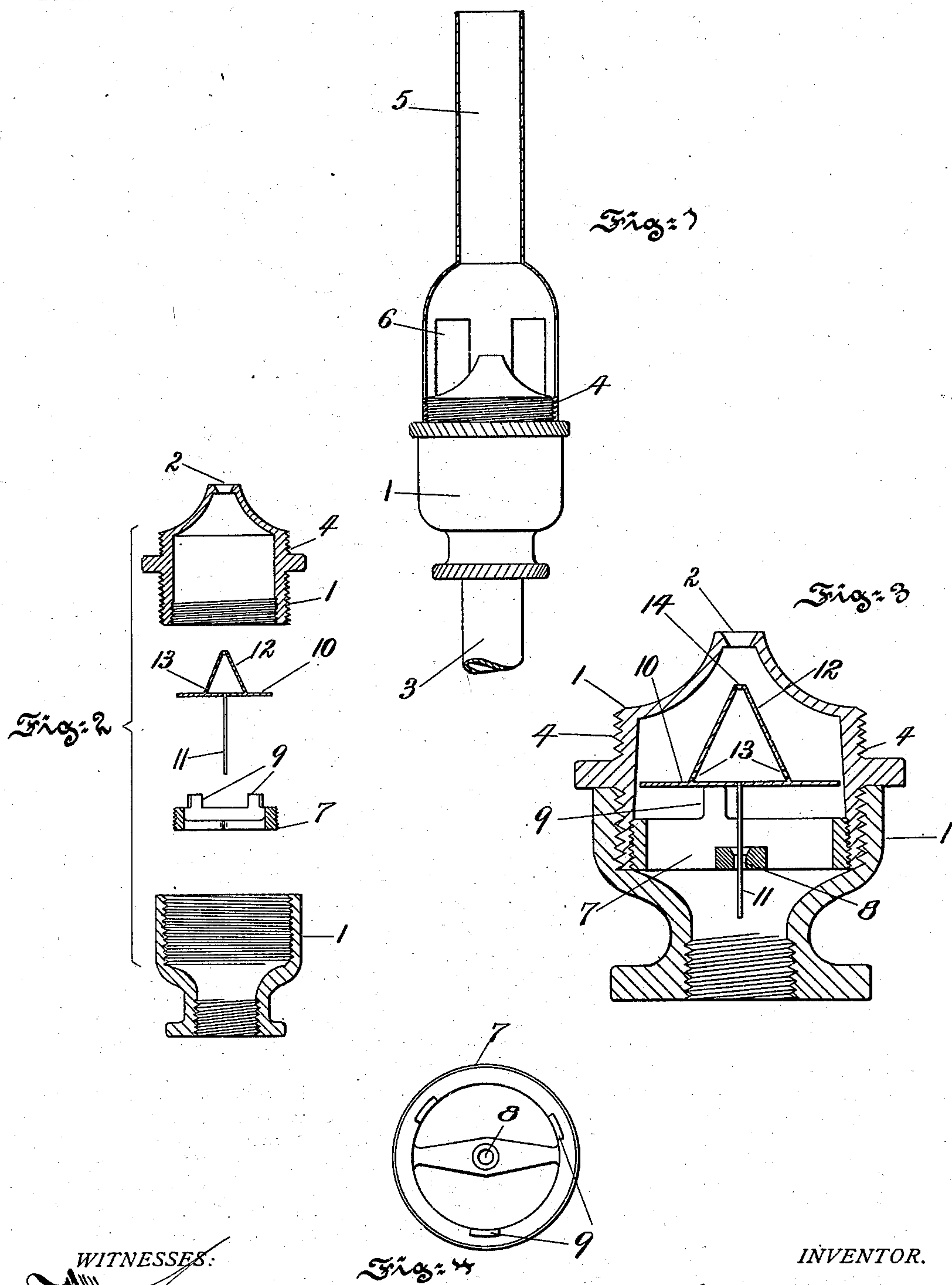


No. 748,226.

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V. H. SLINACK.
INCANDESCENT GAS LIGHT.
APPLICATION FILED MAY 30, 1902.

NO MODEL.



WITNESSES:
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INCANDESCENT GAS-LIGHT.

SPECIFICATION forming part of Letters Patent No. 748,226, dated December 29, 1903.

Application filed May 20, 1903. Serial No. 157,905. (No model.)

To all whom it may concern:

Be it known that I, VICTOR H. SLINACK, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Incandescent Gas-Lights, of which the following is a specification.

One object of the present invention is to provide for automatically regulating the gas-supply to incandescent gas-lights to suit them to varying or different gas-pressures, and thus secure the best lighting effects.

Another object of the invention is to provide for the consumption of a predetermined quantity of gas per unit of time by so-called "incandescent" gas-lights regardless of varying or different pressures in the gas-mains.

These, as well as other objects hereinafter set forth, are accomplished according to the present invention by combining the automatically-variable opening of a pressure-regulator with the air-intake end of a Bunsen tube in such a way that the absence of pressure in the Bunsen tube causes the variable opening to operate as a jet-orifice, from which issues a substantially uniform jet, regardless of variations in pressure in the mains.

In the drawings, Figure 1 is a view, partly in elevation and partly in section, illustrating a burner embodying features of the invention. Fig. 2 is a sectional view illustrating parts of the device in detached position. Fig. 3 is an enlarged view in central section, and Fig. 4 is a top or plan view of one of the parts.

In the drawings the size of the opening between the parts 2 and 12 is automatically adjusted to compensate for varying pressure in the supply-pipe 3 or in the mains and is arranged to communicate with the inlet end of the Bunsen or air-mixing tube 5 near the air-inlets 6 thereof, and this opening is a jet-orifice from which a substantially uniform jet issues. The top of the Bunsen tube is unobstructed, even though fitted with a usual burner-head, and air is freely admitted at its lower end, so that there is in it no back pressure, nor is it filled with a body of gas under pressure. The effect of this is to cause the

variable opening between the parts 2 and 12 to operate as a jet-orifice and to produce a substantially uniform jet. Means are known for automatically varying the size of the opening between the parts 2 and 12 in response to changes of pressure in the mains. However, a description will now be given of means well adapted for this purpose. The parts 1 of the shell or casing are detachably connected by a screw-thread. The shell or casing is provided with an opening 2 at its top and with means for attaching it at its bottom to the pipe 3.

4 is a seat for the accommodation of the mixing or Bunsen tube 5.

7 is a spider provided with a central opening 8 and with upwardly-extending arms 9. Internally the shell is conical, its diameter being larger near its base than at its top.

10 is a movable disk provided with a guide-rod 11 and with a hollow cone 12, having apertures 13 near its base and an aperture 14 at its apex.

In use a change of pressure in the mains or part 3 causes appropriate movement of the cone 12 in respect to the opening 2 for keeping the jet issuing from the casing into the Bunsen tube uniform. The spider 7 is screwed into the shell, and is therefore adjustable, its adjustment operating to suit the device to gases of different specific gravities. The opening 14 serves to provide a jet even though the cone should be seated tightly in the opening 2, and such a jet would prevent complete extinguishment of the light.

It will be obvious to those skilled in the art to which the invention relates that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise construction and arrangement of parts hereinabove set forth, and illustrated in the accompanying drawings; but,

Having thus described the nature and objects of the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Means for automatically regulating incandescent gas-lights to suit varying gas-pressures which comprise the combination of a shell or casing provided at its base with

means for receiving gas and at its top with an air and gas mixing tube and with a jet-orifice, a spider adjustably arranged in the casing and provided with upwardly-extending arms, and a disk arranged in the casing and provided with a depending rod guided by said spider and with an upwardly-extending hollow cone having openings at its base and apex and arranged to cooperate with the jet-orifice, substantially as described.

2. Means for automatically regulating incandescent gas-lights to suit varying gas-pressures which comprise the combination of a shell or casing adapted to receive gas and provided with a mixing-tube and a gas-orifice and internally with conical walls, and a disk movable in the casing and provided with an upwardly-extending hollow cone having openings at its base and apex and adapted to cooperate with the jet-orifice, substantially as described.

3. The combination with the parts of a pressure-regulator which provide an opening varying in response to pressure changes, of a Bunsen or mixing tube unobstructed at its top and having air-openings near its inlet

end, and said opening arranged to communicate directly with and discharge directly into the lower end of said tube whereby said opening operates as a jet-orifice and discharges a substantially uniform jet into the tube, substantially as described.

4. The combination with the parts of a pressure-regulator which provide an opening varying in response to pressure changes, of a Bunsen or mixing tube unobstructed at its top and having air-openings near its inlet end, and said opening arranged to communicate directly with and discharge directly into the lower end of said tube whereby said opening operates as a jet-orifice and discharges a substantially uniform jet into the tube, and means for adjusting the regulator to gases of different specific gravities, substantially as described.

In testimony whereof I have hereunto signed my name.

VICTOR H. SLINACK.

In presence of—

K. N. GILLIGAN,
W. J. JACKSON.