

E. C. PECK.
 AIR MIXING ATTACHMENT FOR CARBURETERS.
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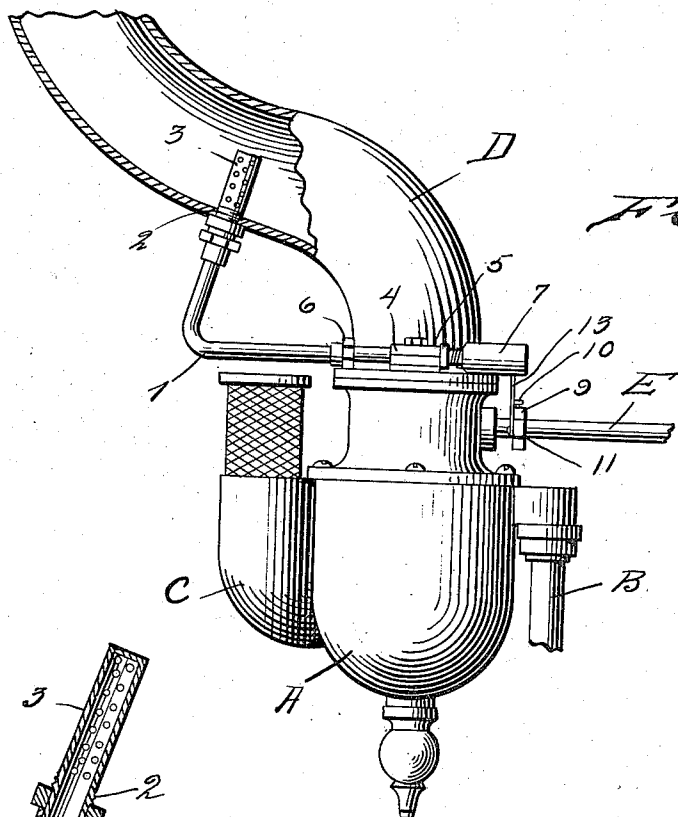


Fig. 1.

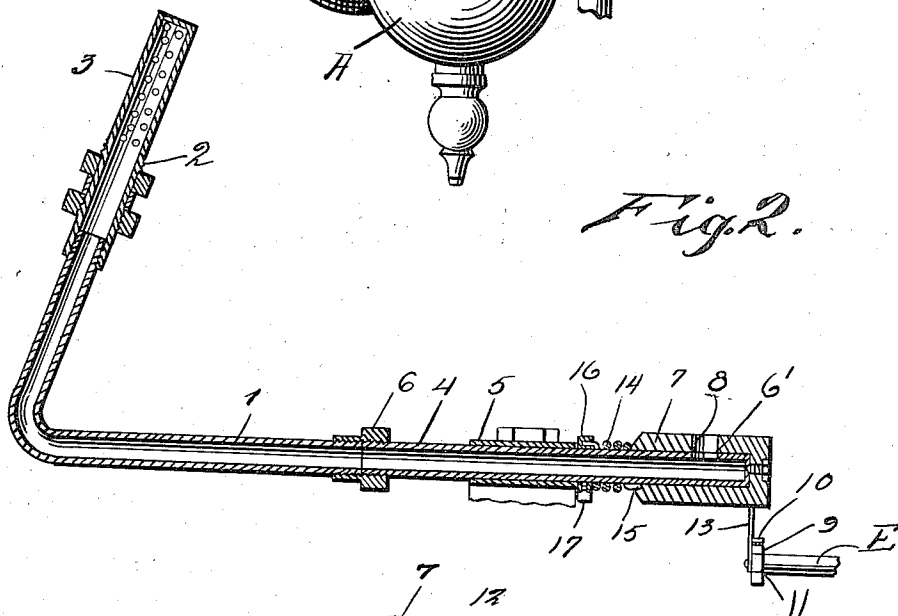
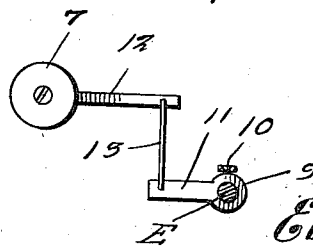


Fig. 2.

Fig. 3.



Witnesses
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AIR-MIXING ATTACHMENT FOR CARBURETERS.

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To all whom it may concern:

Be it known that I, ELBERT C. PECK, a citizen of the United States, residing at San Bernardino, in the county of San Bernardino and State of California, have invented certain new and useful Improvements in Air-Mixing Attachments for Carbureters, of which the following is a specification.

The invention relates to devices for mixing the explosive charge in internal combustion engines and has for its object the provision of means by which, as the speed of the engine increases, the relative proportion of atmospheric air to the fuel is increased.

My improved invention consists in providing in combination with the carbureter and the tube for conveying the explosive mixture from the carbureter to the engine cylinders, a pipe for conveying atmospheric air to the conveyer tube to be mixed with the explosive mixture supplied by the carbureter, the relative proportion of air that is inspirated into the explosive mixture being proportioned to the speed of the engine to prevent the mixture from becoming too rich and for that reason wasting the fuel.

The invention consists of the combination with the throttle valve rod, of a valve operated by the rotation of the throttle valve rod to control the amount of air entering the conveyer duct from the carbureter to accomplish the purpose stated.

My invention will be described in detail hereinafter and illustrated in the accompanying drawings, in which,

Figure 1 is a side view partly in section of a conventional carbureter and conveyer duct showing my improved air inspirator in position thereon; Fig. 2, a longitudinal sectional view of the inspirator; and Fig. 3, a detail view of the connection between the throttle valve rod and the air valve.

In the drawings similar reference characters will be used to designate corresponding parts throughout the several views.

A indicates a carbureter of conventional type having the oil supply pipe B and the air inlet C connected therewith, D indicating the supply duct from the carbureter to the engine (not shown).

E indicates the throttle valve rod that controls the amount of explosive mixture passing from the carbureter A into the supply duct D.

As stated, my improved inspirator provides for supplying atmospheric air to the mixture passing through the duct after leaving the carbureter A, the amount being controlled by the position of the throttle valve rod E and consisting of a pipe 1 tapped into the duct D as shown at 2 and having a perforated distributor nozzle 3 on its end within the duct D.

4 indicates a pipe secured on the casing of the carbureter A by means of a suitable clamp 5 and coupled to the pipe 1 by means of the coupling sleeve 6. The pipe 4 is provided with an opening 6' adjacent to its terminal and has rotatably mounted on said terminal a closed sleeve 7 provided with an opening 8 that is adapted to register at times with the opening 6' aforesaid. The throttle valve E has a collar 9 adjustably secured thereon by means of a set screw 10, and the collar 9 is provided with a laterally extending arm 11 that is connected with a laterally extending arm 12 on the sleeve 7 by means of a link 13.

From this construction, it will be apparent that as the throttle valve rod E is rotated in increasing or decreasing the amount of explosive mixture passing from the carbureter through the duct D, the sleeve 7 will be rotated so that the opening 8 therein will more or less expose the opening 6' in the pipe 4 for the admission of air into said pipe, and from thence into the pipe 1 and through the distributor nozzle 3 into the supply duct D, so that as the speed of the engine increases, the amount of atmospheric air admitted into the pipes 4 and 1 to be supplied to the explosive mixture in the pipe B, will be increased to prevent the mixture from becoming too rich in the relative proportion of fuel to air for proper explosions in the engine cylinders.

To insure a prompt return of the sleeve 7 to the position by which the opening 8 is out of register with the opening 6' when the throttle valve rod is rotated to close the throttle valve, I provide a spring 14 mounted on the pipe 4 and having one end secured in the end of said sleeve as shown at 15,

and its other end secured to a collar 16 that is adjustably secured to the pipe 4 by means of a set screw 17.

Having thus described my invention, what I claim is:—

1. In combination with a carbureter, a duct for conveying the explosive mixture from said carbureter, and a throttle valve rod, a pipe having a distributor nozzle secured thereto and located within said supply duct, a valve rotatably mounted on said pipe to admit air thereto, and means actuated by the throttle valve rod to operate said valve.
2. In combination with a carbureter, a supply duct leading therefrom, and a throttle valve rod, a pipe for supplying air to said supply duct, a perforated distributor nozzle on one end of said pipe and tapped into the supply duct, the other end of said supply pipe having an opening therein, a sleeve rotatably mounted on said pipe and having an opening therein adapted to register with the opening in the pipe, an arm

secured to the throttle valve rod, an arm secured to said sleeve, and a link connecting said arms.

3. In combination with a carbureter, a supply duct leading from said carbureter, and a throttle valve rod, a pipe mounted on the carbureter casing, said pipe being tapped into the supply duct and having a perforated distributor nozzle on its end within the supply duct, the other end of said pipe having an opening therein, a sleeve rotatably mounted on said end of the pipe and having an opening therein adapted to register with the opening in the pipe, a collar secured to the pipe, a coiled spring secured to said sleeve and collar, an arm secured to the throttle valve rod, an arm secured to said sleeve, and a link connecting said arms.

In testimony whereof I affix my signature in presence of two witnesses.

ELBERT C. PECK.

Witnesses:

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