Sept. 28, 1926. 1,601,185

F. MOENCH

HUMIDIFIER FOR CARBURETORS

Filed June 20, 1924

Fig. 1

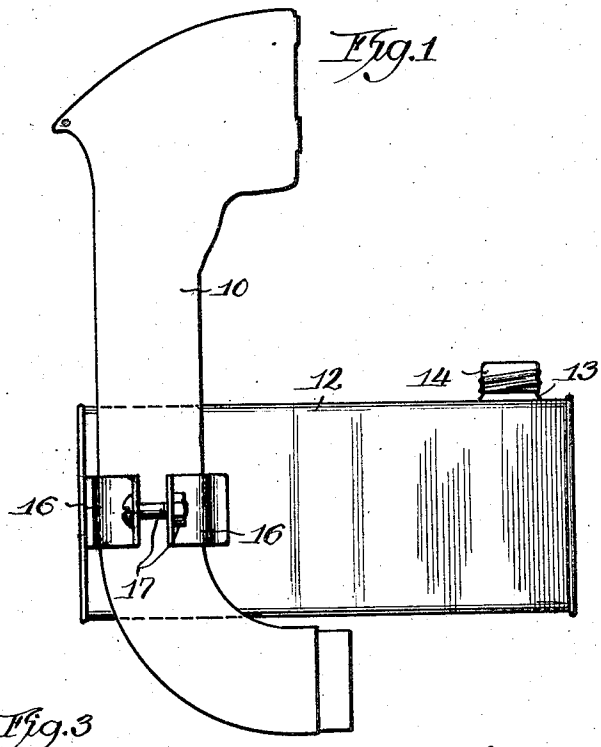


Fig. 2

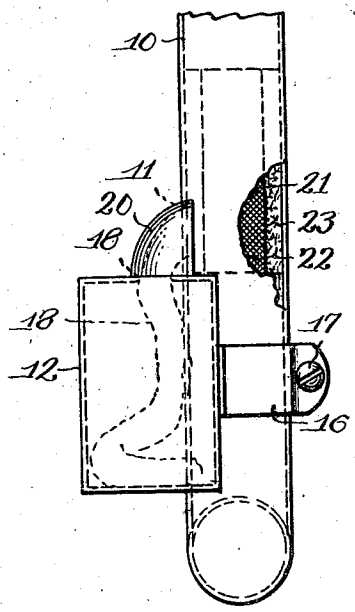


Fig. 3

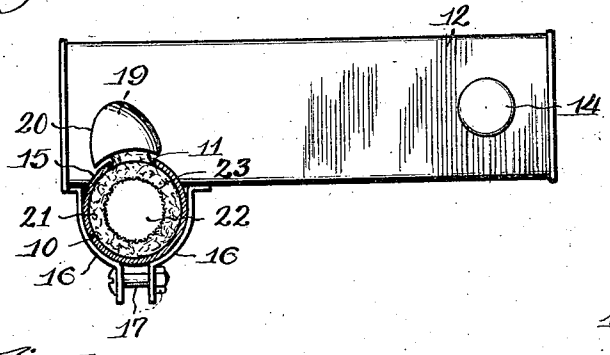


Fig. 4

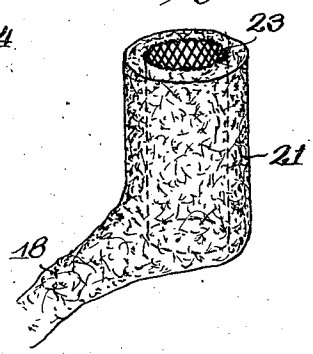


Fig. 5

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Patented Sept. 28, 1926. 1,601,185

UNITED STATES PATENT OFFICE.

FREDERICK MOENCH, OF MOUNT VICTORY, OHIO.

HUMIDIFIER FOR CARBURETORS.

Application filed June 20, 1924. Serial No. 721,274.

My invention relates to means for moistening the air passing through the intake pipe that feeds the air to the carburetor of an internal combustion engine.

One of the primary objects of my invention is to provide means whereby the liquid from a fluid reservoir may be raised by capillarity out of the reservoir by means of a wick that extends into the air intake pipe so that the air moving past the saturated wick will take up moisture therefrom and the moistened air fed to the carburetor. In this connection I have provided a member within the air intake pipe which is constructed so that a channel or passageway is provided through which the air passing through the intake pipe will be directed. This channel may be provided by means of a hollow cylindrical member, or there may be a plurality of channels or grooves upon the exterior of the member, or between the member and the intake pipe, as shown in the specifically modified structures herein illustrated. Other objects of my invention reside in providing a moistening device of the above character that is simple in construction, easy to install, will not readily get out of order, and which has features of novelty and dependability.

In the drawings I have illustrated a typical or preferred embodiment of my invention, in which—

Figure 1 is a side elevation showing my invention attached to a carburetor air intake pipe.

Fig. 2 is a left hand edge view of the structure shown in Figure 1.

Fig. 3 is a top plan of the aforesaid structure.

Fig. 4 is a detail of the wick and absorbent member removed from the pipe.

Referring to the drawings, 10 designates the pipe that is usually employed for feeding air to a carburetor for an internal combustion engine and which is provided with an aperture 11 upon its side through which the wick passes, as will hereinafter more fully appear. This pipe 10, herein illustrated, is the well known design employed upon a Ford motor car and has a lateral upper end portion that partially houses the exhaust manifold of the engine so that the heat therefrom will raise the temperature of the drawn-in air in order to avoid feeding cold air to the carburetor after the engine has been started. I provide a fluid reservoir in the form of a hollow receptacle 12 having a suitable filling spout 13 that is closed by a screw cap 14. One end of the receptacle has its longitudinal side wall formed with a depression or channel 15 of semi-circular shape that extends vertically thereof so that it is adapted to fit snugly around the adjacent portion of the air intake pipe 10, while suitable clamping ears 16 are provided that extend outwardly from the sides of this concaved or channelled portion and are drawn towards each other by means of a bolt and nut structure 17.

Immersed in the fluid in the receptacle 12 is an elongated wick 18 which is of a capillary nature, and said wick is passed upwardly through an aperture 19 in the upper wall of the receptacle and then into the intake pipe 10 through the aperture 11 therein. Where the wick is exposed to the outer atmosphere, I have provided a shield or guard 20 that partly surrounds the aperture 19 in the top of the receptacle and projects upwardly, as seen in the drawings so as to protect the wick and, owing to its fragmental conical shape, it is adapted to shed off dust or foreign matter which might otherwise come into contact with the wick and thereby hinder it in performing the functions for which it is designed.

Within the pipe 10 is an absorbent member 21 which may comprise a portion of the wick, or it may be a separate element that has intimate contact with the wick so as to receive the moisture therefrom. In the preferred embodiment of the structure this absorbent member 21 is of a cylindrical shape and of an outside diameter approximately the same as the interior diameter of the pipe so that it may be constricted slightly when inserted in the pipe in order to fit snugly therein. A central passageway 22 is provided entirely through the member 21 and the sides of said passageway are lined or faced with a reticulated metal wall or wire mesh screen 23, the function of which is to prevent portions of the material of which the member or the wick is formed from being drawn off by the air current, and thus to the carburetor where it may clog some of the minute passageways of needle-valve.

What I claim:—

1. A humidifier for the air supply pipe of a carburetor comprising a liquid-container removably clamped to said supply pipe, a wick having a tubular formation at

one end disposed within said pipe to permit air to pass therethrough the remaining portion of said wick being extended through said pipe and into said container and immersed in the liquid therein, whereby the liquid is conveyed by capillarity to the interior of said pipe and moistens the air passing therethrough, and a shield protecting the portion of said wick between said pipe and said container.

2. A humidifier for the air supply pipe of a carburetor comprising a liquid-container removably clamped to said supply pipe, a wick having a tubular formation at one end disposed within said pipe to permit air to pass therethrough, a reticulated wall within the tubular portion of said wick and maintaining the same against distortion, the remaining portion of said wick being extended through said pipe and into the container and immersed in the liquid therein, whereby the liquid is conveyed by capillarity to the interior of said pipe and moistens the air passing therethrough, and a shield protecting the portion of said wick between said pipe and the container.

Signed at Winnebago, county of Faribault and State of Minnesota, this 14 day of June, 1924.

FREDERICK MOENCH.