C. H. PRATT.

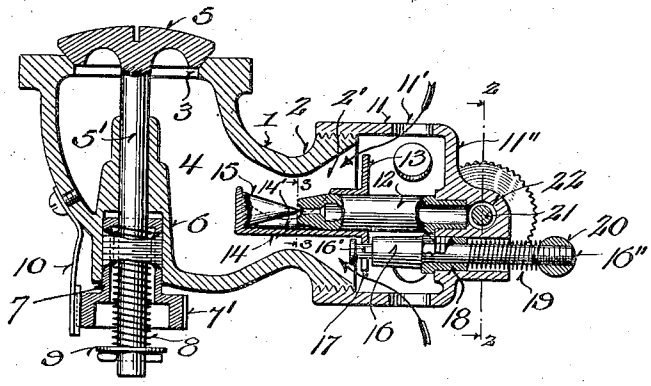
CARBURETER.

APPLICATION FILED FEB. 9, 1914.

1,111,179.

Patented Sept. 22, 1914.

Fig. 1.



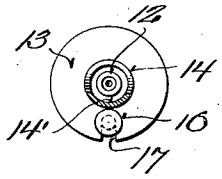


Fig. 3.

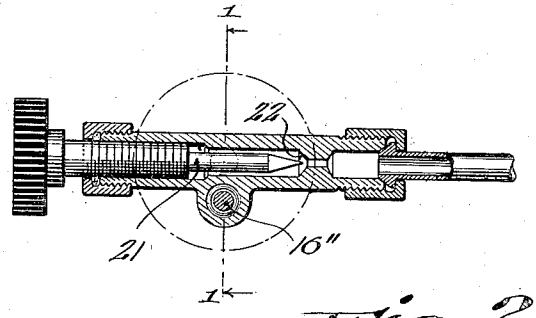


Fig. 2.

Witnesses:
Clarence E. Young
May Downey.

Inventor:
Clarence H. Pratt.
By Elphant & Young
Attorneys.

UNITED STATES PATENT OFFICE.

CLARENCE H. PRATT, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO KOBAN MANUFACTURING COMPANY, OF MILWAUKEE, WISCONSIN.

CARBURETER.

1,111,179. Specification of Letters Patent. Patented Sept. 22, 1914.

Application filed February 9, 1914. Serial No. 817,478.

To all whom it may concern:

Be it known that I, CLARENCE H. PRATT, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Carbureters; and I do hereby declare that the following is a full, clear, and exact description therof.

My invention has for its general object to provide a simple, economical and effective carbureter.

Specific objects of my invention are to provide simple and effective means for adjusting and controlling the air and oil supply to the mixing chamber and to provide means for regulating the tension of the delivery valve spring.

With the above objects in view the invention consists in certain peculiarities of construction and combination of parts as hereinafter set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings—Figure 1 represents a longitudinal central section of a carbureter embodying the features of my invention, the section being partly indicated by line 1—1 of Fig. 2; Fig. 2, a detail section through the fuel supply valve, the section being indicated by line 2—2 of Fig. 1, and Fig. 3, a detail cross sectional view of the fuel discharge nipple and its related parts, the section being indicated by line 3—3 of Fig. 1.

Referring by characters to the drawings, 1 represents a housing provided with a neck 2 having a flared air intake mouth 2′ and a discharge port 3, each of the same being in communication with a mixing chamber 4 as shown. The intake mouth as shown flares in opposite directions from a restricted waist-line in choke-bore formation. Thus air is admitted and contracted at the waist-line to increase its velocity upon the principle of the venturi tube.

The port 3 is controlled by a delivery valve 5 having a stem 5′, which stem passes through a hub 6 that forms part of the housing. The mouth of the hub 6 is cupped for the reception of a thimble 7, which thimble is in threaded union with the cup walls, to permit adjustment that is effected by means of a knurled button 7′, the same being extended from the body of the thimble. The valve-stem 5′ projects through the thimble and has fitted thereover a coiled-spring 8, one end of which is seated upon the base of said thimble, while its opposite end is confined by a coller 9 that is suitably affixed to the valve-stem.

By the above arrangement the tension of the valve spring 8 can be adjusted through manipulation of the thimble and after such manipulation the said thimble is locked through engagement of a spring-finger 10, with the knurled surface of the button, it being understood that one end of the finger is affixed to the housing.

The housing neck 2 is exteriorly threaded for the reception of a cap 11, having a series of perforations 11′, through which air is admitted to the carbureter chamber. The head 11″ of the cap is centrally bored for the reception of a nipple 12 that extends into the air intake mouth 2′ and terminating with a discharge head which is positioned within a contracted neck that forms a connecting passage between the air intake mouth and the carbureter chamber. A flutter valve 13 is slidably mounted upon the nipple 12 and adapted to control the passage of air through the intake mouth 2′. A hub-sleeve 14 of the flutter-valve is fitted over the nipple, being mutilated or cut away upon its one side to form an oil deflector 14′, whereby the carbureted air is directed toward the discharge port 3. The deflector end of the hub-sleeve 14 carries a tapered plug 15, which plug is arranged to enter or recede from the contracted flow channel of the nipple head, coincident to movement of the flutter valve, whereby the supply of fuel oil is automatically controlled.

Movement of the flutter-valve in one direction is effected by the flow of air to the mixing chamber, and in practice this force is in opposition to gravity. To regulate the valve movement I provide a stem 16 having an annular recess 16′ which is fitted into a slot 17 that is formed within the periphery of the valve. The stem is shouldered and has a reduced shank 16″, which shank passes through a bushing 18, the same being in threaded union with the walls of an aperture formed in the cap head 11″. Mounted upon the stem shank 16″ beyond the bushing is a coiled spring 19, the same being confined between the end of the bushing 18 and

button 20, which button is in threaded engagement with the outer end of the stem as shown.

The carbureter is vertical in working position and air is admitted to the housing 1 through the intake 2′ that is governed by the flutter-valve. The cone 15 of the valve is normally held to its seat by force of gravity and movement of air through the housing 1 causes a lift of said valve until further motion of the same is stopped by the opposing end of the stem 16, the adjustment of this stem and the play of the valve thereon being so proportioned that said valve will only rise far enough to admit escape into housing 1 of the fuel oil required for operating the engine.

The spring 19 has the function of holding the stem 16 from movement during the operation of the engine, except when it is desired to increase the flow of the fuel oil, as in starting the engine, in which case said stem is pushed up by an operator against resistance of said spring.

The supply of oil to the carbureter is controlled by a pin valve 21 of ordinary type, which valve is fitted with a flow channel 22, the same being formed in an offset portion of the cap head 11″ and communicates with the discharge nipple 12, as best shown in Fig. 1.

I claim:

In a carbureter, a housing provided with a mixing chamber having a choke bored intake mouth in communication therewith, the mouth being flared in opposite directions to form a restricted waist-line, and a perforated cap incasing the said mouth; the combination of a fuel supply nipple carried by the cap having its discharge end in alinement with the restricted waist-line of the mouth, a mutilated hub-sleeve in slidable union with the nipple and extending beyond its discharge end, one side of the sleeve being cut away to form an oil delivery deflector, a tapered valve plug carried by said hub sleeve adapted to engage the end of the nipple, a solid surface gravity flutter valve extending from the hub-sleeve for regulating the flow of air through the intake mouth, the said valve being provided with a peripheral slot, and a spring-controlled stem having an annular recess engageable with the valve slot.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

CLARENCE H. PRATT.

Witnesses:

ALICE HENDY,

A. D. PAUL.