

A. GOSSÉ.
CARBURETER.

APPLICATION FILED JAN. 6, 1905.

2 SHEETS—SHEET 1.

FIG. 1.

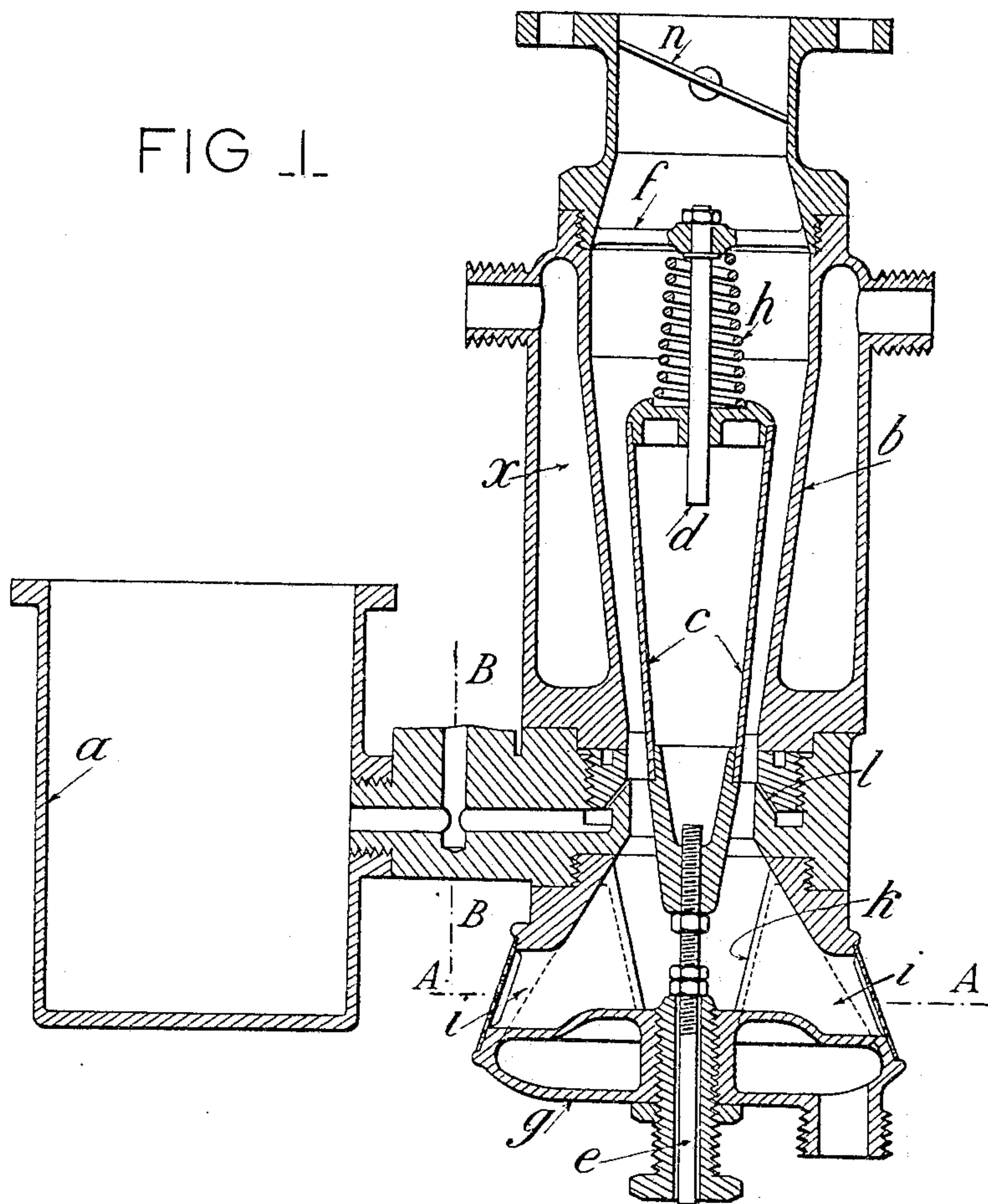


FIG. 2.

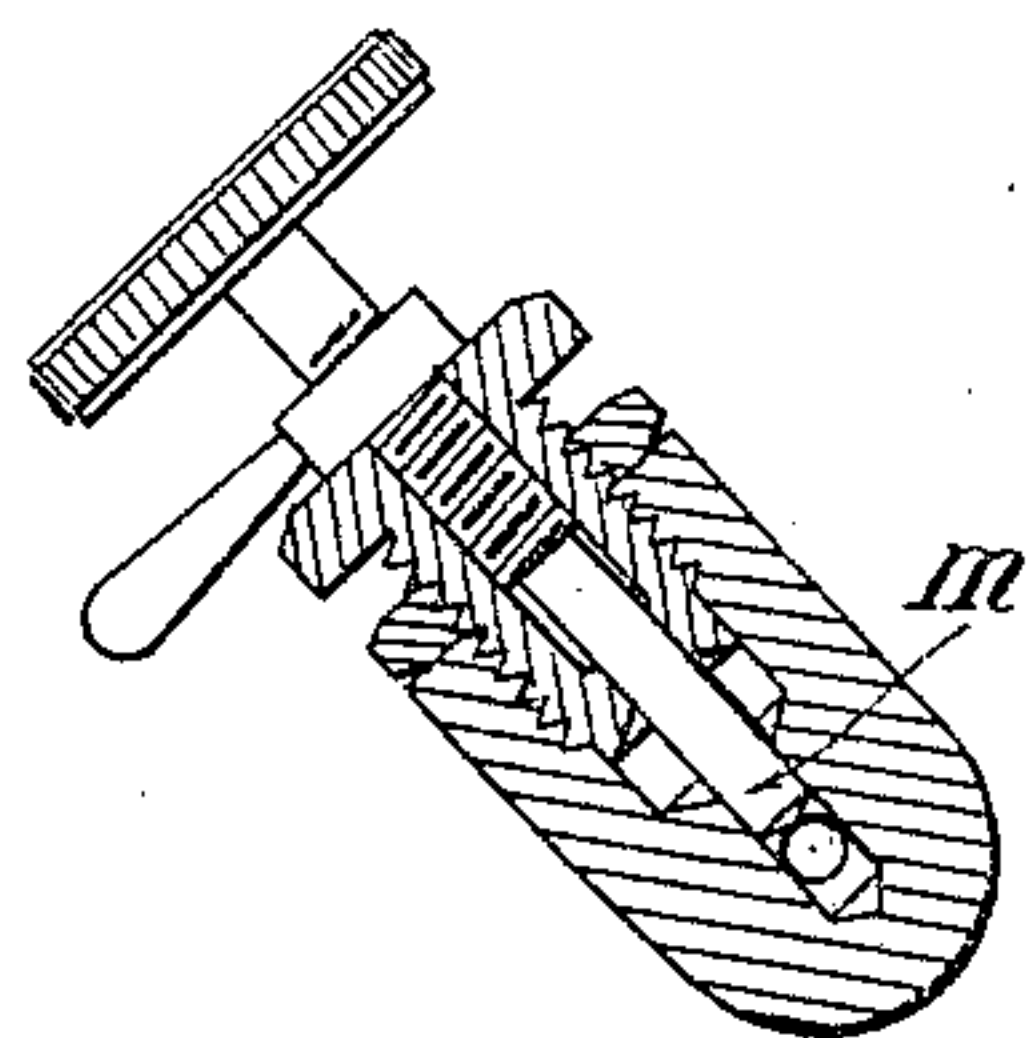
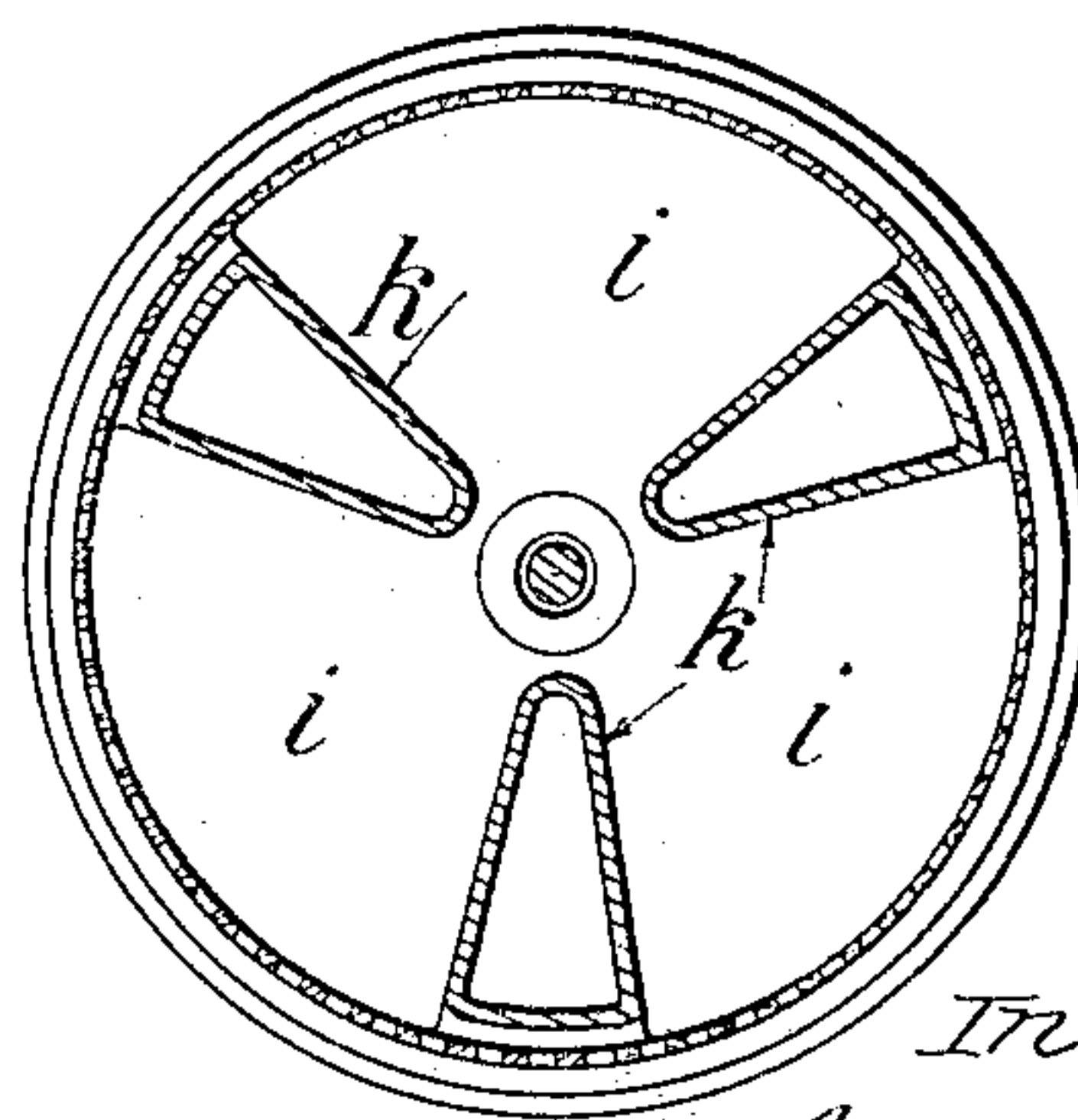


FIG. 3.



Witnesses
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2 SHEETS—SHEET 2.

FIG 4.

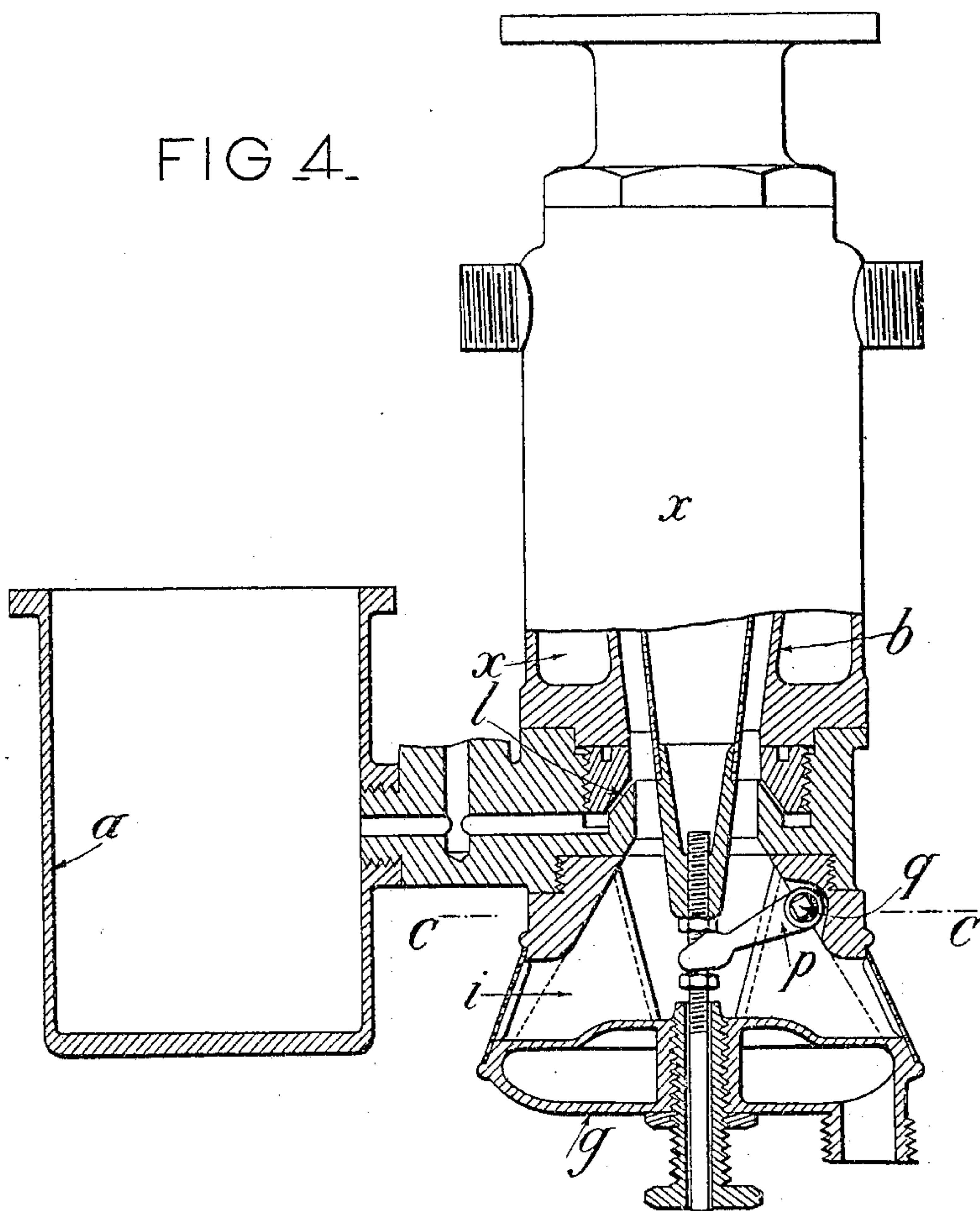
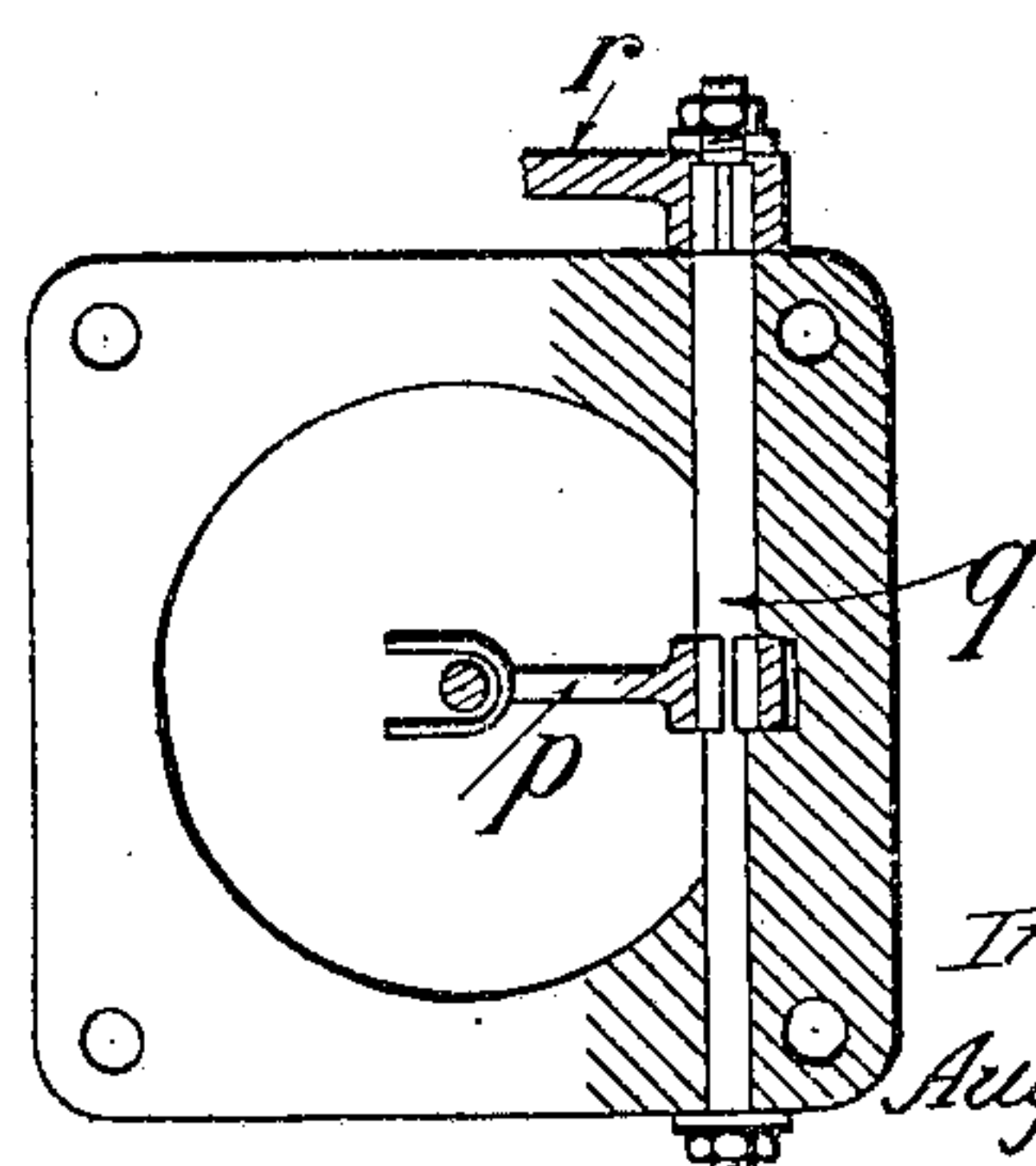


FIG 5.



Witnesses

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UNITED STATES PATENT OFFICE.

AUGUSTE GOSSÉ, OF PETIT-BOURG, SEINE AND OISE, FRANCE, ASSIGNOR
TO SOCIÉTÉ NOUVELLE DES ÉTABLISSEMENTS DECAUVILLE AÎNÉ, OF
PETIT-BOURG, SEINE AND OISE, FRANCE.

CARBURETER.

No. 799,232.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed January 6, 1905. Serial No. 240,041.

To all whom it may concern:

Be it known that I, AUGUSTE GOSSÉ, civil engineer, a citizen of France, residing at Petit-Bourg, Seine and Oise, in the Republic
5 of France, have invented new and useful Improvements in Carbureters, of which the following is a specification.

This invention relates to an improved construction of carbureter for internal-combustion motors which insures by very simple means a regular action of the apparatus and constant composition of the mixture at different speeds of the motor, the said carbureter being at the same time of great strength and
15 occupying a very small space.

The apparatus principally comprises, in addition to the usual constant-level feed, a vertical chamber having a conical interior wall widening toward its upper end and
20 adapted to receive the air at one end and a movable conical member also vertically disposed and displaceable in the aforesaid chamber in an axial direction for the purpose of regulating the annular section of the air-inlet
25 passage. The said movable member is adapted to move freely and may be simply under the action of a spring, so that the variations of speed of the motor create varying degrees of depression in the carbureter,
30 which cause the displacement of said movable member, thus producing variations in the annular section of the air-inlet passage proportionally to the speed of the motor and insuring a constant carburization. The said
35 movable member can also be operated mechanically by a movable part of the motor, according to the speed of the latter.

The invention also relates to the novel arrangement and combination of the component parts of the carbureter, of which the
40 following description will explain the action.

In the annexed drawings, Figure 1 is a vertical section of the complete carbureter, showing a construction in which the movable
45 member is automatically regulated by the suction of the motor. Fig. 2 is a horizontal section on the line A A of Fig. 1. Fig. 3 is a section on the line B B of Fig. 1, showing the fuel-supply cock. Fig. 4 is a vertical section,
50 partly in elevation, of a carbureter with mechanically-operated movable member. Fig.

5 is a partially horizontal section on the line C C of Fig. 4, showing the means for mechanically operating said movable member.

Referring to Figs. 1 to 3, it will be seen 55 that the carbureter comprises an ordinary constant-level feed *a* and the body of the carbureter proper. The latter comprises a vertical conical chamber *b*, having its wider end at the top, this chamber communicating at 60 its lower end—that is to say, its smaller end—with the air and fuel supply and at its upper end with the suction-space of the motor. Axially within the chamber *b* is located the movable member or light hollow cone *c*, with 65 its wider diameter above and guided at both ends by rods *d* and *e*, one of which, *d*, is fixed to a spider *f* and passes easily through the upper end of said cone *c*. The other rod *e* is fixed to the lower end of the cone *c* and slides 70 in a cast-iron bracket *g*, connected to the walls of the chamber *b*. The cone *c* regulates the annular section of the air-inlet produced between itself and the walls of the chamber *b*, so that by displacing the cone 75 longitudinally this section can be varied. A spring *h*, the tension of which is adjusted for each motor, tends to press the cone *c* downward. According as the degree of depression in the chamber *b*, produced by the suction of 80 the motor, increases with the speed of the motor the cone *c* is more or less raised, thus increasing the annular section of the air-passage and automatically maintaining constant composition of the mixture. The air passes 85 into the carbureter through the radial apertures *i*, arranged around the bracket *g*, the latter being in the form of a spider with hollow wings or arms *k* and its lower part being hollow for reception of the circulation-water 90 from the motor, water at the same time also passing into the arms *k*, and thus partly heating the air on its way to the mixing-chamber. A similar circulation takes place in the jacket *x*, surrounding the chamber *b* of the carbureter. 95 The inlet of liquid fuel to the carbureter preferably takes place through the small channels *l*, arranged between two conical surfaces around the air space or inlet. Between the constant-level feed and the body of the carbureter a regulating-cock having a pin-valve 100 or the like *m* will usually be arranged for con-

trolling the passage of the liquid, and in the upper part of the mixing-chamber is arranged a damper *n*, controlled by the governor.

Referring to Figs. 4 and 5, it will be seen that
 5 the component parts of the carbureter remain the same as in the construction described, with the exception that the movable member or cone *c* instead of being displaced automatically by the suction of the motor is
 10 operated mechanically by a lever *p*, connected by means of a spindle *q*, fixed to said lever, and an exterior arm *r* to a part of the motor, the position of which varies according to the speed—for instance, the device for con-
 15 trolling the ignition. The spring *h* is then dispensed with. Constant carburization is by this means also completely assured, since the movable member *c* is raised or lowered me-
 20 chanically by degrees as the speed of the motor increases or decreases, thus proportionally augmenting or diminishing the section of air-passage to the carbureter.

Having now described my invention, what I claim as new, and desire to secure by Let-
 25 ters Patent, is—

1. A carbureter comprising in combina-
 tion a vertical conical chamber *b* having its
 larger end uppermost, a water-jacket *x* sur-
 30 rounding said chamber, inclined channels *l*
 for the inlet of liquid fuel arranged around
 said chamber at its lower part, a liquid-fuel
 receptacle with constant-level feed *a* in com-
 munication with said channels, a cast-metal
 35 bracket *g* attached to the lower part of said
 conical chamber below the inlet-channels,
 radial apertures *i* in said bracket for the en-
 trance of air to the chamber *b*, hollow wings
k between said apertures communicating
 with the hollow bottom of the bracket for the

circulation of heated water, a movable ver- 40
 tical hollow cone *c* having its larger end up-
 permost and located in the axis of the afore-
 said chamber, and means for guiding said
 cone in its longitudinal movements substan-
 tially as described and for the purpose set 45
 forth.

2. A carbureter comprising in combina-
 tion a vertical conical chamber *b* having its
 larger end uppermost, a water-jacket *x* sur-
 50 rounding said chamber, inclined channels *l*
 for the inlet of liquid fuel, arranged round said
 chamber at its lower part, a liquid-fuel recep-
 tacle with constant-level feed *a* in commu-
 nication with said channels, a cast-metal
 bracket *g* attached to the lower part of said 55
 conical chamber below the inlet-channels,
 radial apertures *i* in said bracket for the en-
 trance of air to the chamber *b*, hollow wings *k*
 between said apertures communicating with
 the hollow bottom of the bracket for the cir- 60
 culation of heated water, a movable ver-
 tical hollow cone *c* having its larger end up-
 permost and located in the axis of the afore-
 said chamber, means for guiding said cone in
 its longitudinal movements, a lever *p* in en- 65
 gagement with said cone *c*, a spindle *q* fixed
 to said lever, and an operating-arm *r* keyed
 to the spindle outside the apparatus, sub-
 stantially as described and for the purpose
 set forth. 70

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

AUGUSTE GOSSÉ.

Witnesses:

JOHN BAKER,
 ANTOINE LAVOIX.