G. J. MAYER.

GASOLENE FEED CHAMBER.

APPLICATION FILED OCT. 14, 1909.

1,015,053.

Patented Jan. 16, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

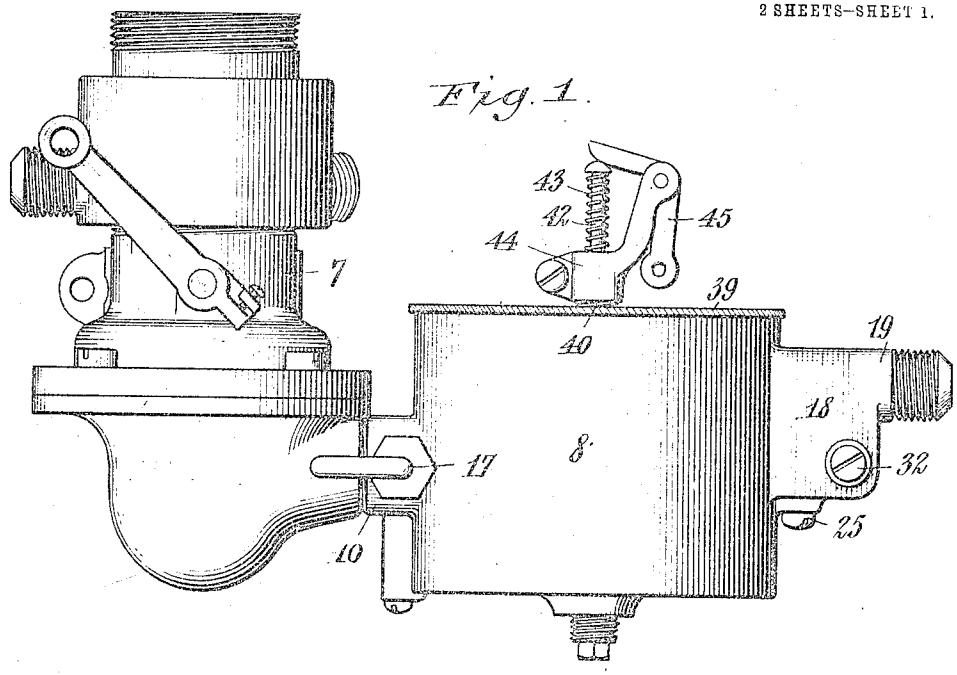
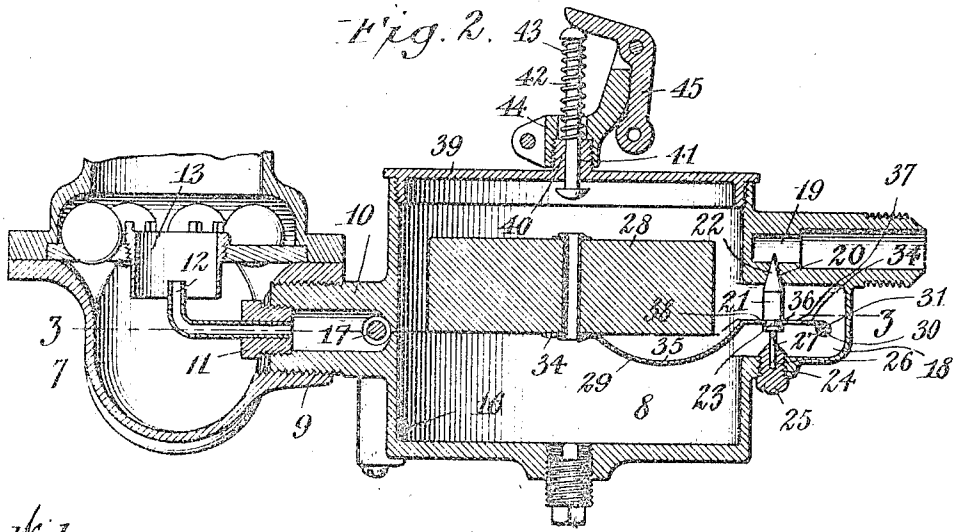


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

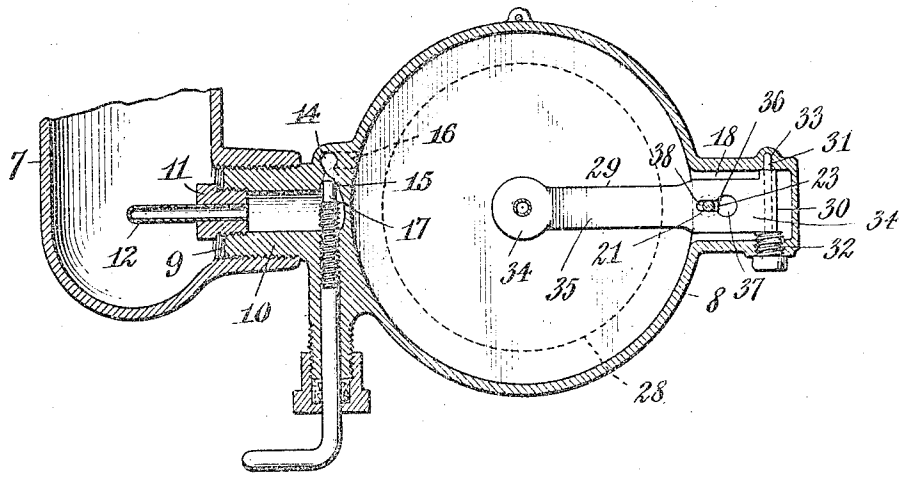


Fig. 5.

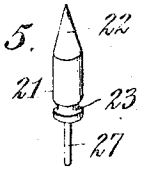


Fig. 4.

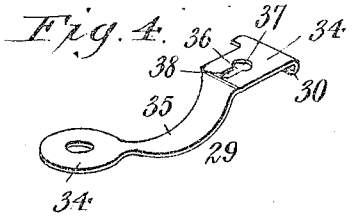
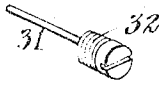


Fig. 6.



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UNITED STATES PATENT OFFICE.

GODFRIED J. MAYER, OF BUFFALO, NEW YORK.

GASOLENE FEED-CHAMBER.

1,015,053. Specification of Letters Patent. Patented Jan. 16, 1912.

Application filed October 14, 1909. Serial No. 522,664.

To all whom it may concern:

Be it known that I, GODFRIED J. MAYER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Gasolene Feed-Chambers, of which the following is a specification.

This invention relates to improvements in gasolene feed-chambers for carbureters, and its object is the production of simple and effective means for regulating the supply of gasolene or other liquid to said chamber; also to render said means accessible so that the parts may be easily removed for examination, cleaning, or repairs.

The invention consists in the construction, arrangement, and combination of parts to be hereinafter described and particularly pointed out in the subjoined claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which,—

Figure 1 is a side elevation of a carbureter equipped with my invention. Fig. 2 is a central vertical section through the gasolene chamber and the lower portion of the carbureter proper. Fig. 3 is a horizontal section taken on line *z*—*z*, Fig. 2. Fig. 4 is a detached perspective view of the oscillating spring-arm or lever. Fig. 5 is a detached perspective view of the inlet-valve. Fig. 6 is a detached perspective view of the pivot-pin to which the spring arm or lever is pivoted.

Referring by numerals to the drawings, 7 designates the carbureter proper to which my improved gasolene feed-chamber 8 is secured. Said carbureter has a threaded opening 9, into which an externally threaded boss 10 formed on said feed-chamber is inserted. Said boss is hollow and at its outer end is threaded internally to receive a bushing 11 having a gasolene nozzle 12 secured therein. Said nozzle extends into the carbureting chamber 13 and air passing over it has an aspirating effect thereon so as to cause gasolene to be vaporized and carried with it to the engine.

A vertical passage 14 is formed in the wall of the feed-chamber and it has connection with the interior of the boss 10 by means of a passage 15 and with the interior of said chamber by a passage 16. In order to govern the flow of gasolene to the aspirating-nozzle 12, a needle-valve 17 is provided which is adjusted to open the passage 15 to any extent desired or to entirely close the same.

The feed-chamber 8 is extended laterally at one point to provide a valve-chamber 18 having an inlet-tube 19 at its upper end and in the wall separating the interior of the tube from said valve-chamber is a tapered passage 20 which serves as a valve-seat for a vertically-movable valve 21 having its upper end tapered, as at 22, to conform to said valve-seat. The body of said valve is cylindrical and near its lower end it has a circumferential groove 23, for a purpose to appear presently. The bottom of said valve-chamber has a threaded opening 24 into which is secured a plug 25 extending into the valve-chamber and provided with an axial bore 26 in which is guided a stem 27 formed on the lower end of the inlet-valve. The portion of said plug extending into said valve-chamber is tapered so that any foreign matter in the gasolene cannot easily become lodged in the bore of said plug and prevent free action of the valve. By tapering said plug as described, any matter dripping thereon from the valve will flow down the tapered face of said plug and lodge on the bottom of the valve-chamber.

A float 28 of any approved construction is placed in the feed-chamber 8 and it has secured thereto one end of a spring-arm or lever 29. The opposite end of said arm or lever is curved upon itself to form an eye 30 through which is passed a pivot-pin 31 having at one end an externally threaded head 32 which is threaded into a threaded opening in one of the side walls of said valve-chamber. The opposite end of said pivot-pin enters a socket 33 formed in the other side wall of said chamber.

The ends of the arm or lever 29 are flat, as at 34, and the intermediate portion is curved, as at 35, to provide the desired resiliency. Adjacent the pivoted end of said arm or lever is a key-hole opening 36, having its circular portion 37 somewhat larger in diameter than the diameter of the valve 21 and its elongated portion 38 is of a size to receive the reduced portion of the valve provided by the circumferential groove 23.

By making the float-arm or lever 29 resilient, it will absorb the jarring to which the feed chamber is subjected without caus-

ing the inlet-valve 21 to open the passage 20, thus guarding against flooding of the carbureter with an overcharge of gasolene.

The feed-chamber has a cover 39 removably applied thereto, which cover has an externally-threaded axial boss 40 provided with a central guide-bore 41 in which is arranged a stem 42 having enlargements at opposite ends. Between the upper enlargement and the upper end of said boss and surrounding said stem is a coil-spring 43 acting to hold said stem in its elevated position. A bracket 44 is threaded onto said boss and is adjustable vertically and rotatably thereon. Pivotally secured to said bracket is an elbow-lever 45 bearing with the end of one of its arms against the upper end of the stem 42 and adapted to have its other arm connected to a draw-rod, or its equivalent, leading to a point within convenient reach of the operator. Upon actuating the elbow-lever, the stem 42 is depressed and engages the float to depress the same. This causes the inlet-valve 21 to become unseated and allows the gasolene to flow into the gasolene chamber to reach a higher than normal level, thereby compelling the gasolene to flow over the end of the aspirating-nozzle in the carbureter and cause what is termed "flooding" of the carbureter, which is often necessary when starting an engine after it has not been in use for some time.

It is apparent that the inlet-valve 21 acts in a similar manner when the level of the gasolene in the feed-chamber lowers, but in such cases, as soon as the gasolene admitted upon opening said valve causes the normal level to be reached, the valve has been brought to its seat to shut-off the supply.

When the parts are to be assembled, the float 28 is placed in the feed-chamber with the free end of the float-arm or lever 29 entered in the valve-chamber 18. The inlet-valve 21 is then introduced into said valve-chamber through the opening 24 in the bottom thereof and passed through the circular portion of the key-hole opening 36 in said arm or lever until the circumferential groove 23 thereof is in line with the elongated portion of said opening. Said arm or lever is then forced outward to place it in proper position, which brings the grooved portion of the valve into said elongated portion of the key-hole opening. The screw-plug 25 is then threaded into position to receive the stem 27 of said valve and guide the latter for vertical movement. The pivot-pin 31 is next screwed into proper place so as to pass through the eye 30 of the float-arm or lever, after which the float is properly held for its oscillating movement and causes the inlet-valve 21 to move with it.

Having thus described my invention, what I claim is,—

1. A gasolene feed-chamber having an inlet and an outlet, a float within said chamber, a valve operatively connected with said float and acting to open and close said inlet, a spring-supported stem held above said float and out of contact therewith, a bracket adjustable vertically on and rotatably around said stem, and an elbow-lever pivoted between its ends to said bracket and adapted to rotate with and to depress said stem with one of its arms.

2. A gasolene feed-chamber having an inlet, an outlet, an externally-threaded boss formed on its top and a bore centrally through said boss, a float within said chamber, an inlet-valve operatively connected with said float, a stem movable within said bore and having an enlargement at its upper end, a spring surrounding said stem between said enlargement and said boss, a bracket threaded onto said boss so as to be adjustable vertically and rotatably thereon, and a manipulating-lever pivoted to said bracket and adapted to actuate said stem, said lever rotating with said bracket.

3. A gasolene feed-chamber having an outlet and a laterally-extended valve-chamber provided with a threaded opening in its lower wall and an inlet in its opposite wall, a screw-plug fitting said threaded opening and having its inner end tapered and provided with an axial guide-bore, said inner end extending upward into said valve-chamber, a valve guided in said bore and acting to open and close said inlet, and a float in said feed-chamber operatively connected with said valve.

In testimony whereof, I have affixed my signature in the presence of two subscribing witnesses.

GODFRIED J. MAYER.

Witnesses:
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CHRIST FEINLE, Jr.