No. 850,223. PATENTED APR. 16, 1907.

W. E. HALLETT.

CARBURETER.

APPLICATION FILED APR. 23, 1906.

FIG. 2.

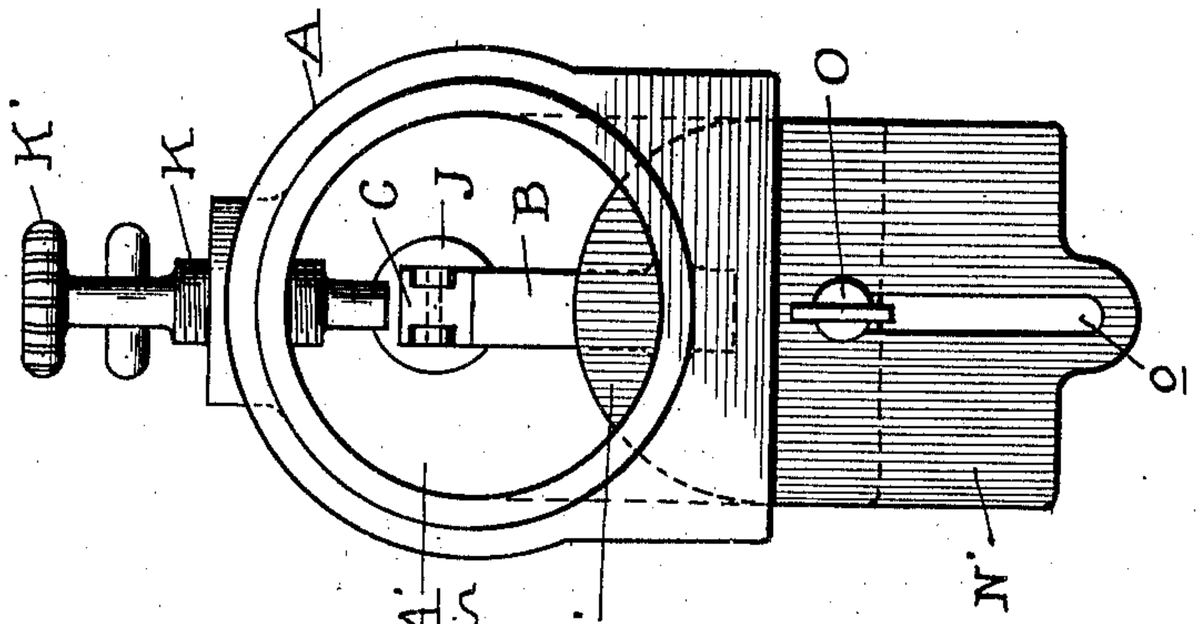


FIG. 1.

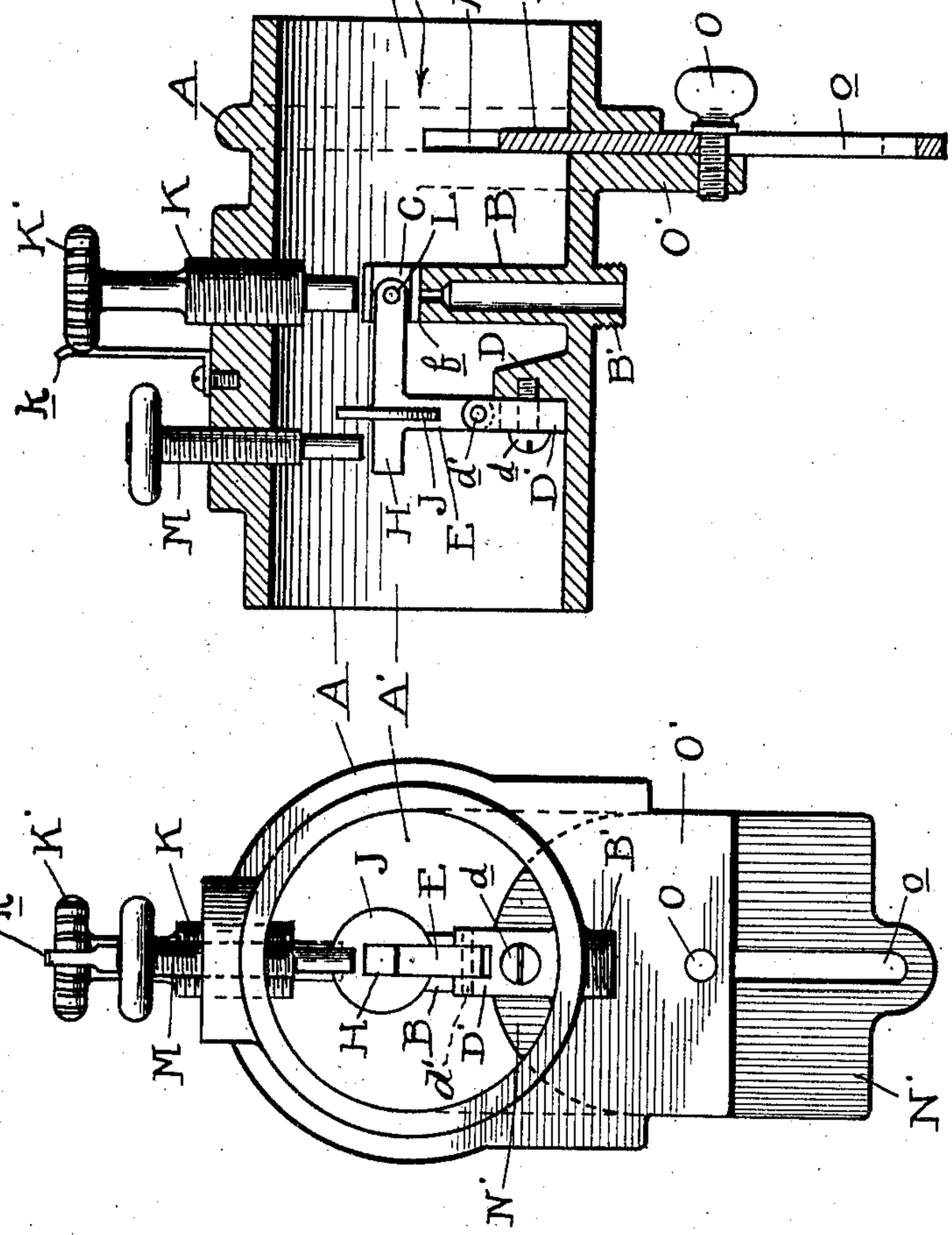
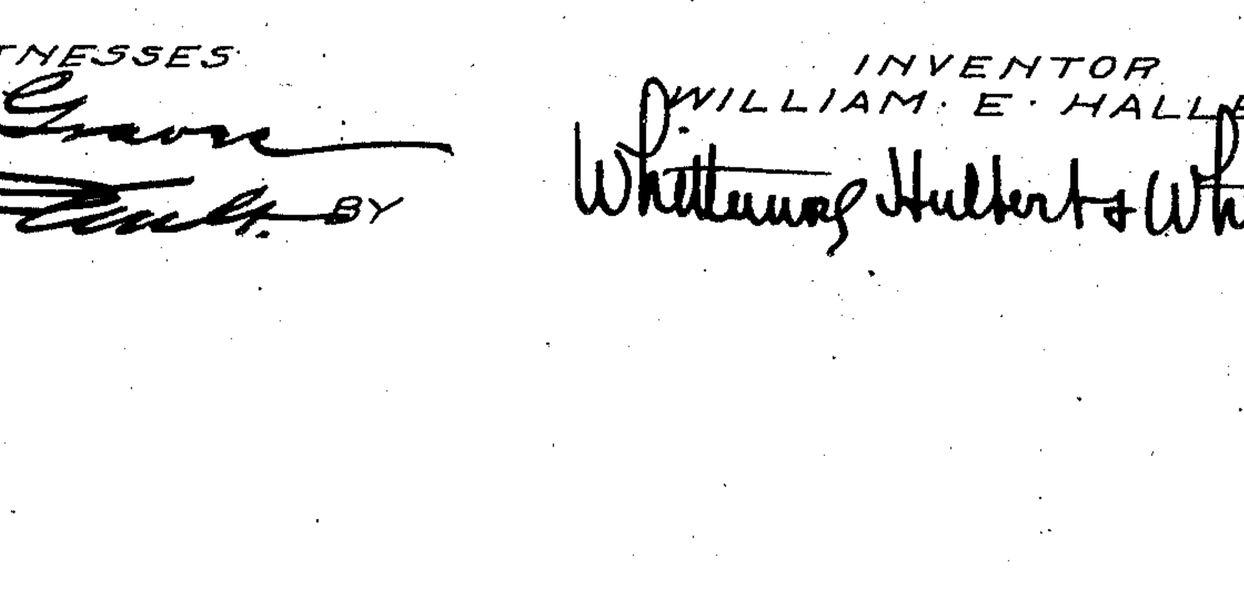


FIG. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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CARBURETER.

No. 850,223. Specification of Letters Patent. Patented April 16, 1907.

Application filed April 23, 1906. Serial No. 313,339.

To all whom it may concern:

Be it known that I, WILLIAM E. HALLETT, a citizen of the United States of America, residing at Hillsdale, in the county of Hillsdale and State of Michigan, have invented certain new and useful Improvements in Carbureters, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to carbureters for explosion-engines, and consists particularly in a novel and useful construction and arrangement of parts, as will be more fully hereinafter described, and particularly pointed out in the claims.

In the drawings, Figure 1 shows a longitudinal central section through the carbureter. Fig. 2 is a view in elevation of the air-inlet end, and Fig. 3 is a view in elevation of the outlet end, of the carbureter.

A is a hollow casing forming a preferably cylindrical passage A′, through which passes the air-current induced by the suction-stroke of the engine in the direction of the arrow shown in Fig. 1.

B is the gasolene-nozzle, projecting into the air-passage and preferably provided with a nipple B′ for connection with a suitable float-chamber or other means for maintaining a constant fuel-feed. The end *b* of the nozzle is preferably provided with a plane surface to form a seat for the block-valve C, and the upward movement of the valve is limited by an adjustable stop K, passing through the wall of the casing and having a screw-threaded engagement therewith. For holding the stop in any desired position of adjustment I preferably provide a spring *k*, secured to the casing and engaging the milled head K′ of the stop, as shown. However, it is obvious that a suitable jam-nut may be used for this purpose, if desired.

A lug D is arranged in the casing adjacent to the nozzle, and to this lug is secured, by means of a screw *d*, the member D′, having its upper end bifurcated. Between the furcations of the member D′ is pivoted one end of the angled or inverted L-shaped lever E on the pin *d*′, and the other end of the lever engages the block-valve C, the end of the lever being bifurcated and the central portion of the block preferably being reduced to fit between the furcations where it is pivoted on the pin L.

On the lever E, I arrange a disk J of restricted area, but sufficiently large to be moved to rock the lever by the impinging thereon of the air-current when the engine is running under its own power. With this disk of the proper size, the size being determined by the bore and the stroke of the engine, it will not restrict the air-passage sufficiently to throttle the engine, but when the engine is being started the air-current will not be sufficient to move the disk and rock the lever to lift the valve C.

For starting the engine I provide a screw-threaded rod M, passing through the wall of the casing and engaging an arm H, projecting from the lever alined with and opposed to the lever-arm which carries the valve. Thus by screwing down the rod H the valve will be lifted to allow the flow of sufficient gasolene to form the proper mixture to start the engine.

I preferably arrange the valve-carrying arm of the lever horizontal and the lever-stem vertical in order to permit the valve-block to be seated and held to its seat by gravity, thus obviating the necessity for a spring.

Near the inlet end of the casing is a transverse slot N, in which is inserted a slide-valve N′, and for holding this slide in the desired position of adjustment I preferably provide a thumb-screw O, passing through a slot *o* in the slide and engaging a lug O′, projecting from the casing.

By arranging the carbureter as shown and described the air is taken directly across the gasolene-nozzle when the valve is lifted, and the meeting faces of the valve-block and nozzle being plane and the block being pivoted, a perfect seating of the valve is assured. Another advantage of this construction is that the valve will not rebound from its seat and permit leakage or flooding.

What I claim as my invention is—

1. In a carbureter, the combination with a hollow casing forming an air-passage and a gasolene-nozzle projecting into said passage, in the path of the air-current of a lever pivoted adjacent to said nozzle, a disk on said lever in path of the air-current in said passage, a projection on said lever extending over said nozzle and a valve pivoted on said projection, for the purpose described.

2. In a carbureter, the combination with a hollow casing and a gasolene-nozzle projecting therein, having a plane surface on its end of a pivoted block arranged to seat on said plane surface, for the purpose described.

3. In a carbureter, the combination with a hollow casing and a gasolene-nozzle projecting therein having a plane surface forming a valve-seat, of a pivoted block-valve arranged to seat on said nozzle and means for automatically raising said block, for the purpose described.

4. In a carbureter, the combination with a hollow casing and a gasolene-nozzle projecting therein, of a block pivoted and arranged to seat on said nozzle, automatic means for raising said block, and means for positively raising said block, said means being adjustable and self-sustaining in all positions of adjustment for the purpose described.

5. In a carbureter, the combination with a hollow casing and a gasolene-nozzle projecting therein, of a valve for said nozzle, automatic means for lifting said valve and adjustable self-sustaining means for positively lifting and holding said valve in its lifted position.

6. In a carbureter, the combination with a hollow casing forming a passage for the air-current and a gasolene-nozzle projecting therein, of an angled lever pivoted adjacent to said nozzle, a valve for said nozzle pivoted on said lever whereby the rocking of said lever will raise said valve, means for automatically rocking said lever to lift said valve, said means operating on the passage of a predetermined volume of air through said passage, and adjustable means for positively lifting said valve, for the purpose described.

7. In a carbureter, an oil-nozzle having a plane surface on its end and a pivotally-supported valve arranged to seat on said plane surface.

8. In a carbureter, the combination with a casing, of an oil-nozzle therein, a pivoted block-valve arranged to seat on said nozzle, and adjustable means operating to hold said valve open, for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. HALLETT.

Witnesses:
HORACE M. JEROME,
J. R. HADLEY.