Feb. 26, 1935. D. J. SPORMAN 1,992,450

RECEIVER FOR CIGARS, CIGARETTES, AND THE LIKE

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Fig. 1.

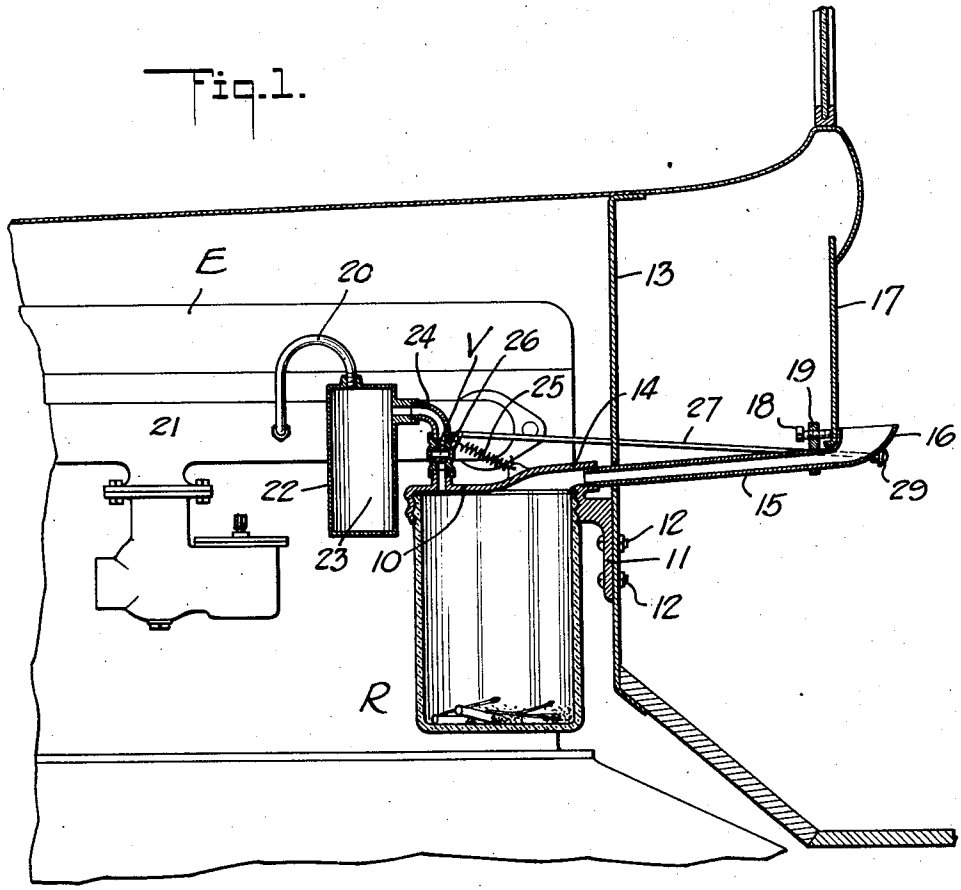
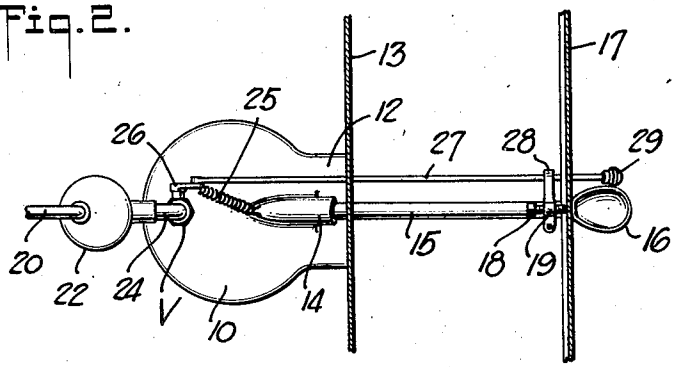


Fig. 2.



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RECEIVER FOR CIGARS, CIGARETTES, AND THE LIKE

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4 Claims. (Cl. 206—19.5)

This invention relates generally to receivers in which cigarette and cigar butts, as well as ashes and match sticks, are intended to be deposited by the smoker.

It is the purpose of the present invention to provide a device particularly adapted, although not necessarily, for use in an automobile or other vehicle, and which functions to remove cigarette and cigar butts, ashes and matchsticks from a point of deposit convenient to an occupant of the vehicle, to a closed and fireproof receptacle located in an inconspicuous or concealed position on the vehicle, by utilizing the action of a vacuum induced in any suitable manner, such as, for example, from the suction of the vehicle's engine, to the end of eliminating unsightly receivers in the vehicle, as well as removing the fire hazard attending the use of open receptacles.

It is a further purpose of the invention to provide a receiver of the above described character which, in the embodiment utilizing engine suction for producing the vacuum, positively prevents the butts, ashes etc., from being drawn into the engine and possibly interfering with its operation or causing damage to its working parts.

Only one form of the invention will be described, following which its novel features will be pointed out in claims.

In the accompanying drawing,

Figure 1 is a view showing in vertical section the invention applied to an automobile;

Figure 2 is a plan view of the device shown in Figure 1.

Similar reference characters designate similar parts in each of the views.

Referring specifically to the drawing, the invention comprises a receptacle R which can be constructed of glass or other suitable material in the form of a cup of convenient dimensions. The open end of the receptacle is externally threaded for detachable connection to an internally threaded closure 10 constructed of metal and including a bracket portion 11 through which fastening members 12 are extended to rigidly secure the closure to the dashboard 13 of an automobile, whereby to support the receptacle therefrom preferably within the engine compartment of the automobile.

The closure 10 is provided with a tubular extension 14 defining an entrance slot to the receptacle through which cigarette and cigar butts, ashes, matchsticks, etc., can freely pass into the receptacle. To the extension 14 one end of a delivery pipe 15 is connected, the pipe passing through a suitable opening in the dashboard 13 and terminating at its other end in an upwardly opening mouth or cup 16, into which the butts, ashes, etc., are intended to be deposited by the smoker.

The length of the pipe 15 is such as to dispose its mouth in front of the instrument panel 17 at the lower edge thereof; and the pipe is rigidly supported by means of a screw 18 which is threaded through a lug 19 on the pipe and is screwed tightly against the back of the panel to secure the pipe to the latter, all as clearly shown in Figure 1.

In the present instance, a source of vacuum produced by the suction of the engine E of the automobile is utilized to draw cigarette and cigar butts or other articles from the mouth 16 through the pipe 15 into the receptacle R, all under the control of the user of the device. For this purpose a suction pipe 20 is connected to the intake manifold 21 of the engine and to a fluid-tight container 22 providing a vacuum chamber 23, the chamber being placed in communication with the receptacle R through a pipe 24 connecting the two.

A valve V in the pipe 24 is of the rotary type and is urged to the closed position shown in Figure 1 by a spring 25 connected to a lug on the closure C and to a lever 26 attached to the valve. An operating member in the form of a push rod 27 is connected at one end to the lever 26 and passes freely through the dashboard 13 and through an ear 28 projecting from the lug 20 so as to slidably mount the rod. The outer end of the rod terminates in proximity to the mouth 16 of the pipe 15 and is provided with a button 29 against which manual pressure is adapted to be exerted to open the valve V against the action of the spring 25.

The operation of the invention is as follows:

Let it be assumed that the engine E of the automobile is in operation and that the valve V occupies its closed position so as to seal the vacuum chamber 23 against communication with the receptacle R and with the atmosphere through the pipe 15. Under these circumstances the suction produced in the intake manifold of the engine will build up a relatively high vacuum in the chamber 23.

Upon opening the valve V by an actuation of the push rod 27 following the deposit of a cigarette butt, cigar butt, matchstick, ashes or the like in the cup formed by the mouth 16 of the pipe 15, such article is subjected to a powerful suction induced in the pipe 15 from the chamber 23, with the result that the article will be in-

stantaneously drawn through the pipe 15 and deposited in the receptacle R.

The vacuum chamber 23, while not absolutely necessary to the functioning of the device, provides a source of relatively high vacuum which is maintained during operation of the engine for use upon opening of the valve V to insure that the article placed in the mouth 16 will be acted upon for a short interval by a powerful suction which is ample to instantly draw the article through the pipe 15 into the receptacle. The vacuum chamber also functions to prevent the articles from being sucked into the engine with possible damage to the latter, as the action of the suction on the article is broken when the article discharges from the pipe 15 into the receptacle.

It will be clear that upon releasing the push rod with the resultant closing of the valve V, the vacuum will again build up in the chamber 23 for a succeeding operation. The receptacle R can be readily unscrewed from the closure 10 and emptied of its contents whenever required.

It will be manifest that this invention provides for the safe and clean disposal of butts, matchsticks, etc., in a simple and highly efficient manner, and that the device can be readily installed in an automobile either as standard equipment or as an accessory.

Although only one form of the invention has been herein shown and described, it is to be understood that various changes and modifications may be made therein without departing from the spirit of the invention and the spirit and scope of the appended claims.

What is claimed is:

1. A device of the class described comprising a receptacle; means for supporting the receptacle on an automobile; a delivery pipe in communication with the receptacle and having a mouth accessible for an occupant of the automobile to deposit cigarette butts, matchsticks, etc., therein; means for subjecting the interior of the receptacle to the action of suction induced by the engine of the automobile when in operation, whereby to draw into the receptacle the article deposited in said mouth; a valve normally closed to prevent the receptacle from being subjected to engine suction; and manually operable means for opening the valve.

2. A device of the class described comprising a receptacle; means for supporting the receptacle on an automobile; a delivery pipe in communication with the receptacle and having a mouth accessible for an occupant of the automobile to deposit cigarette butts, matchsticks, etc., therein; means defining a chamber in communication with the receptacle and with the engine of the automobile in a manner to be subjected to suction induced by the engine when in operation; a valve for controlling communication between the chamber and receptacle so that when the valve is closed a vacuum will be formed in the chamber; and manually operable means for opening the valve to subject the interior of the receptacle to the vacuum produced in said chamber, whereby to cause an article deposited in said mouth to be sucked through the pipe into the receptacle.

3. A device of the class described comprising a receptacle; means for supporting the receptacle on an automobile; a delivery pipe in communication with the receptacle and having a mouth accessible for an occupant of the automobile to deposit cigarette butts, matchsticks, etc., therein; means defining a chamber operatively associated with the engine of the automobile for a vacuum to be formed in the chamber by suction induced in the engine when in operation; and means for placing the chamber in communication with the receptacle so that the vacuum in the chamber will be effective to draw into the receptacle the article deposited in said mouth.

4. A device of the class described comprising a low pressure manifold of an internal combustion engine, a vacuum tank in communication with the manifold so that suction will be created in the tank, a receptacle for refuse from smoking materials, means for conducting such refuse to the receptacle, a tube connecting the vacuum tank with the receptacle, a valve in the tube for controlling communication between the tank and receptacle.

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