J. T. PETERSON.

CARBURETER.

APPLICATION FILED NOV. 20, 1915. RENEWED MAY 31, 1917.

1,233,503. Patented July 17, 1917.

Fig. 1.

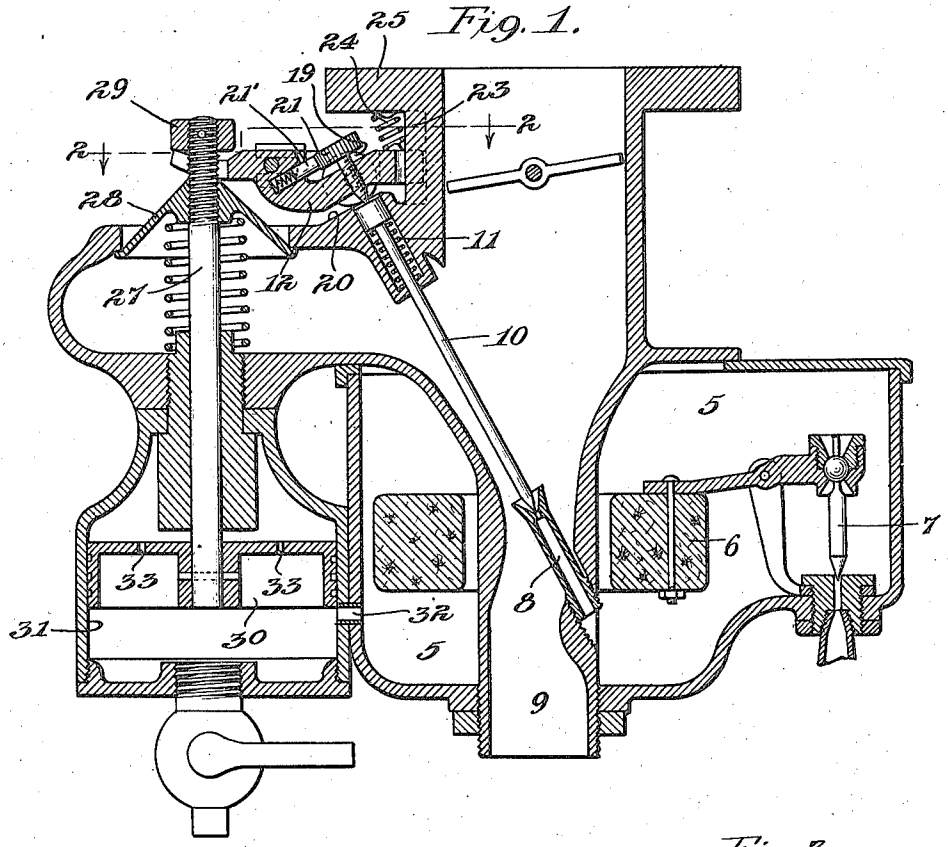


Fig. 2.

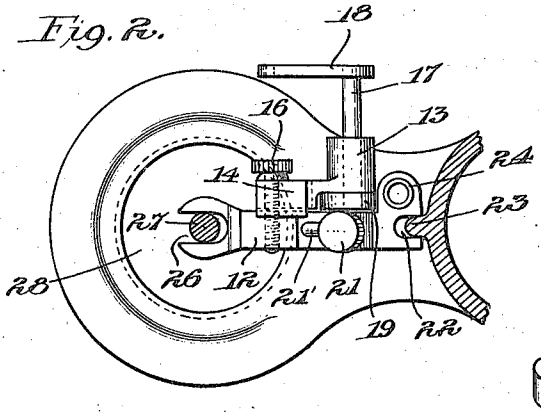


Fig. 3.

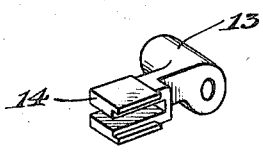
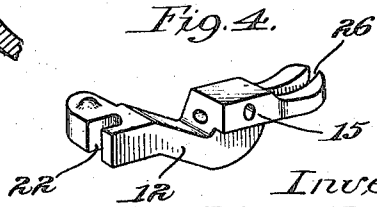


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN T. PETERSON, OF MELROSE PARK, ILLINOIS.

CARBURETER.

1,233,503. Specification of Letters Patent. Patented July 17, 1917.

Application filed November 20, 1915, Serial No. 62,489. Renewed May 31, 1917. Serial No. 172,077.

To all whom it may concern:

Be it known that I, JOHN T. PETERSON, a citizen of the United States, and a resident of the city of Melrose Park, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Carbureters, of which the following is a specification.

My invention relates to improvements in carbureters, and has for its object the provision of a carbureter provided with improved means for regulating the fuel mixture to meet different weather conditions, or other contingencies.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing forming a part of this specification, and in which,

Figure 1 is a vertical section of a carbureter embodying my invention,

Fig. 2, a section taken on line 2—2 of Fig. 1,

Fig. 3, a perspective view of a bearing member employed in the construction, and

Fig. 4, a perspective view of an operating lever employed in the construction.

The preferred form of construction, as illustrated in the drawing, comprises a carbureter provided with the usual float chamber 5 having the usual float 6 therein controlling the usual needle valve 7 which admits fuel to said chamber in the usual manner, said float operating in the usual manner to maintain a constant level of fuel in said chamber. A fuel supply pipe 8 is projected from chamber 5 into the air passage 9 of the carbureter and a needle valve 10 is arranged to control the passage of fuel through pipe 8. Needle valve 10 is normally held in open position by means of a spring 11 and coöperates with an operating lever 12 mounted at the top of the carbureter at one side thereof. A bearing 13 is provided with a bifurcated arm 14 slidable upon a lateral projection 15 on lever 12, and a set screw 16 is provided on lever 12 passing through guide arm 14 to serve as a means for effecting adjustments of bearing 13 longitudinally of lever 12, as will be readily understood. An operating stem 17 carrying an operating arm 18 is rotatably mounted in bearing 13 and provided with an eccentric 19 rolling on a surface 20 provided therefor on the carbureter casing. Lever 12 carries a set screw 21 contacting with the upper end of needle valve 10 and a spring held friction block 21′ is arranged to contact with said set screw 21 to exert friction thereon to hold the same in adjusted positions.

At its inner end lever 12 is provided with a slot 22 engaging over a guide rib 23 provided on the casing of the carbureter and a spring 24 is interposed between the inner end of lever 12 and the usual flange 25 of the carbureter casing, said spring serving to press the set screw 21 normally into contact with the head of valve 10. The outer end of lever 12 is provided with a slot 26 embracing the upper end of a spring held air valve stem 27 carrying the usual auxiliary air valve 28 for the admission of more air to the carbureter under high speeds. A stop nut 29 is secured to the upper end of valve stem 27 to effect an operative connection with lever 12.

By this arrangement, it will be observed that opening of air valve 28 automatically operates lever 12 to further open needle valve 10 to admit additional fuel. By manipulating eccentric 19 through handle 18, the eccentric 19 may be adjusted on the surface 20 to vary the leverage of lever 12 to vary the extent of the opening of valve 10. Likewise adjustments of bearing 13 on lever 12 through the medium of set screw 16 may be employed to vary the leverage of lever 12, as will be readily understood. By this arrangement a delicate adjustment may be obtained to meet different weather conditions and the manipulations of the fuel valve during operation may be also nicely adjusted and varied. It is also obvious that by adjustment of the member 19 it is possible to open the oil valve without disturbing or operating the air valve 28, that is, the oil valve may be opened without opening the air valve, which is of advantage when running the engine without the supplemental air supply and also for priming the engine.

Valve stem 27 carries a retarding piston 30 at its lower end operating in a retarding chamber 31 which is in open communication with chamber 5 through a passage 32, said piston being provided with minute passages 33 to permit the slow passage of liquid therethrough. By this arrangement the movements of valve 28 will be retarded to

prevent too quick changes thereof and to eliminate the influence of the motion of the vehicle or other mounting for the carbureter.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination with a carbureter provided with an air valve and a fuel valve, of a lever operatively connected with said air valve; an eccentric carried by said lever and given a rolling bearing on said carbureter whose point of contact with the carbureter acts as the fulcrum for said lever; and an operative connection between said lever and said fuel valve, substantially as described.

2. The combination with a carbureter provided with an air valve and a fuel valve, of a lever operatively connected with said air valve; an eccentric adjustable longitudinally of said lever and given a rolling bearing on said carbureter whose point of contact with the carbureter acts as the fulcrum for said lever; and an operative connection between said lever and said fuel valve, substantially as described.

3. The combination with a carbureter provided with a spring held air valve and a spring held fuel valve, of a spring held lever operatively connected with said air valve; an eccentric carried by said lever and given a rolling bearing on said carbureter whose point of contact with the carbureter acts as the fulcrum for said lever; and a set screw connection between said lever and said fuel valve, substantially as described.

4. The combination with a carbureter provided with a spring held air valve and a spring held fuel valve, of a spring held lever operatively connected with said air valve; an eccentric adjustable longitudinally of said lever and given a rolling bearing on said carbureter whose point of contact with the carbureter acts as the fulcrum for said lever; and a set screw connection between said lever and said fuel valve, substantially as described.

5. The combination with a carbureter provided with a spring held air valve and a spring held fuel valve, of a lever operatively connected with said air valve; a bearing member slidably adjustable on said lever; an eccentric carried by said bearing and rolling on said carbureter whose point of contact with the carbureter acts as the fulcrum for said lever; a set screw carried by said lever and arranged to force said fuel valve toward closing position; and a spring contacting with said lever to hold said set screw in operative contact with said fuel valve, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN T. PETERSON.

Witnesses:
JOSHUA R. H. POTTS,
HELEN F. LILLIS.