

H. T. ALUMBAUGH.  
 DISTRIBUTER FOR INTAKE MANIFOLDS.  
 APPLICATION FILED MAR. 3, 1914.

1,250,753.

Patented Dec. 18, 1917.

FIG. 1.

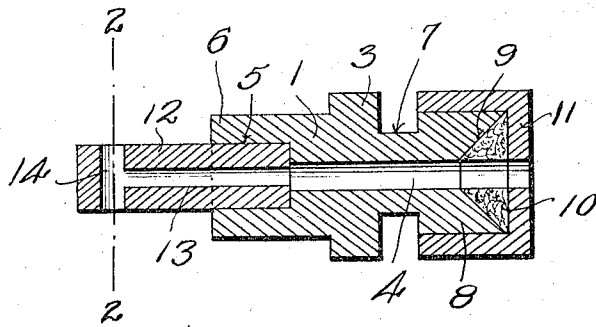


FIG. 2.

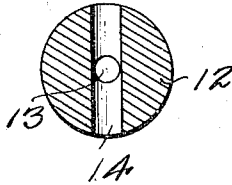


FIG. 3.

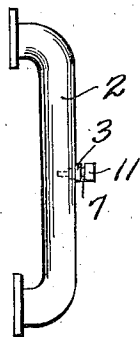
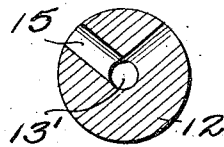


FIG. 4.



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# UNITED STATES PATENT OFFICE.

HARRY T. ALUMBAUGH, OF CARLISLE, INDIANA.

DISTRIBUTER FOR INTAKE-MANIFOLDS.

1,250,753.

Specification of Letters Patent.

Patented Dec. 18, 1917.

Application filed March 3, 1914. Serial No. 822,149.

*To all whom it may concern:*

Be it known that I, HARRY T. ALUMBAUGH, a citizen of the United States, residing at Carlisle, in the county of Sullivan and State of Indiana, have invented certain new and useful Improvements in Distributers for Intake-Manifolds, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a distributer for intake manifolds of internal combustion engines, and has for its principal object the production of a distributer which will efficiently and positively distribute gas in several desired directions within the manifold of the engine so as to cause a jet of gas to be directed into each branch of the manifold.

Another object of this invention is the production of a distributer for the intake of an internal combustion engine, wherein the body of the distributer is constructed so as to be easily held in a set position upon the manifold of the engine and at the same time carry a detachable tip at one end and a cap and packing at its opposite end, thereby forming an efficient distributer for directing jets of gas in desired directions within the manifold of the engine.

With these and other objects in view, this invention consists of certain novel combinations, constructions and arrangement of parts as will be hereinafter fully described and claimed.

In the accompanying drawing, like characters of reference indicate like parts in the several views, wherein:

Figure 1 is a longitudinal section taken through the distributer, showing the same enlarged.

Fig. 2 is a transverse section taken through the tip, taken on the line 2—2 of Fig. 1.

Fig. 3 is a top plan of a manifold, showing the same detached from an engine and illustrating the distributer attached thereto.

Fig. 4. is a transverse section through a slightly modified form from that shown in Fig. 2.

Referring to the accompanying drawing by numerals, it will be seen that the distributer comprises a body 1 of an elongated construction, which may be placed on the manifold 2, so as to extend thereinto, and the inward movement of the body 1 is limited by

the abutting of the annular shoulder 3 of the body against the exterior of the manifold. The body 1 has a longitudinally extending bore 4 extending therethrough, as shown in Fig. 1. This bore 4 communicates with the unthreaded pocket 5 formed in the inner end of the body 1. The inner end portion 6 of the body 1, which projects inwardly beyond the rib 3, is thickened, although the portion of the body projecting outwardly beyond the rib 3 is reduced as shown at 7. The enlarged head 8 is formed upon the outer end of the reduced portion 7 and this head 8 is provided with the conical pocket 9. This pocket 9 carries packing, as shown at 10, while the cap 11 is positioned upon the head 8 so as to hold the packing within the pocket 9. As a consequence, although a pipe may be projected into the outer end of the bore 4, there is no possibility of the accidental escape of gas, because the packing will fit upon the pipe and prevent this action. When, however, the packing becomes worn it may be easily removed from the pocket 9, because the conical construction of this pocket permits an instrument to be easily slipped under the packing and thereby lift the packing from the pocket 9, after which action new packing may be substituted.

The tip 12 is provided with a reduced passage 13 extending thereinto from one end and this passage 13 communicates with the branch passage 14 extending transversely through the tip and communicating with the side portions of the tip 12. This tip 12 is also unthreaded so as to be easily wedged within the pocket 5 formed in the body 1, whereby the passage 13 will communicate with the bore 4. While a considerable volume of gas may be injected into the bore 4, this gas will be compressed within the passage 13 since this passage is considerably smaller than the bore 4. As a consequence, the gas will be discharged from the passage 13 into the branch passage 14 with greater force, thereby causing the jets of gas discharged from the branch passage to be emitted from the branch passage with considerable force in desired directions.

It will be seen that by having the tip detachably carried by the body, a new tip may be easily substituted when desired. This new tip may be provided with branch passages of different angles from those of the

removed tip so as to allow the device to be useful in connection with an engine, irrespective of the construction of the manifold. Furthermore, it will be seen that since the longitudinal opening in the tip is smaller than the bore in the body, the pressure of the gas will be increased within said tip so as to be discharged with greater force.

By referring to Fig. 4, it will be seen that a slightly modified form of a tip has been produced. In this form the tip 12' has the usual central passage 13' which communicates at its outer end portion with a branch passage of a V-shaped construction as illustrated at 15. It is obvious that the tips may be provided with branch passages of various constructions and angles so to be useful in connection with manifolds of engines of various constructions, without departing from the spirit of this invention.

From the foregoing description, it will be seen that the present distributor may be cheaply constructed and formed so as to be useful in connection with different manifolds, while the construction of the distributor permits gas to be passed therethrough without danger of the accidental escaping of the gas, while the gas will be efficiently compressed, so that when it is distributed the separate jets will be discharged in various directions with considerable force.

What is claimed as new, is:—

As a new article of manufacture, a distributor for the manifold of an engine comprising an elongated body, said body having an unobstructed straight even bore extending therethrough said body having an enlarged head formed upon its outer end, said head having a pocket formed therein, packing carried within said pocket, a cap carried upon said head for removably retaining said packing within said pocket, an enlarged annular rib formed upon said body, a thickened inner end formed upon said body upon one side of said rib, whereby said thickened end may be passed into a manifold and said rib will limit the inward movement of said body, said thickened inner end having a pocket formed therein, a tip removably wedged within said pocket, said tip having a central reduced passage formed therein, said tip also having branch passages communicating with said central passage whereby gas injected into said tip will be compressed and discharged through the passages of said tip.

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

HARRY T. ALUMBAUGH.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."