

Dec. 24, 1929.

J. E. HINES
CRANK CASE VENTILATOR

1,741,111

Filed June 4, 1928

Fig. 1.

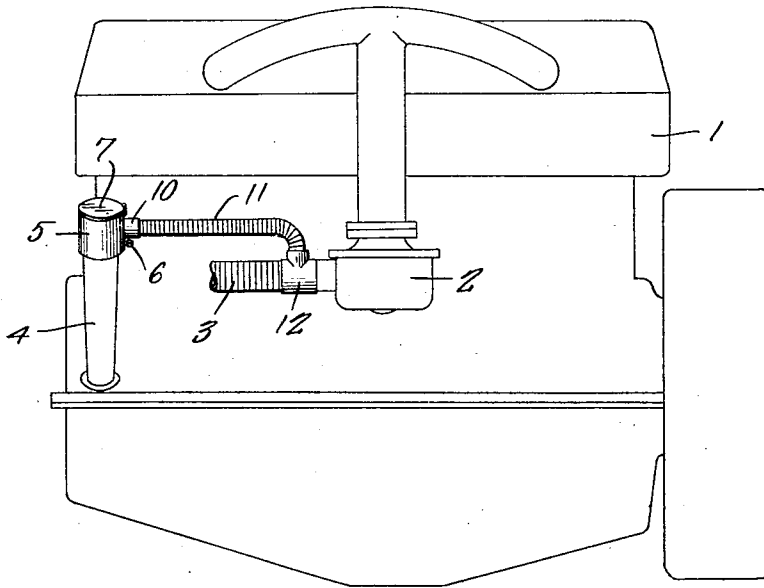
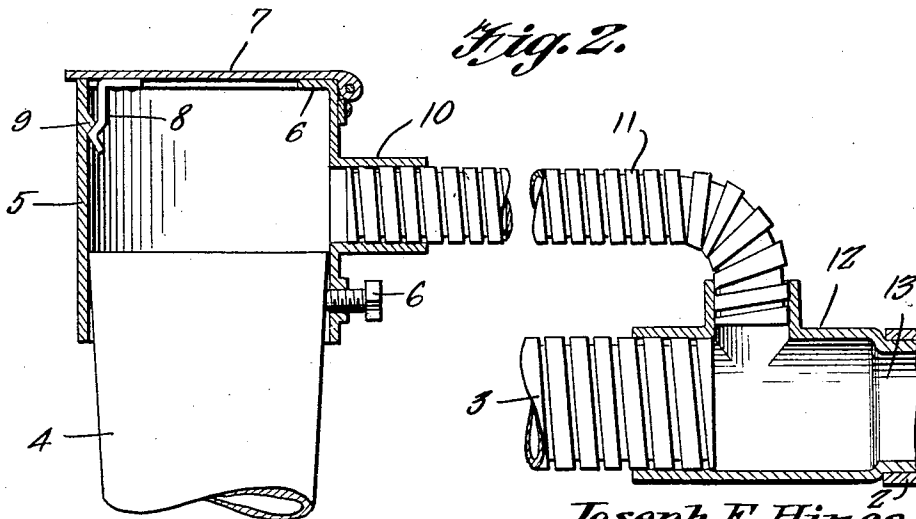


Fig. 2.



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WITNESS:

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CRANK-CASE VENTILATOR

Application filed June 4, 1928. Serial No. 282,769.

My present invention has reference to an attachment for motor vehicles, and has for its primary object the provision of an extremely simple, easily attached means for ridding crank cases of burnt gases and to direct the same into the carbureter and to likewise prevent dilution and removes all acid forming gases from the crank case.

To the attainment of the foregoing the invention consists in the improvement as hereinafter described and definitely claimed.

In the drawings:

Figure 1 is a side elevation of an internal combustion engine provided with the improvement.

Figure 2 is a side elevation of the improvement with parts in section.

Referring to the drawings in detail, the numeral 1 designates an internal combustion engine or engine of the type usually employed in connection with automobiles, 2 the carbureter, 3 the air intake pipe leading to the carbureter and 4 the breather pipe.

In carrying out my invention I remove the usual cap or cover from the breather pipe and in lieu thereof arrange on said breather pipe a flanged or tubular member 5 through which is threaded a bolt 6 that contacts with the breather pipe and sustains the tubular or cap member 5 thereon. The tubular or cap member 5 has its outer end formed with an inwardly directed flange 6 and the said tube or cap has pivoted to one side adjacent to the top thereof a cover 7. This cover is provided with an inwardly extending spring catch 8 that is offset or rather has a substantially V-shaped bend adjacent to the end thereof, the inner portion of which is designed to frictionally engage with a substantially V-shaped lug 9 integrally formed in the bore of the cap 5. The cap 5 is formed with an opening that is surrounded by a tubular extension or sleeve 10, in which is received one end of a flexible pipe 11.

The pipe 11 has its outer end received in

the lateral branch of a T-coupling 12, one end of the T-coupling being connected to a pipe 13 that leads to the carbureter 2 and the second and outer end of the T-coupling having received therein the end of the air intake 3.

To those acquainted with internal combustion engines, it is well known that when the said engine is run at low temperatures, moisture will collect and unite with the gases formed by combustion, so that acid will be formed and is likely to cause serious etching and pitting. This etching, pitting or corrosion, is occasioned by fuel which contains considerable sulphur and manifests itself in excessively rapid wear on the piston pins, cam shaft bearings, and other moving parts of the motor. In addition to this water accumulates in the oil reservoir. The gases passing the pistons and rings, even under the most favorable conditions, will have the formation of water in the oil reservoir in a greater or less degree until the motor becomes warm. When the motor becomes thoroughly warm, the crank case will no longer act as a condenser and nearly all of these gases will pass out through the breather pipe. My improvement is designed to overcome the pitting of the engine parts, and to prevent dilution of the crank case, as the vapors rising in the breather pipe will be conducted through the pipe 11 into the T-coupling 12 and from thence directed into the carbureter.

While I have illustrated a satisfactory embodiment of the improvement my features of construction are capable of extended application and I do not wish to be limited to the specific structure shown and described.

Having described the invention, I claim:

A cap designed to be arranged over the mouth of the breather tube of an internal combustion engine, comprising a tubular member, a binding element for holding the member on a breather pipe, said member having at its top an inwardly directed flange, 90

said member having the wall of its bore, opposite the last mentioned flange integrally formed with a substantially V-shaped enlargement, a cover member hingedly secured to the cap at the flanged portion of the mouth thereof, a spring catch fixed on the inner face of the cover member having an angle portion to engage with the V-shaped lug in the cap, said cap having a side opening for the reception of a pipe member, and a flange surrounding this opening.

In testimony whereof I affix my signature.

JOSEPH E. HINES.