

(No Model.)

J. J. MYERS.  
AUTOMATIC GAS GOVERNOR.

No. 522,480.

Patented July 3, 1894.

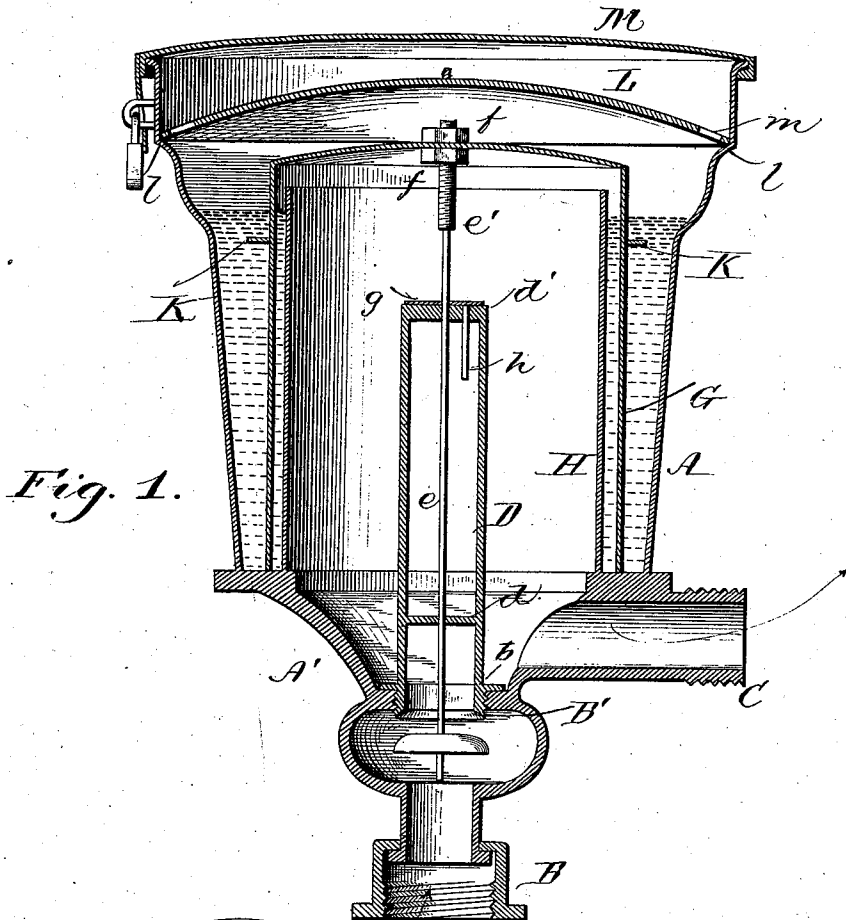
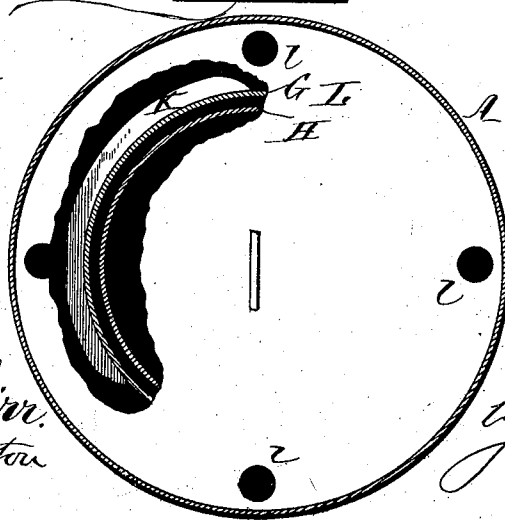


Fig. 1.

Fig. 2.



Witnesses:

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# UNITED STATES PATENT OFFICE.

JOHN J. MYERS, OF BALTIMORE, MARYLAND.

## AUTOMATIC GAS-GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 522,480, dated July 3, 1894.

Application filed December 6, 1893. Serial No. 492,911. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. MYERS, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Automatic Gas Governors or Controllers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to automatic gas governors or controllers of that class in which the governor or controller comprises a tank or cup containing a supply of liquid, such as glycerine, and a reciprocating valve attached to a cylindrical float.

This invention consists, first, in the novel construction, combination and arrangement of parts hereinafter described; second, in providing the float drum with protecting fins to equalize the resistance, and prevent vibration or fluttering of the valve; third, in providing the glycerine tank with a double, removable top forming a separate chamber in the upper part of the tank for the reception and retention of the liquid raised under the influence of back pressure.

In the accompanying drawings, Figure 1 is a vertical, central section of the governor or controller embodying my invention. Fig. 2 is a horizontal section on line X—X of Fig. 1.

A designates the casing or shell of the governor, consisting of an inverted bell-shaped structure having connection B, C for attachment to the meter, and service pipe respectively.

The base A' of the structure is a casting, having above the inlet B a threaded, enlarged aperture B', forming the seat for an externally threaded flanged ring *b*, constituting the valve seat, and constructed with or having attached to it a skeleton frame D, having cross bars *d*, *d'*, through which the stem *e*, of the valve plays.

G designates the float or drum, which is attached to the upper part of the valve stem, and covers the cylindrical wall H supported on the base of the casing A.

The stem *e* has a threaded enlargement *e'* at its upper end, which passes through an aperture in the top of the drum, and carries two nuts, *f*, *f*, which secure the drum and valve

stem together, but allow them to be easily separated.

To the stem *e* is secured a plate *g* provided on the under side with a pin *h*, which passes through a hole in the top of the frame D, and acts as a guide or feather to hold the valve in position after being first properly adjusted to its seat. In adjusting the valve to its seat the valve is first attached to the stem *e*, and the plate *g*, being loose on the stem, the valve is turned around on its seat until it is seen that it makes a perfect joint with the seat. The plate *g*, is then soldered to the stem and the stem and valve are thus prevented from turning but are allowed to move freely in the direction of the length of the stem.

The valve and its connections, as described, are removable without disorganization of the other parts of the structure.—Heretofore the valve has been so constructed and arranged, that when cleansing or repair is required the entire structure had to be removed, and as frequent cleaning is required the work is troublesome and expensive.

On the outside of the float drum are arranged the fins K, K, which offer an obstruction to the too rapid rise and fall of the drum and valve, and hence prevent fluttering or vibration.

L, designates an inner supplementary cover consisting of a concavo-convex plate resting at its edge or rim on a shelf or bead *l* formed within the casing above the float drum and pierced around its rim with holes *m*, which, when there is an excess of normal pressure within the float drum acts as a splash plate to prevent the glycerine from splashing or bubbling up against the top edge of the casing or the bottom of the casing cover and exuding through the joint between the casing and the cover of the same. With this supplementary cover or splash plate in position when there is an excess of the normal pressure within the float drum sufficient to force the glycerine up to the level of the edge of the splash plate and when the gas causes the glycerine to splash or bubble, the glycerine will exude through the holes in the plate L, and, when the abnormal pressure ceases, return to its normal position in the tank. The supplementary cover or splash plate will thus prevent the impairment of the seal of the gov-

ernor and serve to maintain a sufficient quantity of glycerine in the tank at all times, whereas if the supplementary cover be omitted the splashing of the glycerine against the outer cover and the consequent exudation of the glycerine through the joint of the outer cover will eventually reduce the quantity of glycerine in the tank to such an extent as to destroy the usefulness of the governor.

The casing is provided with an outer cover or cap M, which is secured by a padlock to prevent meddling with the valve.

It is necessary that the supplementary cover L, should rest with its edge or rim a considerable distance below the edge of the outer cover or cap M, so as to prevent the glycerine when it bubbles up through the supplementary cover from reaching the top of the tank, as, if the main and supplementary covers were close together, their edges would form a common joint and the supplementary cover would aid rather than prevent the escape of glycerine.

The outer cover or cap M, should not be tightly or hermetically fitted to the casing and may be provided with a small vent hole, so as to avoid compression of the air within the casing and the holes in the supplementary cover allow the air to pass freely through the cover so as to avoid any compression of the air beneath the same, as any considerable compression of the air would interfere with the proper action of the apparatus.

Having described my invention, I claim as new and desire to secure by Letters Patent— 35

1. In an automatic gas governor or controller, the combination of a casing having inlet and outlet ports and a float drum, with a removable valve and valve seat, said valve seat consisting of a threaded ring fitting a threaded opening in the base of the casing and having formed or attached thereto an upright frame D, having holes in the top for the passage of the valve stem and guiding pin and the valve stem soldered to the valve and carrying the plate G soldered to said stem and provided with a guiding pin H, substantially as described. 45

2. In an automatic gas governor or controller, the combination with the valve, the float drum, the exterior casing and the unsealed or pervious main cover, of the removable supplemental perforated cover or splash plate L, seated within the casing below the upper edge thereof and leaving a clear space between the upper edge of the casing and the top of said supplemental cover, sufficient to accommodate any glycerine that may be forced through the supplemental cover, substantially as described. 55

In testimony whereof I affix my signature in presence of two witnesses. 60

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Witnesses:

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M. MERTZ.