Oct. 11, 1955 M. MERMELSTEIN 2,720,407

VIBRATORY SANDER ADAPTED FOR USE IN AUTOMOBILE TRUNKS

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Fig. 1.

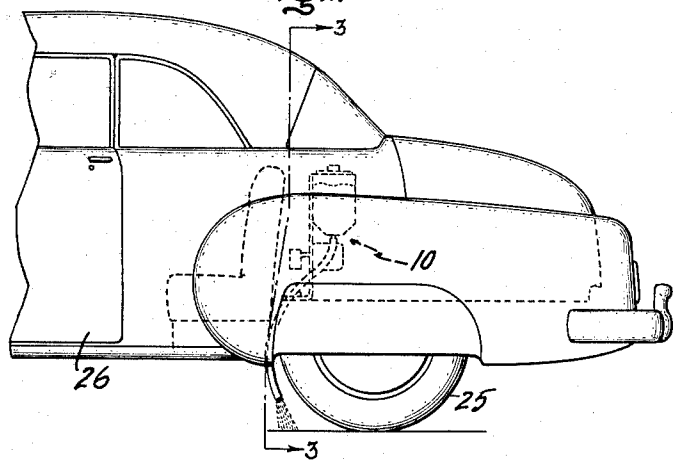


Fig. 2.

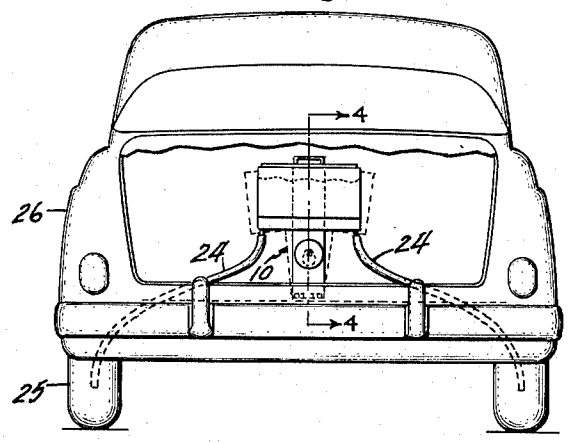
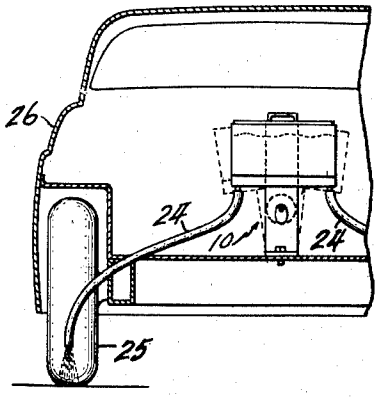


Fig. 3.



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Fig. 4.

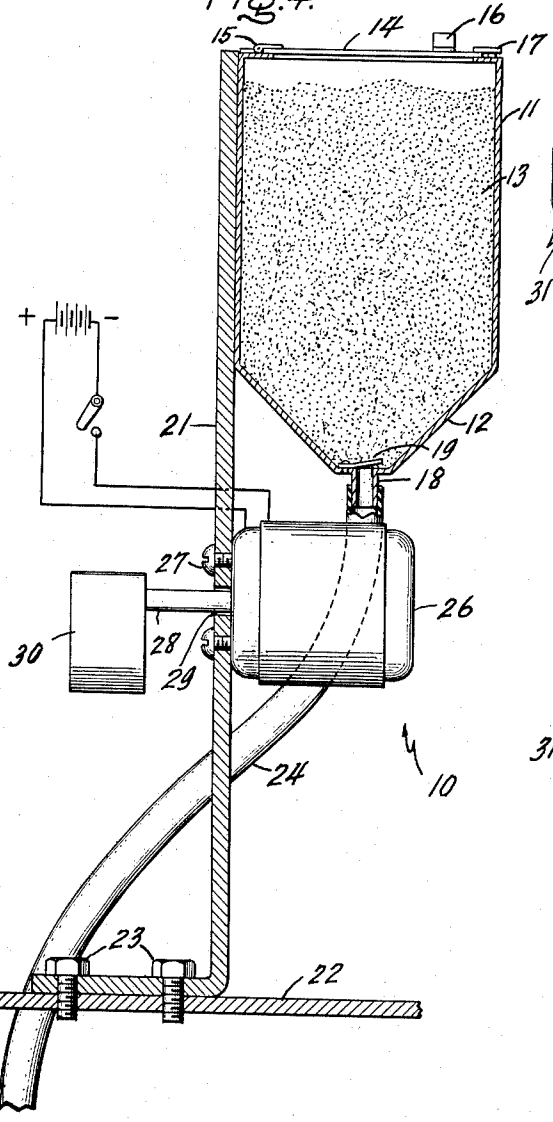


Fig. 6.

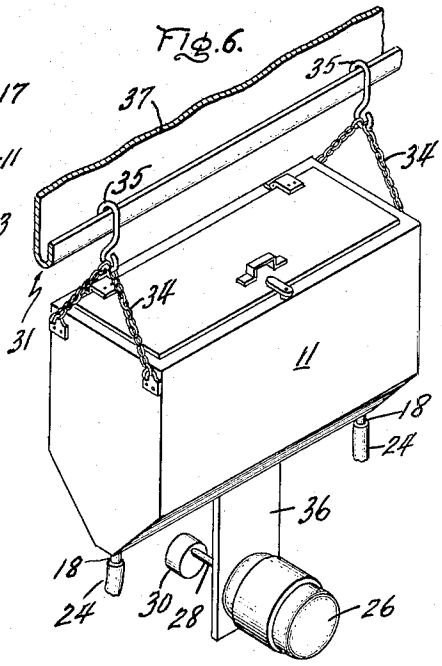


Fig. 7.

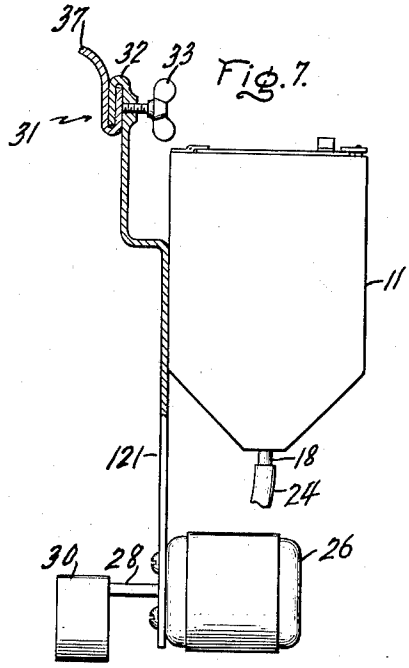
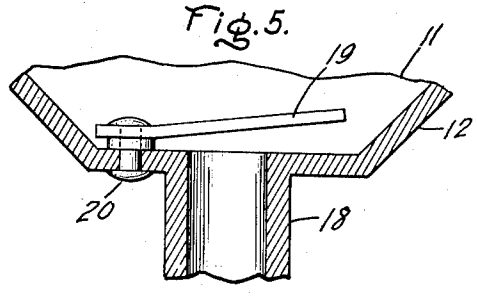


Fig. 5.



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2,720,407

VIBRATORY SANDER ADAPTED FOR USE IN AUTOMOBILE TRUNKS

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Application October 30, 1952, Serial No. 317,661

3 Claims. (Cl. 291—25)

This invention relates to a sanding device for vehicles, having particular reference to a vibartory sanding device adapted to be mounted in the trunk of an automobile and preferably being electrically operated, and the provision of such a device is a principal object of the invention.

Conventional types of sanding devices for automobile trunks are bulky, consisting of expensive to install containers, secured to the floors of such trunks. They are often operated by manually controlled gates, valves or other devices depending largely on gravity to dump the sand from the containers. The sand often becomes lumpy and caked, especially when moist, and often, at most critical times, fail properly to function.

A general object of the invention is to overcome the foregoing difficulties and disadvantages by providing a vibratory sanding device that is economic of manufacture, easily and inexpensively installed as well as readily removed when desired, and positive in operation.

More specifically, it is an object of the invention to provide a vibratory sanding device adapted to be mounted within the trunk of an automobile, comprising a container adapted to hold a quanity of sand, and having an outlet for the sand adapted to spray the sand in the path of the driving wheels of the automobile, means adapted to mount the container within the trunk in a manner such that the container can be vibrated, and means connected therewith to vibrate the container to cause the sand to be expelled therefrom into the path of the wheels.

More specifically, it is an object of the invention to provide such a device as that above described comprising a suitable container adapted to hold a quantity of sand and having an outlet for the sand, baffle means within the container to check the flow of sand therefrom when the device is not intended to be operated, means mounting the container in the trunk so that it can be vibrated at the will of the operator, conduit means connecting the outlet and adapted to extend to a position adjacent the driving wheels of the automobile and an electric motor connected to the mounting means with a weight eccentrically mounted on the shaft of the motor, whereby the container can be vibrated to cause the sand to be expelled therefrom in the path of the wheels.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the features of construction, combination of elements, and arrangement of parts, which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

Fig. 1 is a side elevational view illustrating in dotted line position, one embodiment of the invention mounted in the trunk of an automobile;

Fig. 2 is a transverse sectional view through the trunk

showing the rear of the device in Fig. 1 and looking toward the front of the automobile;

Fig. 3 is a partial sectional view taken along the lines 3—3 of Fig. 1 and looking in the direction of the arrows;

Fig. 4 is an enlarged sectional view taken along the lines 4—4 of Fig. 2 and looking in the direction of the arrows;

Fig. 5 is an enlarged sectional view of a fragmentary portion of the bottom of the container illustrating a sand baffle control member;

Fig. 6 is a perspective view of a modification of the invention; and

Fig. 7 is a side elevational view, partly in section, of a further modification of the invention.

Referring more particularly to the drawings, one form of device such as that above briefly described is indicated generally at 10, see for example Fig. 4. The device comprises a container 11 having downwardly sloping portions 12 and adapted to hold a quantity of sand 13. A cover 14 is hinged to the top of the container as at 15 and is adapted to be raised by a handle 16, the same having a latch 17 to hold the cover in closed position.

At opposite ends of the container are shown outlets 18 for the sand although it will be understood that a single outlet can be provided with oppositely directed branches in place of the outlets shown.

Above the outlets 18, and preferably within the container, are baffle means preferably comprising a plate 19 secured to the container bottom, for example, as by rivets 20 and in spaced relation with respect to the outlet. Such baffle means is adapted to check the flow of sand when the device is rendered inoperative but should be so spaced as to permit the escape of sand when the container is vibrated. Such a plate should be sufficiently flexible to permit bending in such a manner that the same can be moved toward or away from the outlet to increase or decrease the flow of sand therefrom as desired.

The container is secured to a suitable vibratory member, such as a standard 21, in any desirable manner so that the container is out of contact with the floor, top or walls of the trunk section to permit the same freely to be vibrated. In Fig. 4 the standard 21 consists of a relatively thin resilient strip of metal that can be bolted to the floor 22 by means of suitable wood screws or machine screws 23. In order to enhance the vibration, rubber or other resilient members can be placed between the floor 22 and standard 21 as well as between the latter and the container if desired.

Connected to the outlets 18 are pipes or conduits 24 and these are adapted to pass through openings in the trunk and terminate at their opposite ends preferably in front of or in the path of the driving wheels 25 of an automobile 26 as indicated in Figs. 1–3 of the drawings.

Connected in any suitable manner with the container, and preferably on the vibratory standard 21 is an electric motor 26 secured to the standard 21 by suitable screws 27. The motor is preferably connected in such a manner that the shaft 28 passes through an opening 29 in the standard 21 provided therefor. At the end of the motor shaft 21 is a weighted member 30 which is eccentrically mounted.

As shown diagrammatically in Fig. 4 the leads of the motor are connected in circuit with a battery and switch. Preferably the latter is mounted on the dashboard of the vehicle within easy reach of the operator. When the switch is closed the spinning of the eccentrically weighted shaft will cause the entire device to vibrate to such an extent that the sand will be jarred through outlets 18 and conduits 24 to be expelled therefrom in the

path of the driving wheels of the vehicle as illustrated in Figs. 1 and 3.

Figs. 6 and 7 illustrate further modifications of the invention embodying the same principle of vibration. However, while the device illustrated in Fig. 4 is held in raised position from the floor of the trunk, the modifications illustrate the same as being suspended, for example, from the water groove indicated at **31** along the top of the trunk provided on almost every automobile.

In Fig. 7 the standard preferably comprises a resilient strip of metal **121** and a hook portion **32** to fit into the water groove **31** of the trunk portion **37**, being secured thereto by means of a thumb screw **33**. The container **11** and motor **26** may similarly be secured to this vibration member **121** as described in connection with Fig. 4.

In Fig. 6 the vibration members may comprise chains **34**, or spring or other equivalent resilient or flexible vibration members. Hooks **35** may be secured to the chains and hooked into the groove **31** of the trunk portion **37** to hold the container **11** in suspended position. A strip of metal **36** may suitably be secured to such a container to mount the motor **26** whereby the same may be vibrated.

Other forms of vibration members such as suitable large rubber suction cups may be attached to such containers as illustrated, for example, in Figs. 6 and 7, particularly where it is desired to mount the same otherwise in position within a trunk or, for example, on the back of the cab of a tractor.

It will thus be seen that the objects hereinbefore set forth may readily and efficiently be attained, and since certain changes may be made in the above construction and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

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

1. A sanding device for a motor vehicle comprising assembled units consisting of a container for the sand having a discharge opening in the bottom thereof, a flexible discharge pipe communicating with said opening, a support for said container comprising an upright member rigidly secured to said container, a foot member carried by said upright member below and substantially spaced from said container for rigidly securing said upright member to the floor of said vehicle, and means including a motor also rigidly secured directly to said support and an eccentric mounted on the shaft of said motor, for vibrating the complete assembly when said motor is operating for effecting a discharge of sand from said container through said flexible discharge pipe.

2. A sanding device for a motor vehicle comprising assembled units consisting of a container for the sand having two separate discharge openings in the bottom thereof, a discharge pipe extending from each discharge opening, said pipes being formed of flexible material at least in the zones adjacent said openings, a support for said container comprising an upright member rigidly secured to said container, a foot member carried by said upright member to rest upon and be secured to the floor of said vehicle, and means including a motor rigidly secured directly to the upright member of said support and an eccentric mounted on the shaft of said motor, for vibrating the complete assembly when said motor is operating for effecting a discharge of sand through each of said pipes.

3. The structure set forth in claim 2, in which the shaft of said motor is disposed substantially horizontal when said foot member is resting on a floor.

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