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L. D. SCHWAB

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FORCED AIR MIXER FOR GAS ENGINES

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Fig. 1.

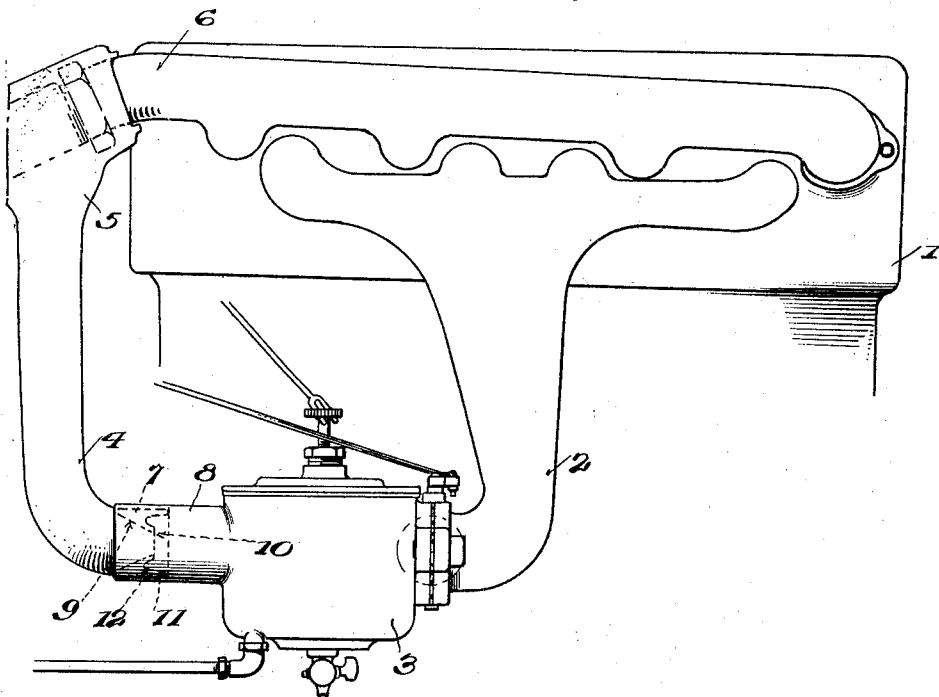


Fig. 2.

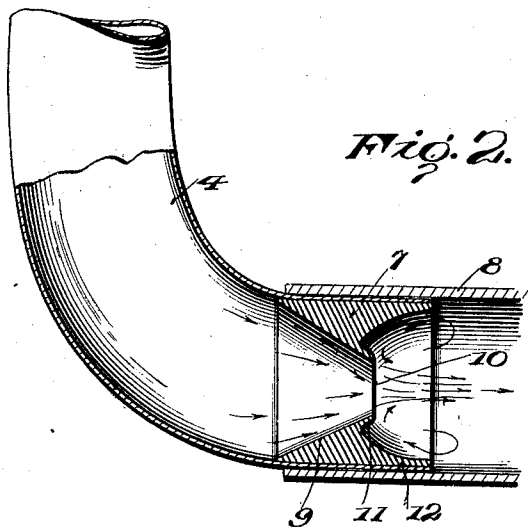
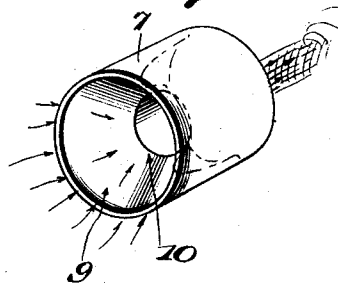


Fig. 3.



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FORCED AIR MIXER FOR GAS ENGINES

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This invention relates to improvements in gas engines, the particular object being to provide an attachment to carbureting device for constricting the flow of air prior to admission to the carbureter for the purpose of increasing the force thereof and thus insure a more thorough commingling with the liquid fuel, this being of advantage in a number of respects as will be subsequently brought out.

Other objects and advantages appear in the following specification, reference being had to the accompanying drawing, in which:—

Figure 1 is a side elevation of enough of a gas engine and a carbureter to illustrate the application of the improvement,

Figure 2 is a sectional view showing the air mixer in place, and

Figure 3 is a detail perspective view of the air mixer.

In the drawings, the gas engine 1 has an intake manifold 2 to which the carbureter 3 is attached. The air intake 4 connects with the carbureter at one end and with a stove 5 at the other end, the latter being suitably applied to the exhaust manifold 6 of the engine.

Fitted within the air intake 4 is an attachment 7 herein known as the forced air mixer. The attachment is cylindrical in form, the size thereof being such that it will stay in place when fitted into the end of the air intake. If desired, the attachment may be fitted within the air intake portion 8 of the carbureter but this would involve no change in principle or construction other than to possibly make the outside diameter larger.

The tapering opening 9 extends to a pointed end slightly beyond the transverse center of the attachment where the opening is found to be reduced considerably from its original size at the leading edge of the air mixer, the purpose of this particular part of the arrangement being to reduce the volume of the incoming air and to increase both the velocity and pressure thereof. The restricted stream of air is discharged into the carbureter 3 where it produces such mixture with the liquid fuel as to produce the better combustion with all the attendant advantages.

A flange 11 forming, in effect, a boss merges with the concave back portion 12 of the at-

tachment, the effect of the construction being to provide a venturi which will cause the air stream to flow through much quicker than if the opening in the attachment were perfectly plain.

I claim:—

As an article of manufacture, a Venturi tube for insertion within the air passages of carburetors comprising a cylindrical tubular body formed internally at one end with an intake bore portion defining a truncated cone converging inwardly from said end to terminate with a restricted diameter at a point intermediate the ends of the tubular body and formed internally at its other end with an outlet concaved bore extending inwardly from a substantially coincident maximum diameter at said other end to a point of reduced diameter overlapping and circumferentially outward of said terminal point of restricted diameter.

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