F. H. HEITGER.

CARBURETER.

APPLICATION FILED JUNE 8, 1912.

1,134,532.

Patented Apr. 6, 1915.

Fig. 1.

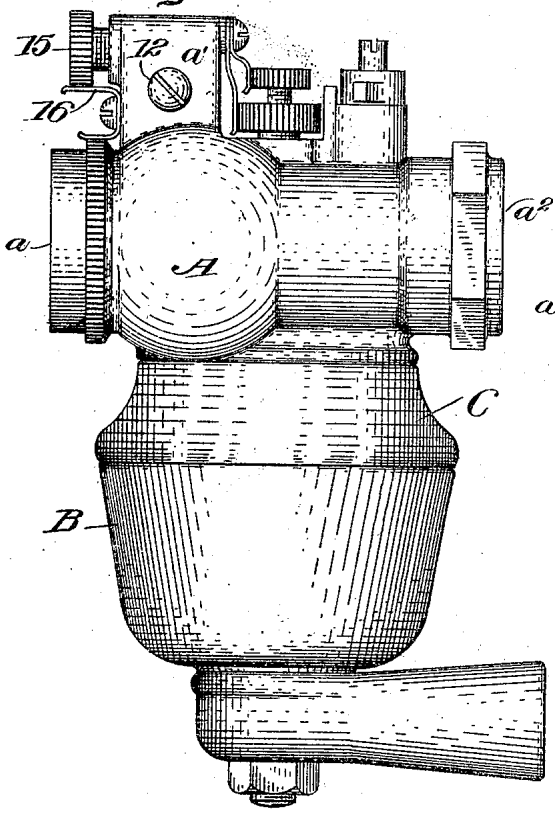


Fig. 3.

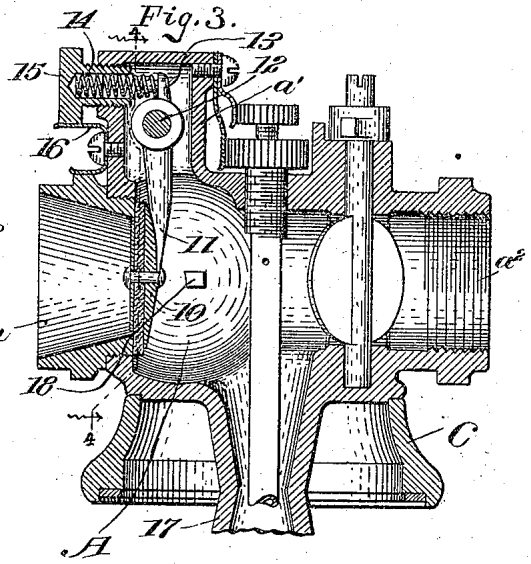


Fig. 2.

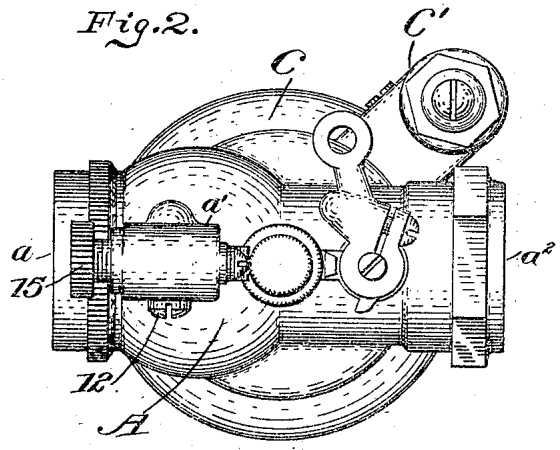
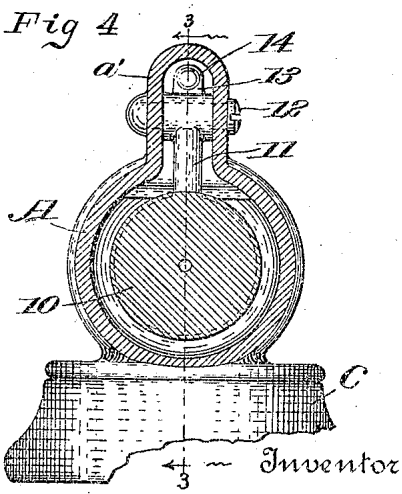


Fig 4



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK H. HEITGER, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO HEITGER CARBURETOR COMPANY, OF INDIANAPOLIS, INDIANA, A CORPORATION OF INDIANA.

CARBURETER.

1,134,532. Specification of Letters Patent. Patented Apr. 6, 1915.

Application filed June 8, 1912. Serial No. 702,613.

To all whom it may concern:

Be it known that I, FRANK H. HEITGER, a citizen of the United States, residing at Indianapolis, Marion county, and State of Indiana, have invented and discovered certain new and useful Improvements in Carbureters, of which the following is a specification.

My said invention consists in certain improvements in the details of construction of certain parts of carbureters for internal combustion engines and it relates especially to means for holding the auxiliary air valve under tension and regulating such tension for controlling the supply of air to the mixing chamber to suit the requirements of the conditions under which the engine is operating, as to atmosphere, temperature, etc., all ... will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of a carbureter embodying my said invention, Fig. 2 a top or plan view, Fig. 3 a central vertical section through the upper end thereof, and Fig. 4 a cross section on the dotted line 4—4 in Fig. 3.

In said drawings the portions marked A represent the casing of the mixing chamber, B the gasolene or float chamber and C an annular casing section carrying the gasolene supply connection. Said several parts, as shown, are all of a well known construction, such as used in the Heitger carbureter in common use, but may be of any appropriate construction or design.

The casing A is provided with an air cage a which is covered by valve 10 in the form of a disk adapted to cover the inner end of said air cage. Said disk is mounted upon the lower end of a lever 11 which is fulcrumed upon a shaft 12, mounted in suitable bearings in the sides of a hollow boss a^1 formed on the top of chamber A. A part 13 of said lever extends above the fulcrum 12 and a coiled spring 14 is interposed between the front face thereof and the inner end of a socket in an adjusting nut 15 mounted, by means of a screw-threaded connection, in an aperture in the outer end of boss a^1. A spring detent 16 secured to the outer face of the casing is adapted to bear against the ribbed periphery of said nut 15 and hold the same from turning except when force is applied.

In use, the carbureter is employed and operates in a general way the same as carbureters of common construction except valve 10 is held to its seat against the inner end of air cage a by the tension of spring 14, which tension may be adjusted by turning screw 15 in whichever direction may be required to secure the desired adjustment.

In operation, upon starting, or at low speed, valve 10 is normally held closed but when the speed increases and the suction increases said valve is opened and air admitted into the mixing chamber where it mingles with the spray coming through the suction tube 17 in the usual manner and is drawn into the engine cylinders from said mixing chamber through the outlet a^2. When the operation of the engine indicates a fuel of too poor a mixture, the tension of spring 14 is tightened to hold valve 16 so as to admit a smaller quantity of air. On the other hand, when the mixture is too rich, the tension of the spring is relaxed to admit a larger supply of air until the desired character of mixture is secured. A lug 18 is cast on the inside of casing A to limit the inward swing of said valve 10.

Having thus fully described my said invention what I claim as new and desire to secure by Letters Patent is—

A carbureter comprising a mixing chamber with an auxiliary air inlet and a hollow boss on the top thereof, a bearing supported in said hollow boss to one side of the auxiliary air inlet to said mixing chamber, a lever fulcrumed on said bearing and extending each way therefrom, a valve for controlling said auxiliary air inlet mounted on the lower end of said lever and adapted to cover said inlet, a screw-threaded socket adjustably mounted in the side of said hollow boss adjacent to the opposite end of said lever, means for securing said socket in adjusted position, and a spring mounted in said socket and adapted to bear against the end

of said lever above said fulcrum, whereby said valve is normally held closed and under tension which may be readily varied or adjusted, substantially as set forth.

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, this twenty-first day of May, A. D. nineteen hundred and twelve.

FRANK H. HEITGER. [L. S.]

Witnesses:
E. W. BRADFORD,
A. C. RICE.