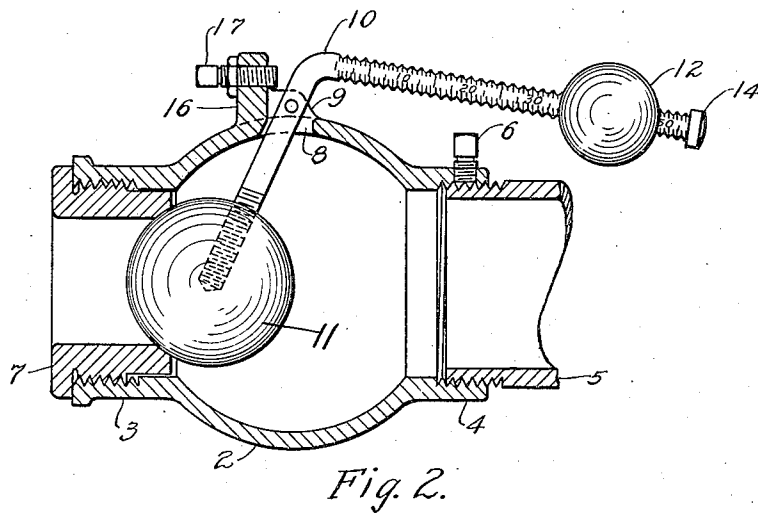
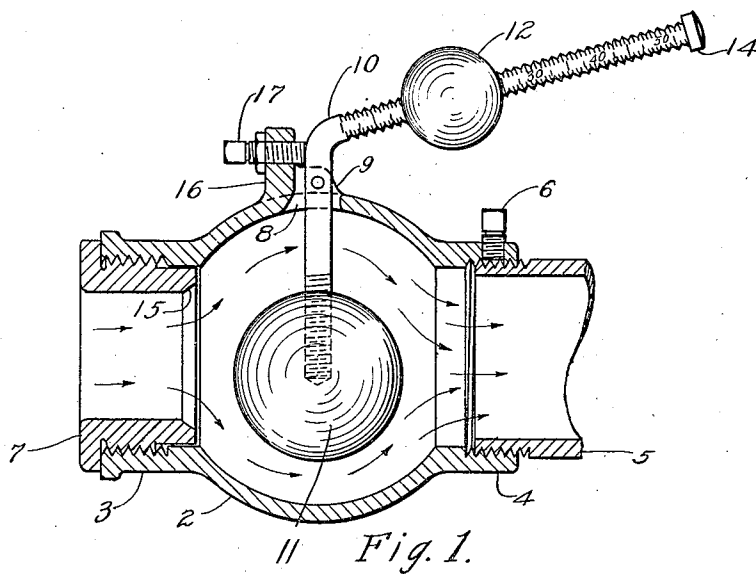


J. OTTI.
AIR REGULATOR.
APPLICATION FILED APR. 11, 1919.

1,324,515.

Patented Dec. 9, 1919.



Witness

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UNITED STATES PATENT OFFICE.

JOSEPH OTTI, OF WICHITA, KANSAS.

AIR-REGULATOR.

1,324,515.

Specification of Letters Patent.

Patented Dec. 9, 1919.

Application filed April 11, 1919. Serial No. 289,323.

To all whom it may concern:

Be it known that I, JOSEPH OTTI, a citizen of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented a new and useful Air-Regulator, of which the following is a specification.

This invention relates to improvements in air regulators, the object of the invention being to provide an improved adjustable device for regulating the supply of air to the carbureter of a gas engine by means of which the use of springs is eliminated.

A further object of the invention is to provide a device of the character set forth which will cause a more thorough breaking up and mixing of the air with the gas, whereby a better combustion is produced and thereby a saving of gas effected.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention consists in the novel features of construction and combination of parts which will be more fully described hereinafter and particularly pointed out in the claim.

In the drawings accompanying and forming part of this specification,

Figure 1 is a longitudinal section through my improved air regulator showing the same applied to the carbureter of a gas engine, the latter being broken away; and

Fig. 2 is also a longitudinal section showing the regulator adjusted to a different position.

The same characters of reference designate the same parts in the different figures of the drawings.

Referring to the drawings, 2 designates a hollow metal shell provided with flanges 3 and 4 at opposite sides thereof forming respectively an intake and an outlet port, both of said ports being interiorly threaded. The outlet port is adapted to be screwed on the intake end of a carbureter, designated by the numeral 5, and secured against movement thereon by means of a set screw 6. A reducer 7 is adapted to be screwed into the intake port of the shell. The shell is provided with an opening 8 in its upper side and a pair of perforated lugs or ears 9, one at each side of said opening. An angular lever 10 is pivotally mounted in said ears and having one leg thereof pro-

jecting through the opening 8 to the interior of the shell and on which is secured in any suitable manner, as for instance by means of screw threads as shown, a ball 11, and which ball may be either solid or hollow. The purpose of the ball is to regulate the size of the intake passage of the shell, and for the purpose of adjusting the ball so as to admit any desired quantity of air I have provided on the horizontal arm of the lever 10 a counterbalancing weight or ball 12, which may be placed at any desired point on said arm so as to cause the ball 11 to swing nearer to or farther from the intake port of the shell, as will be readily understood, the ball 12 being screw threaded on the arm so as to permit its adjustment to any desired position and retained in such position. The horizontal arm may be slightly flattened at one side thereto and graduated to indicate any desired units, and a jam nut 14 is placed on the end of the arm for preventing the ball 12 from being screwed entirely off. The inner end of the reducer 7 is inwardly beveled, as at 15, to form a seat for the ball 11. The removal of the reducer leaves a larger opening for permitting access to the ball 11 for removing or adjusting the same on the stem of the lever. For preventing the ball 11 from being drawn by the suction from the engine past the center of the shell toward the outlet thereof, I have provided an upstanding lug 16 on the upper side of the shell immediately back of the aperture 8, said lug being provided with a threaded opening directly opposite the lever 10 through which passes a set screw 17 adapted to abut against the lever.

From the foregoing it will be seen that I have provided a regulator that is not only adjustable, but which serves also to produce a more thorough breaking up and mixing of the air with the gas, since the air is drawn from the intake around the ball and is thereby given a whirling motion as it enters the gas chamber and mixes with the gas, as illustrated diagrammatically in Fig. 1.

While I have described in detail the structure herein illustrated, it is to be understood that I do not thereby limit my invention to the precise features of construction shown, as I am aware that many mechanical changes may be made therein

without departing from the spirit and scope of the invention as set forth in the appended claim.

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

10 A device of the class described, comprising a shell having an intake port and an outlet port, a lever pivoted at one side of said shell and having a portion thereof projecting into the shell, a member secured to said lever within the shell and adapted to swing toward said intake port thereby to control the passage of air therethrough, a

shiftable counterbalancing weight on said lever, and a lug formed on said shell and 15 having a set screw adapted to contact with said lever thereby to limit the swing of said member away from the intake port.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 20

JOSEPH OTTI.

Witnesses:

J. J. BULGER,
F. LESEN.