

April 12, 1927.

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1,624,838

HUMIDIFIER

Filed Jan. 18, 1926

Fig. 1.

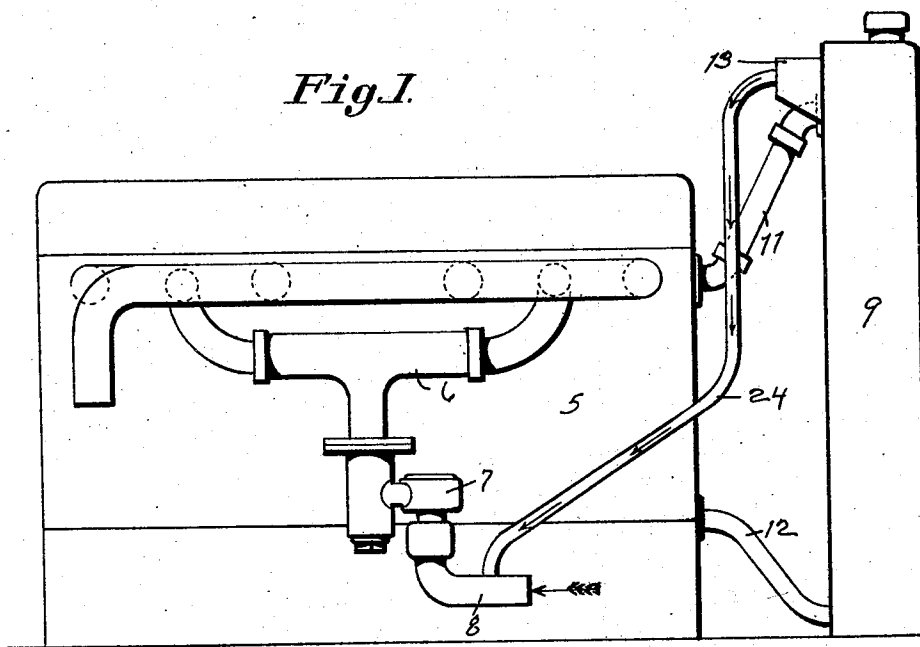
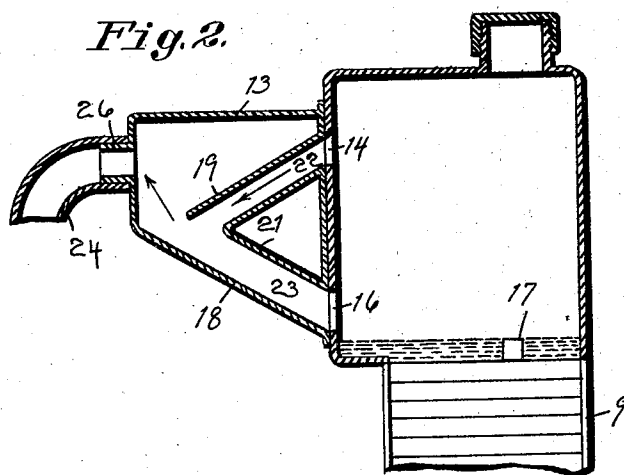


Fig. 2.



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Patented Apr. 12, 1927.

1,624,838

UNITED STATES PATENT OFFICE.

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HUMIDIFIER.

Application filed January 18, 1926. Serial No. 82,130.

This invention relates to improvements in humidifiers.

The principal object of this invention is to increase the humidity or moisture content of the air delivered to an internal combustion engine.

Another object is to provide a device of this character which may be attached to any standard make of water-cooled engine, without materially altering the construction of the same.

A still further object is to provide a device of this character which is simple in construction and, therefore, cheap to manufacture, and install.

An additional object is to provide means whereby the possibility of water entering the engine, in any form other than vapor, is entirely eliminated.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same.

Figure 1 is a side elevation of an internal combustion engine and cooling radiator therefore, having my invention attached thereto, and

Figure 2 is a vertical cross section of my device on an enlarged scale.

It is a well-known fact that if a proper amount of moisture in the form of vapor may be introduced into an internal combustion engine, the power of the engine will be increased and that the carbon which ordinarily forms in internal combustion engines will tend to be eliminated, as well as a quieter running motor will result.

In the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 designates an engine as a whole having an intake manifold 6 to which is attached a carburetor 7 having the ordinary intake air pipe 8.

A radiator commonly employed with internal combustion engines is designated by the numeral 9 which is attached to the engine, as by pipes 11 and 12, so as to provide a circuit of the water to and from the engine.

My device consists of a casing 13 which is attached to the upper portion of the radiator 9 as best shown in Figure 2. Openings 14 and 16 are formed in the radiator and it is

preferable to cut the overflow pipe 17 to within approximately one inch of the bottom of the top portion of the radiator, thus bringing the water level within the radiator at a point below the opening 16.

It will be noted that the bottom of the casing 13 is formed upon a slant, as shown at 18 so that any water which might enter the casing either through the openings 14 or 16, will be immediately drained back into the radiator.

At 19 I have shown a baffle plate extending between the side walls of the casing 13 and at 21 I have shown a V-shaped baffle which is attached to the casing 13, in such a manner as to provide channels 22 and 23 extending from the openings 14 and 16 to the interior of the casing.

At 24 I have shown a pipe which is connected to a nipple 26 extending from the case 13. This pipe has its opposite end connected to the air intake pipe 8. The result of this construction is that when the water within the radiator 9 commences to generate water vapor, this vapor is conducted through the openings 14 and 16 in the casing 13, thence through the pipe 24 to the air intake pipe 8, thence into the carburetor and is fed with the gaseous mixture to the respective cylinders of the engine 5.

It will thus be readily seen that with this construction, it will be impossible to draw any water into the carburetor, due to the inclined bottom of the casing 8 and due to the fact that there are two openings 14 and 16, so that even should the water entirely close the opening 16 there cannot be a vacuum set up within the device, which would draw the water into the pipe 24, because the top opening 14 would still permit the vapor to pass through the channel 22 and thence through the pipe 24.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the sub-joined claim.

Having thus described my invention, I claim:—

In a device of the character described, the combination with an internal combustion engine, having a radiator attached thereto, a casing secured to said radiator, a pair of

ports formed between said radiator and said casing, one of said ports being above the other, a baffle positioned within said casing and extending from a point adjacent the upper extremity of the upper of said ports to a point adjacent the bottom of said casing, and a V-shaped baffle positioned within said casing so as to form passageways between said first mentioned baffle and the bottom of said casing, and a pipe extending from said casing and communicating with the carburetor of said engine. 10

In testimony whereof I affix my signature.

ZENON A. LIPINSKI.