June 15, 1937. J. G. HILTON 2,083,650

CARBURETOR ATTACHMENT

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Fig. 1.

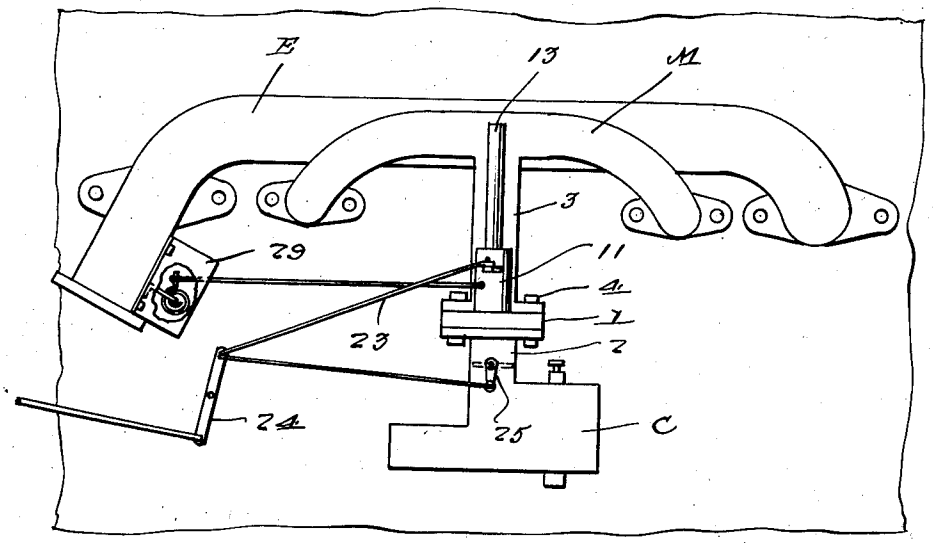


Fig. 7.

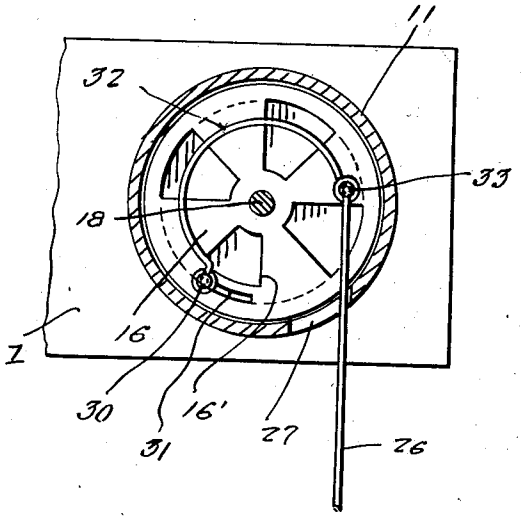
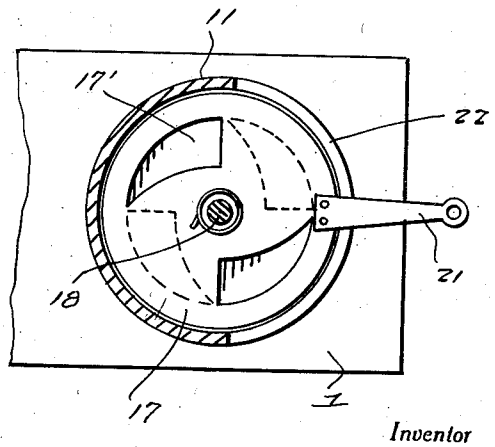


Fig. 6.



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Fig. 2.

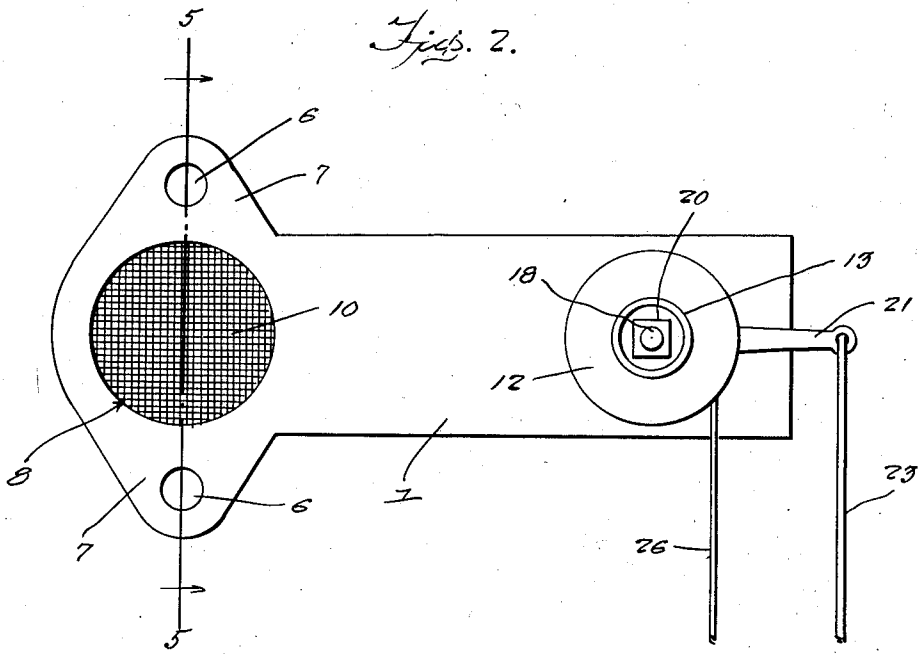


Fig. 5.

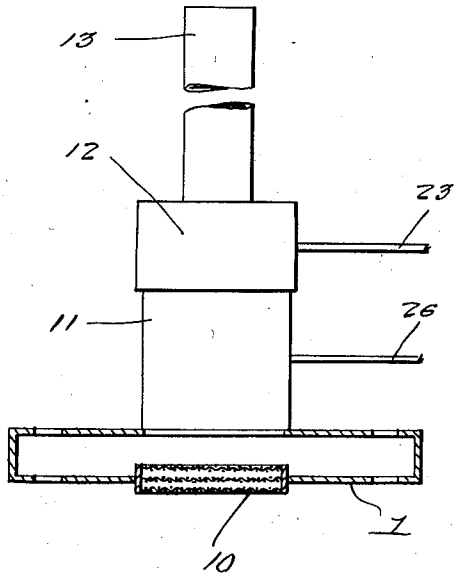
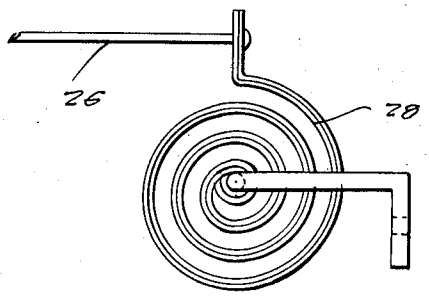


Fig. 8.



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Fig. 3.

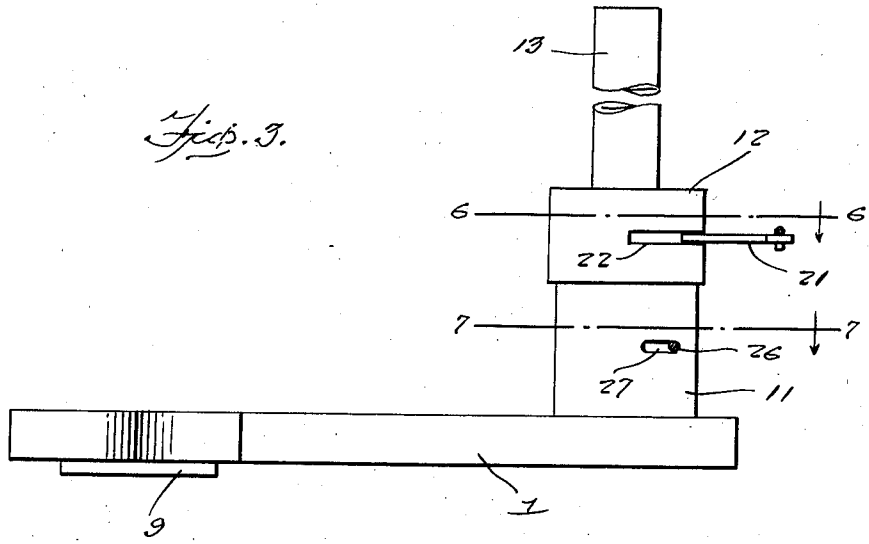
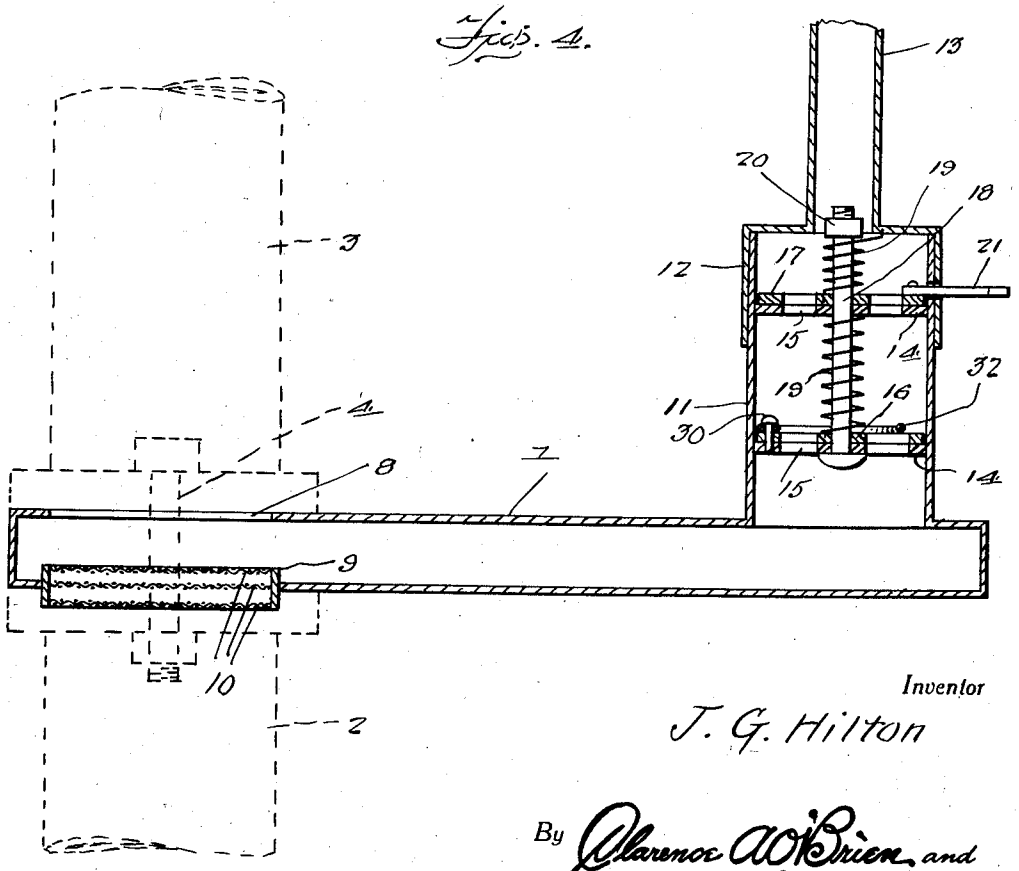


Fig. 4.



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Patented June 15, 1937 2,083,650

UNITED STATES PATENT OFFICE

2,083,650

CARBURETOR ATTACHMENT

Jesse G. Hilton, Mena, Ark.

Application November 14, 1935, Serial No. 49,808

1 Claim. (Cl. 123—124)

This invention relates to a carburetor attachment, the general object of the invention being to provide means for introducing air into the conduit leading from the carburetor to the inlet manifold of an engine, with means for mixing the air with the explosive mixture.

Another object of the invention is to provide thermostatic control valve means for controlling the flow of air into the device and a check valve means operated by the throttle valve control means of the engine.

This invention also consists in certain other features of construction and in the combination and arrangement of several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a fragmentary elevation of an engine showing the invention in use thereon, parts being broken away.

Figure 2 is a top plan view of the device itself.

Figure 3 is an elevation of the device.

Figure 4 is a vertical sectional view showing how the device is arranged in conjunction with the conduit leading from the carburetor to the intake manifold, said conduit being shown in dotted lines.

Figure 5 is a section on the line 5—5 of Figure 2.

Figure 6 is a section on the line 6—6 of Figure 3.

Figure 7 is a section on the line 7—7 of Figure 3.

Figure 8 is a view of the thermostat.

As shown in these drawings I provide an elongated casing 1 which is relatively thin so that one end can be placed between the top part 2 of the carburetor C and the conduit 3 leading to the inlet manifold M of the engine, the parts 2 and 3 being connected together by the usual bolts 4 which pass through holes 6 in the extensions 7 at the sides of said end of the casing 1. Upper and lower openings 8 are formed in said end of the casing, said openings being in alignment with the openings or bores of the parts 2 and 3 and a short tube 9 is placed in the lower opening 8 and contains a plurality of screens 10 which are spaced apart vertically as shown more particularly in Figures 4 and 5.

A cylinder 11 rises from the top of the casing adjacent the other end thereof with its lower end in communication of the casing and a cap 12 closes the upper end of the casing and has a pipe 13 leading upwardly therefrom.

Upper and lower spaced spiders or partitions 14 are located in the cylinder and having openings 15 therein and a valve plate 16 is seated on the lower partition and a valve plate 17 on the upper partition, a bolt 18 passing through the two partitions and the two valve plates and has springs 19 thereon for pressing the valve plates against the partitions and the upper spring is held in place by the nut 20 and has one end connected with the valve plate 17 and its other end with a part of the casing, this spring tending to hold the valve plate 17 in closed position. The plate 16 and the partition 15 are preferably provided with the openings shaped as shown at 16' in Figure 7 while the upper partition and the valve plate 17 are preferably provided with the openings 17' shaped as shown in Figure 6.

An arm 21 is connected with the valve plate 17 and passes through a slot 22 in the cylinder and a rod 23 connects the arm to the lever 24 which forms part of the manually operated means for actuating the throttle valve 25 of the carburetor.

A rod 26 is pivotally connected to the lower valve plate 16 and passes through a slot 27 in the cylinder and is connected to a thermostat 28, preferably of the construction shown in Figure 8 and said thermostat is arranged in a casing 29 attached to a part of the exhaust manifold E of the engine.

The lower spider 14 has a post 30 rising therefrom which passes through a slot 31 in the lower valve member 16 and one end of a spring 32 is attached thereto, the other end to a post 33 rising from the valve plate 16 and the rod 26 is pivoted to this post 33. The spring 32 tends to hold the valve plate 16 in closed position.

The pipe 13 may be connected to a heating device heated from the exhaust manifold, during cold weather or said pipe 13 may be connected to a conduit leading to a point remote from the engine, during hot weather, so that cold air will be led into the apparatus during hot weather.

From the foregoing it will be seen that when the engine is in operation air will be drawn through the two sets of valves in the cylinder 11, into the casing 1 and this air as it enters the part 3 will be thoroughly mixed with the explosive mixture coming from the carburetor. The valve means insures a proper amount of air in accordance to the speed of the engine and the air and

gas from the carburetor are thoroughly mixed so that they will enter the engine in correct condition to get maximum power.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claim.

What is claimed is:—

An attachment for an engine which includes an inlet manifold, a carburetor, manually operated means for actuating the throttle valve of the carburetor and a casing having one end forming a conduit between the manifold and the carburetor, said end having openings forming a part of the conduit, screens placed across one opening, a cylinder in communication with the other end of the casing, a cap fitted on the upper end of the cylinder and having a pipe leading upwardly therefrom to form a restricted air inlet for the cylinder, upper and lower spaced partitions mounted within the cylinder and having openings therein, upper and lower spring pressed valve plates seated on the upper and lower partitions respectively, means for actuating the upper valve plate, said means comprising an arm connected with the upper valve plate, and passing through an opening in the cylinder, and a rod connecting the arm with the manually operating means for actuating the throttle valve of the carburetor, and means for actuating the lower valve plate, said means comprising a thermostat attached to a part of the exhaust manifold of the engine and a link connecting the thermostat with the lower valve plate.

JESSE G. HILTON.