

(No Model.)

G. H. GREGORY.
GAS GOVERNOR.

No. 414,525.

Patented Nov. 5, 1889.

Fig. 1.

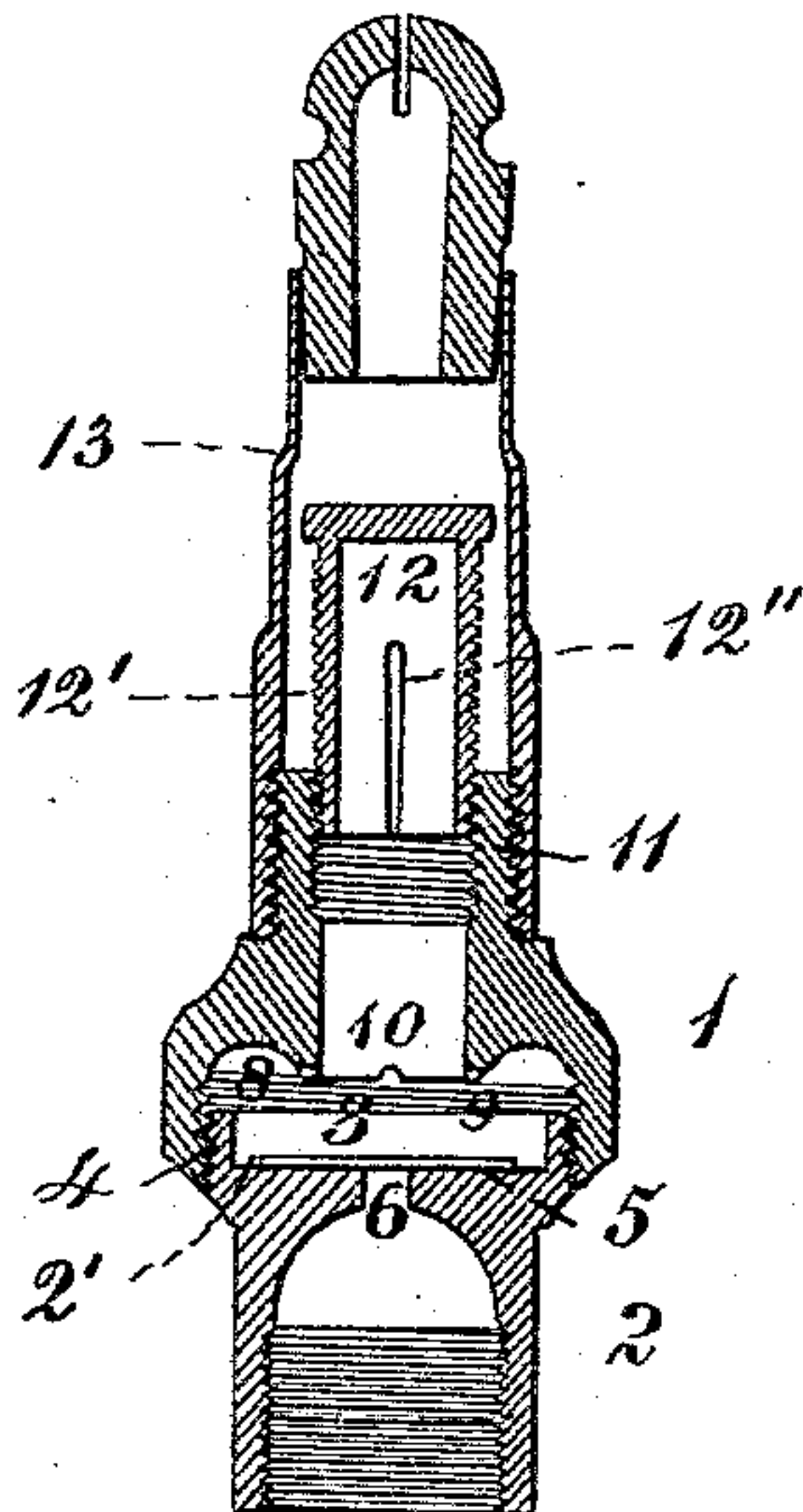


Fig. 2.

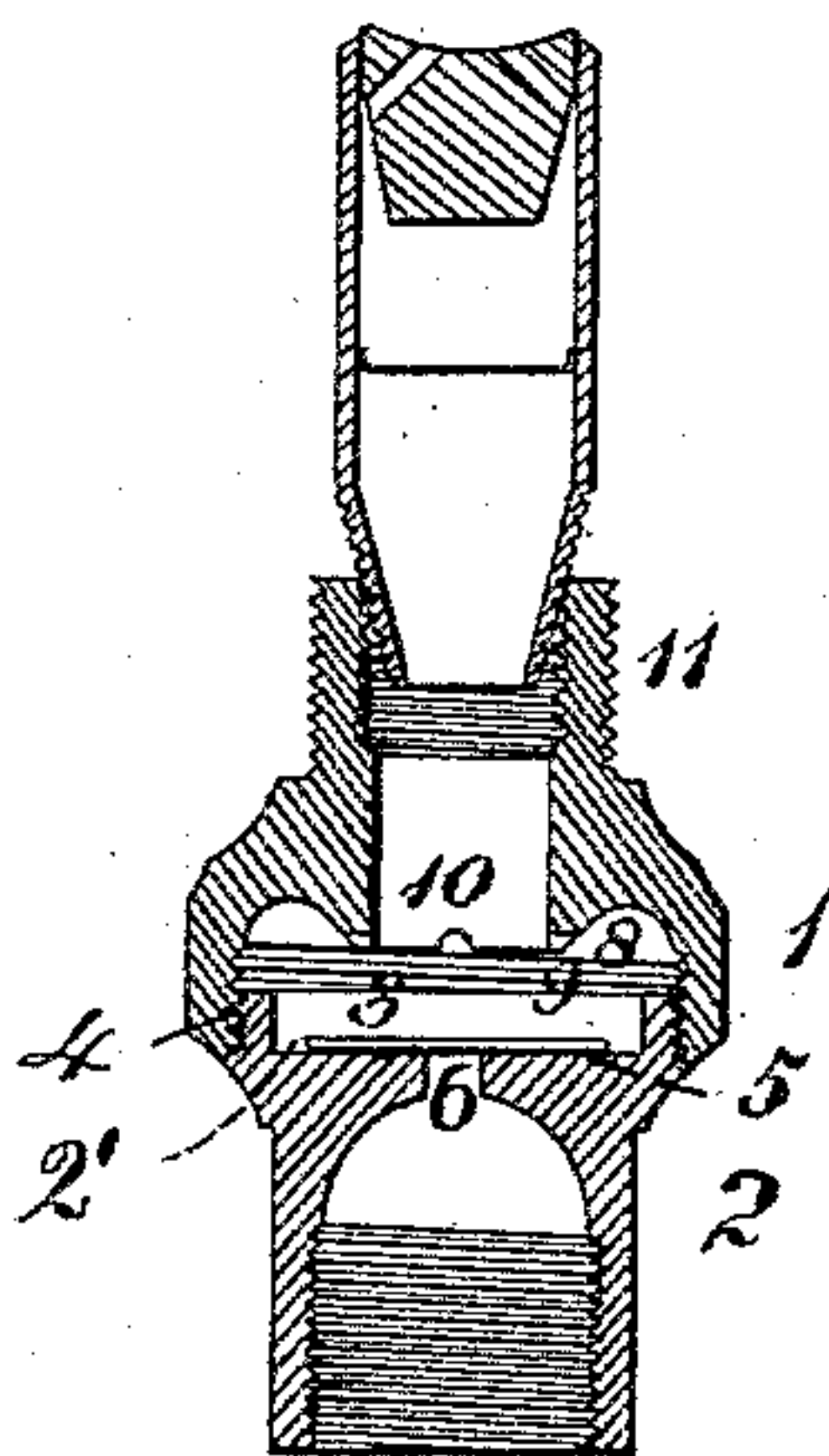
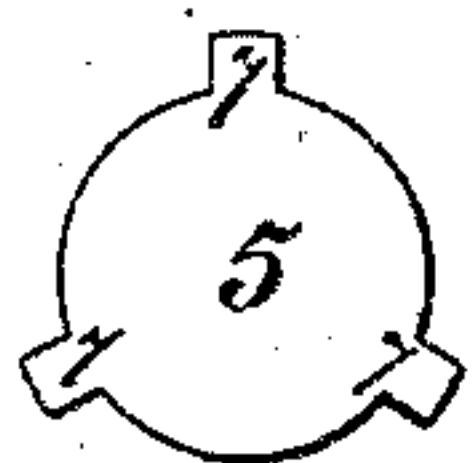


Fig. 3.



Witnesses

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GAS-GOVERNOR.

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Application filed March 11, 1889. Serial No. 302,885. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. GREGORY, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Gas-Governors, of which the following is a specification.

My invention relates to a self-acting check or regulator in a gas pipe or passage, such as to permit substantially unrestricted flow of gas at normal or less than normal pressure, but such as from any increase of pressure to more or less constrict or close the passage, and that in proportion to such increase.

My improved governor is capable of application at any portion of a gas-pipe, either at the meter or immediately adjacent to the tip.

In the accompanying drawings, Figure 1 shows the invention in vertical section. In this view a supplemental check is shown. Fig. 2 is a similar view without the supplemental check, showing the adaptability of the burner to different forms of tip. Fig. 3 is a plan of the disk.

The governor consists of two parts 1 2, which at their adjacent ends are expanded and hollowed so as to embrace a chamber 3. Flanges 4 on the expanded portions screw together, as indicated, and form the side of said chamber 3. The upper surface of part 2 is a broad flat bearing or floor 2', forming the lower valve or seat of a disk 5 of mica or other similar light material. The small gas-supply opening 6 is central of this seat and is covered by the disk 5. Wings 7 on the disk 5 or other means may be employed to hold the said disk in central position within the chamber, so as to permit the gas to pass around its edges.

The action of a light flat disk resting on a flat broad surface and over a minute gas-inlet, as shown, is such that the downward pressure of the disk upon its seat varies with the upward pressure of the gas through the inlet-opening, so that the greater the pressure of the incoming gas the more closely will the mica disk hug its seat and the smaller will be the opening provided for the gas. This is the action even without any upper member for the gas-governor; but it is aided by forming the ceiling of chamber 3 with the recess 8 and downwardly-projecting neck 9, so that the

said ceiling, together with the sides of the chamber, act to direct down upon the top of the disk the gas which passes upward around its edges. The lower edge of this neck is provided with a number of notches 10, so that a constant opening for the gas will be provided, even though the mica disk should be thrown up against said neck, which thus forms its upper valve-seat. Such movement of the disk, however, is abnormal, occurring only in a case of shock given to the instrument. The size of the opening 6 in the lower valve-seat is varied according to the pressure or quality of the gas. For burning gasoline-gas it is made of such diameter as to hold the mica disk constantly against its upper seat, and the depth or size of the notches 10 is regulated according to the number of feet per hour to be burned. The upper member 1 has a nipple 11, both interiorly and exteriorly screw-threaded. The interior screw-thread may receive a burner-tip directly, or a tip-receiver may be screwed over the nipple; or an auxiliary check 12 of the represented tubular form, and having an exterior thread 12' and a longitudinal slit 12'', may screw into the nipple, and the tip-receiver may be screwed around it.

The auxiliary check 12 in the described association with the automatic regulator beneath it enables discretionary limitation of the automatic delivery. When the auxiliary check is added, the burner 13 is screwed on the outside of nipple 11, as shown in Fig. 1.

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

1. A gas-governor formed in two parts having a chamber between, one part having a flat broad valve-seat with a central supply-opening and the upper part having a downwardly-projecting neck notched as described, for the purposes set forth.

2. A gas-governor formed in two parts having a chamber between them, said chamber having a flat floor or valve-seat, a vertical or substantially vertical side, and a recessed ceiling, the neck notched, as described, projecting downwardly from said ceiling, and the flat light disk occupying said chamber, substantially as set forth.

3. In a gas-governor, the combination of the part 1, expanded at its lower end and having flange 4, recessed ceiling, and notched neck 9, and the part 2, having small supply-opening 5 6, the broad flat valve-seat surrounding said opening, and the disk 5, resting thereon and surrounded by flange 4, screwed into the flange of the upper part 1, substantially as set forth.
- 10 4. In a gas-governor, the combination of the following elements, to wit: the service-pipe 2, having the broad floor 2', with small central orifice 6, the loose disk 5, seated thereupon, the part 1, screwed to said pipe 2 and having the notched and downwardly-projecting neck 15 9 in the chamber 3, and having the upwardly-projecting interiorly-threaded nipple 11 and the optionally-adjustable check 12, as and for the purposes set forth.

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Witnesses:

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