S. D. BALDWIN.

Gas-Governor.

No. 168,551. Patented Oct. 11, 1875.

Fig. 3.

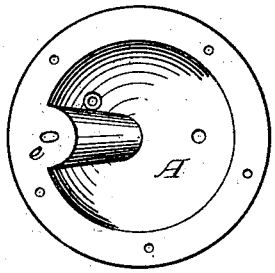

Fig. 1.

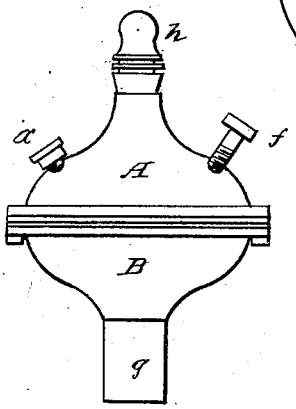

Fig. 2.

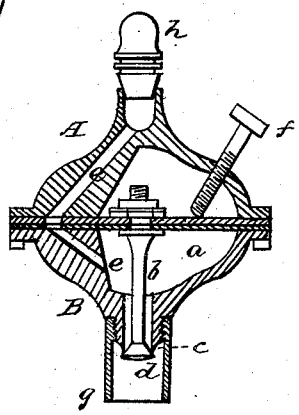

Fig. 4.

WITNESSES:

E. A. West

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SILAS D. BALDWIN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN GAS-GOVERNORS.

Specification forming part of Letters Patent No. **168,551**, dated October 11, 1875; application filed December 11, 1874.

To all whom it may concern:

Be it known that I, SILAS D. BALDWIN, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gas-Governors, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation; Fig. 2, a vertical section; Fig. 3, a bottom view of the upper section, and Fig. 4 a vertical section of the cap enlarged.

This invention relates to gas-governors, having for its object to improve the same; and consists in the combination of the sections, interior passage, and diaphragm, which serves as a packing, as will be hereinafter more fully set forth.

In the drawings, A represents the upper half or section of a gas-governor; B, the lower half; *a*, the diaphragm; *b*, the valve-stem; *c*, the sharp valve-seat; *d*, the valve; *e*, the gas-passage; *f*, the regulating-screw; *g*, the gas-pipe, and *h* the burner. *x y* is an opening for large governors, to be used in the place of the screw *f* in the small governors, which are made a part of the gas-burner.

In constructing a governor of large size, to be applied to the pipes, the only change desired is the change from the screw *f* to the opening *x y*, which is made large enough for the introduction of weights to be placed upon and regulate the diaphragm, and closed with wax and a seal-cap, *x*, as shown at Fig. 4.

In the form shown the governor is made a part of the burner, and in this form the opening and cap *x y* are not required or used.

I make the governor in two sections or hemispheres, as shown, and provide them with flanges, so that they can be riveted or bolted together, and hold the diaphragm in place.

The diaphragm *a* is stretched across and between the hemispheres A B, as shown at Fig. 2. At the center there is suspended from this diaphragm *a* a valve-stem, *b*, by suitable collars and screws, at the lower end of which is placed a conical valve, *d*, which vibrates up and down, according to the pressure on the diaphragm. To prevent the sticking of this valve *d* I cut away the outer portion of its seat, so as to produce a sharp edge on the inside, so that whenever the drops of tar fall or run down upon the valve the sharp edge will cut them off, and clear the valve and prevent its permanent sticking, and prevent the retaining of the tar on the valve-seat.

In order to start the valve, in case it should by any means become stuck, I provide the governor with the screw *f*, by which the valve can be pressed down so as to start it, or keep it permanently open, if desired, and also to regulate the extent of the lifting of the diaphragm. This screw may be so inserted as to come in contact at its lower end with the metal of the valve-stem, if desired.

The gas-passage *e* is formed by boring or drilling a hole through a small portion of the metal left on the inside of the chamber, as shown, a hole being made in the diaphragm to correspond with the holes in the metal. By this arrangement I take the gas around the upper or air chamber without taking it outside of the governor.

The burner *h* may be made of any of the known forms, and the device is attached to the gas-pipe in the usual manner.

By this arrangement I make a governor which is simple in its construction, and which is efficient in its operation for a very long period of time.

What I claim as new is as follows:

1. The combination of the sections A B and the interior gas-passage *e* with the diaphragm *a*, serving as a packing for the sections and gas-passage, all constructed and arranged substantially as specified.

2. The combination of the self-sealing cap-opening *x y* with a gas-governor, substantially as specified.

SILAS D. BALDWIN.

Witnesses:

E. A. WEST,

O. W. BOND.