

No. 794,859.

PATENTED JULY 18, 1905.

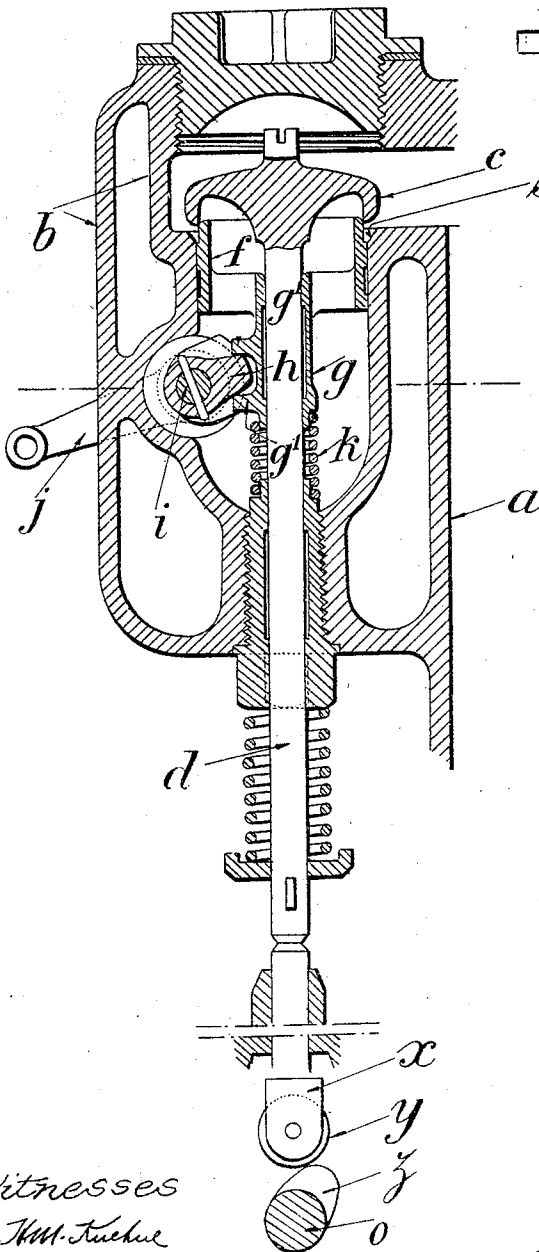
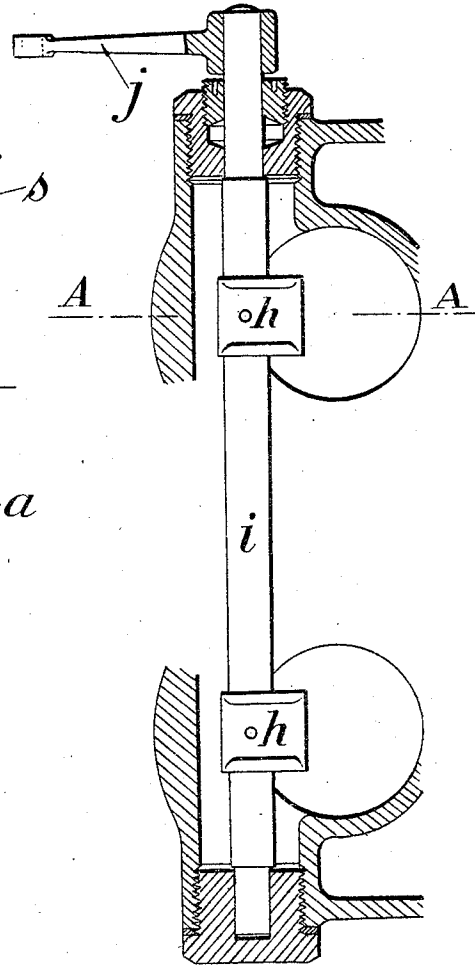
A. GOSSE.

FUEL CONTROLLING MEANS FOR INTERNAL COMBUSTION MOTORS.

APPLICATION FILED JAN. 6, 1905.

FIG 1_

FIG 2_



Witnesses

Wm. Tucker

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

FUEL-CONTROLLING MEANS FOR INTERNAL-COMBUSTION MOTORS.

SPECIFICATION forming part of Letters Patent No. 794,859, dated July 18, 1905.

Application filed January 6, 1905. Serial No. 239,937.

To all whom it may concern:

Be it known that I, AUGUSTE GOSSÉ, civil engineer, a citizen of France, residing at Petit-Bourg, Seine-et-Oise, in the Republic of France, have invented new and useful Improvements in Fuel-Controlling Means for Internal-Combustion Motors, of which the following is a specification.

This invention relates to improvements in means for controlling the supply of fuel to the cylinders of internal-combustion motors; and its object is to effect the control without in any way altering the arrangement or action of the gear which controls the supply-valve, the latter being operated by a cam or the like to the same extent during each cycle. For this purpose an auxiliary slide-valve or the like is provided, said slide-valve being concentric with the main supply-valve and adapted to be displaced in the direction of the axis of the latter, so that the passage provided for the fuel by the main valve during each suction stroke can be more or less throttled by means of the auxiliary valve, if desired.

The invention is illustrated in the annexed drawings, in which—

Figure 1 is a section of the valve-box on the line A A of Fig. 2, and Fig. 2 a partial horizontal section of the valve-box of a two-cylinder motor, this section being taken through the axis of the shaft by means of which the auxiliary slide-valves are operated and all the valves being removed.

Referring to Fig. 1, *a* is the wall of a motor-cylinder; *b*, a valve-box cast in one with the said cylinder; *c*, the supply-valve; *s*, the seat of the valve; *d*, the guiding-rod of the valve; *e*, the forked arm arranged below the rod and carrying the roller *y*, against which the cam *z*, keyed on the rotary shaft *o*, is adapted to act. The valve *c* is raised by the cam *z* to the same extent at each cycle, whatever may be the quantity of mixture admitted.

The supply of fuel to the cylinder is regulated by means of the slide-valve *f*, which allows of obtaining any rate of supply between full admission and complete cut-off. The said slide-valve is fixed to a sleeve *g*, slidable

on the valve-rod *d* and adapted to be operated by means of a short arm or lever *h*, which engages between two lugs *g'* *g'* on the sleeve *g*. The arm or lever *h* is fixed to a shaft *i*, by means of which the auxiliary slide-valve can be operated for regulating the supply of fuel. A lever *j* is fixed to the shaft *i* and may be connected to a controlling device situated at a distance from the motor—for instance, to a controlling device mounted on the steering-wheel of an automobile vehicle. It will be seen that the movement of the lever *j* will cause the slide-valve *f* to be displaced in such a manner that the section of passage for the fuel passing to the cylinder when the valve *c* is open is increased or reduced. A spring *k*, bearing against the sleeve *g* and the guide of the valve-rod *d*, serves to keep the said sleeve in close contact with the lever *h*. The shaft *i* has bearings in the valve-box, a stuffing-box being used to prevent the entrance of air to the valve-chamber.

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

1. A device for controlling the supply of fuel to the cylinders of internal-combustion motors, comprising a valve-box *b* communicating with a motor-cylinder *a*, a seat *s* on the valve-box, an inlet-valve *c* guided in the valve-box and adapted to engage the seat, a cam *z* raising at each stroke the valve *c* to the same extent beyond its seat, a cylindrical throttle slide-valve *f* concentric with the inlet-valve *c* and movable in the valve-box in order to throttle all or part of the annular opening between the valve and seat uncovered by the inlet-valve when it is raised, and means for moving the slide-valve *f*, substantially as described and for the purpose set forth.

2. A device for controlling the supply of fuel to the cylinders of internal-combustion motors, comprising a valve-box *b* communicating with a motor-cylinder *a*, a seat *s* on the valve-box, an inlet-valve *c* guided in the valve-box and adapted to engage the seat, a cam *z* raising at each stroke the valve *c* to the same extent beyond its seat, a cylindrical throttle

slide-valve *f* concentric with the inlet-valve *c* and movable in the valve-box in order to throttle all or part of the annular opening between the valve and seat uncovered by the inlet-valve when it is raised, a sleeve *g* slidable on the valve-rod *d* and made integral with the slide-valve *f*, lugs *g' g'* on one side of the sleeve *g*, a small lever *h* engaging the lugs of the sleeve *g*, a distributing-shaft *i* arranged crosswise in the valve-box and carrying the lever *h*, an operating-lever *j* keyed on the shaft *i* outside the valve-box, means for rendering air-tight the openings through which

the shaft *i* traverses the valve-box, and a spring *k* keeping constantly the sleeve *g* in close contact with the lever *h* of the shaft *i*, substantially as described and for the purpose set forth. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 20

AUGUSTE GOSSÉ.

Witnesses:

JOHN BAKER,
ANTOINE LAVOIX.