Oct. 20, 1925. 1,558,174

D. JEANNIES

AUXILIARY AIR VALVE FOR CARBURETORS

Filed June 26, 1924

Fig. 1.

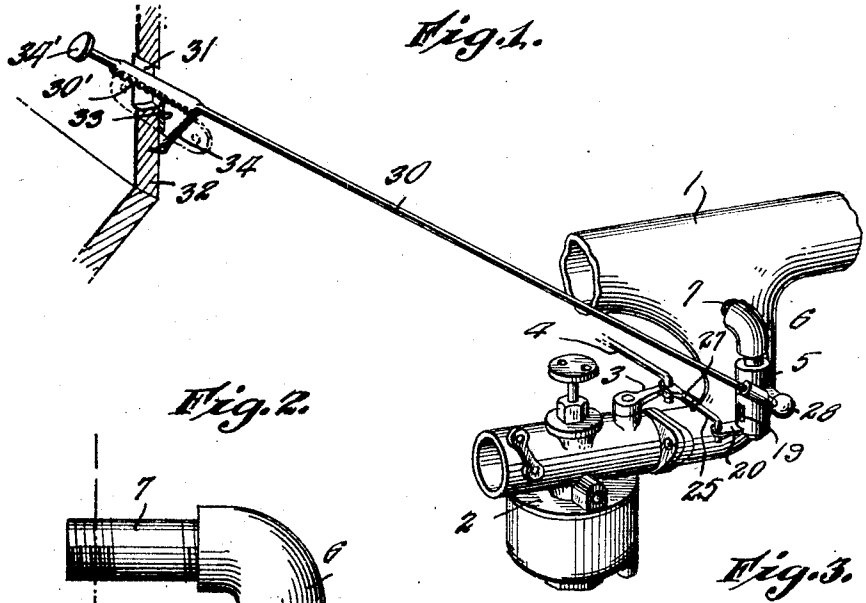


Fig. 2.

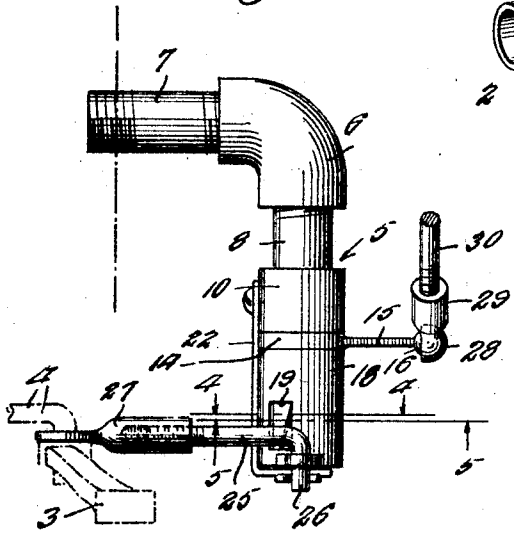


Fig. 3.

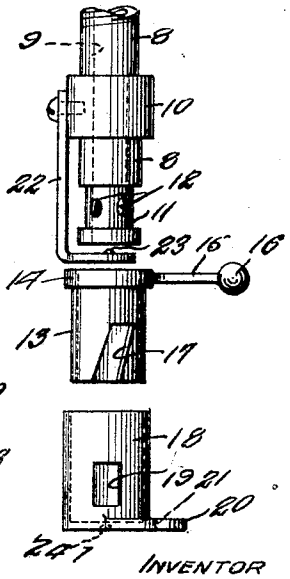


Fig. 4.

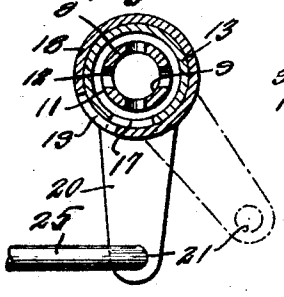
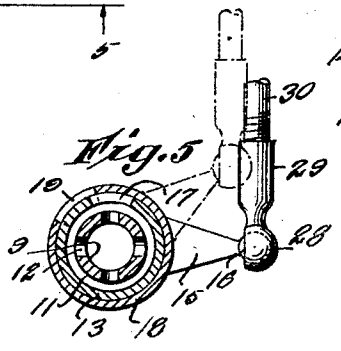


Fig. 5.



INVENTOR

Demaree Jeannies

By Norman J. Whitaker

his ATTORNEY

Patented Oct. 20, 1925. 1,558,174

UNITED STATES PATENT OFFICE.

DEMARE JEANNIES, OF MAMOU, LOUISIANA.

AUXILIARY AIR VALVE FOR CARBURETORS.

Application filed June 26, 1924. Serial No. 722,606.

To all whom it may concern:

Be it known that I, DEMARE JEANNIES, a citizen of the United States, and a resident of Mamou, in the parish of Evangeline, in the State of Louisiana, have invented new and useful Improvements in Auxiliary Air Valves for Carburetors, of which the following is a specification.

My invention relates to devices of the above mentioned character and has for its principal object to provide a valve which will automatically admit more or less air to an internal combustion engine as the carburetion is increased or retarded and means whereby the valve may be manually adjusted in accordance with the amount of air desired for carburetion.

Another object of my invention is to provide means whereby the engine is kept clean and cool and means whereby oil is prevented from being pumped to the piston heads and upper cylinders thereby preventing any deposit of carbon which is detrimental to proper functioning of an internal combustion engine.

A further object of my invention is to provide means whereby gasoline which is admitted to the engine is entirely consumed, thereby causing a saving of the fuel and a reduction in the cost of the operation.

A still further object of my invention is to provide a device of the above mentioned character which shall be simple, durable and economical in construction and simple but positive in operation and action.

Other objects and advantages of my invention will be apparent during the course of the following description.

In the drawings which form part of the specification and in which only a preferred embodiment of my invention is illustrated:

Fig. 1 is a perspective view of my device shown attached to the intake manifold and carburetor of an automobile engine.

Fig. 2 is a side elevation of the valve assembled.

Fig. 3 is a side elevation of the several parts composing the valve.

Fig. 4 is a horizontal cross sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 is a horizontal cross sectional view taken on the line 5—5 of Fig. 2.

Referring in detail to the drawings in which like characters of reference are employed to designate like parts throughout the same the numeral 1 designates the intake manifold of an automobile engine which is connected to a carburetor 2 which is provided with the usual throttle arm 3 and control rod 4.

The numeral 5 designates the valve in its entirety which is attached to and held in communication with the intake manifold 1 by means of an elbow 6 and short horizontal pipe 7. The valve 5 comprises, as shown in Fig. 3, a tube or pipe 8 which has a longitudinal bore 9. A shoulder 10 is provided intermediate the ends of the pipe 10 and an annular groove 11 is provided in the tube 8 between the bottom edge of the shoulder 10 and the lower end of the tube 8. Radial passages 12 are provided in the tube 11 which passages connect the groove 11 with the longitudinal bore 9. A sleeve 13, which will be a median valve rotor, is adapted to rotatably fit over the lower portion of the tube 8 covering the annular groove 11. A shoulder 14 is provided at the extreme upper end of the sleeve 13 and is adapted to abut the bottom edge of the shoulder 10. A radial arm 15 carrying on its free end a ball 16 is made integral with the shoulder 14 the purpose of which will be hereinafter set forth. An angularly disposed aperture 17 is provided in the periphery of the sleeve 13 and is adapted to register with the annular groove 11. An outer sleeve or cup-shaped valve rotor 18 is adapted to rotatably fit over the sleeve 17 and is provided with a radial aperture 19 which is adapted to register with the aperture 17 in the sleeve 13 in a manner to be described later. The sleeve 18 is provided with a radially extending arm 20 having in its free end an aperture or bore 21. The above described parts are assembled as shown in Fig. 1 and are held together by means of an L shaped member 22 which has a pivot point 23 adapted to engage a socket 24 in the bottom face of the outer valve rotor 18.

A rod 25 having a downwardly bent end 26 is engaged by the aperture 21 in the arm 20 while the free end of the rod 25 is adjustably attached to an eye 27 by screw threaded engagement therewith. This eye, as shown in Figs. 1 and 2, is engaged by the end of the throttle control rod 4 which passes through it and it is then engaged by the throttle arm 3.

The ball 16 on the end of the arm 15 is held in a ball socket 28 which is integral

with a boss 29 in which is adjustably mounted at one end of the rod 30 which extends therefrom to and through an aperture 31 in the dash 32 of an automobile. The rod 30 is provided at its free end, or that portion which is adjacent the aperture 31, with teeth 30′ which are adapted to engage a pawl 33 in juxtaposition with the aperture 31. The rod 30 is normally held in engagement with the pawl 33 by means of a spring 34. A knob or finger engaging element 34′ is carried by the extreme free end of the rod 30.

By referring to the several figures of the drawing it will be seen that when running an automobile under ordinary conditions as the throttle is advanced or retarded and consequently as more or less gasoline is admitted to the cylinders, more or less air will also be admitted in like proportion by virtue of the fact that the arm 20, actuating the sleeve 18, is connected with the throttle arm 3 of the carburetor 2 thereby bringing the aperture 19 in more or less engagement with the aperture 17 consequently the groove 11 and the interior of the intake manifold as shown by dot and dash lines in Fig. 4. When running under abnormal conditions, that is, on poor roads or up a steep incline, the valve may be adjusted by means of the rod 30 by pulling it up a few notches, as shown by dot and dash lines in Fig. 5, thereby restricting the possible opening to the interior of the intake manifold and thereby reducing or entirely shutting off the amount of air admitted giving a richer mixture of gasoline.

It will easily be understood that in this manner a great amount of gasoline which would not be consumed by combustion, because of insufficient oxygen, is now consumed, thus causing a great amount of saving in the amount of fuel used to operate the automobile. It will also be understood that because of the increased compression in the cylinders by the increased amount of air will prevent any oil from being pumped up to the cylinder heads which burns and causes a deposit of carbon to be formed on the cylinder walls, piston heads and ignition points.

It must be further understood that only a preferred embodiment of my invention is herein shown and described and that any departure from the same may be resorted to without departing from the spirit of the invention or from the spirit or the scope of the subjoined claim.

Having thus described my invention what I claim is:

In combination with the carburetor and intake manifold of an internal combustion engine, an auxiliary air valve comprising an inner stationary cylinder, a median cylinder rotatably mounted on the inner cylinder and an outer cylinder, rotatably mounted on the median cylinder, an annular groove in the periphery of the inner cylinder, radial apertures connecting the interior of said cylinder with the groove, an angularly disposed radial aperture in the periphery of the median cylinder adapted to register with the annular groove, a radial rectangular aperture in the periphery of the outer cylinder adapted to register with said angularly disposed aperture upon rotation of the cylinders, and means whereby the median cylinder and the outer cylinder may be rotated.

DEMARE JEANNIES