnace in such a way that they will be heated, heating the air passing therethrough. Thus it will be seen that due to this construction, heated air and gases will be supplied to the discharge pipes where the air and gases are further heated by their contact with the tubes.

As illustrated by Figure 2, pipes 27 are open at one of their respective ends so that as air is directed to the pipes 28 by the pipes 30, a suction will be created at the ends of pipes 27, and hot air drawn into the pipes 27 to be supplied to the discharge pipes.

Air is supplied to the coils 31 through pipes 32 which communicate with a suitable source of compressed air supply, through the pipes 33, there being provided valve members 34 and 35 for controlling the passage of air through the pipes.

In the operation of the device, the burners are lighted, the heat from the burners producing heat in the furnaces, which in turn is directed to the snow, ice or vegetation on the railway track over which the device is moving, to the end that the snow, and ice will be melted and all vegetation will be scorched and destroyed.

I claim:

A device for destroying vegetation along a railway track, including an elongated body portion, horizontal pipes supported within the body portion, discharge pipes extending along the bottom of the body portion, pipes for establishing communication between the first mentioned pipes and discharge pipes to direct hot air and gases to the discharge pipes, said discharge pipes having a plurality of discharge openings to direct heated air and gases to vegetation over which the device is moved, the first mentioned pipes having open ends to allow air to enter the pipes, and burners for heating air in the body portion.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

EDWARD GUS LANG.