

No. 654,458.

Patented July 24, 1900.

H. A. KENT.
GAS LAMP OR BURNER.

(Application filed May 23, 1899.)

(No Model.)

Fig. 1.

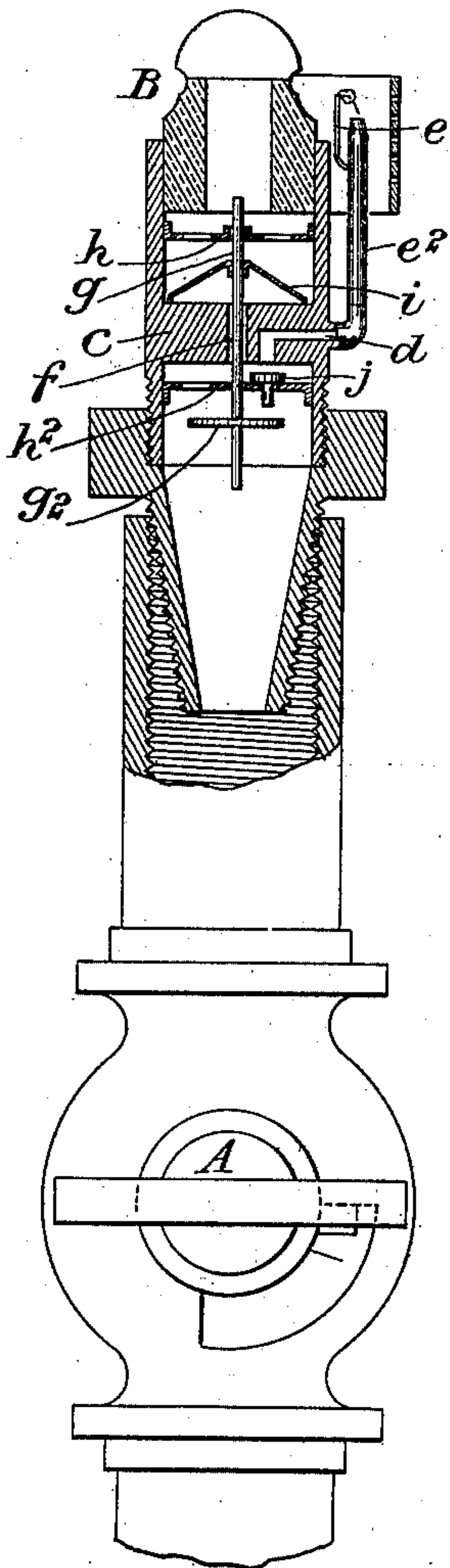
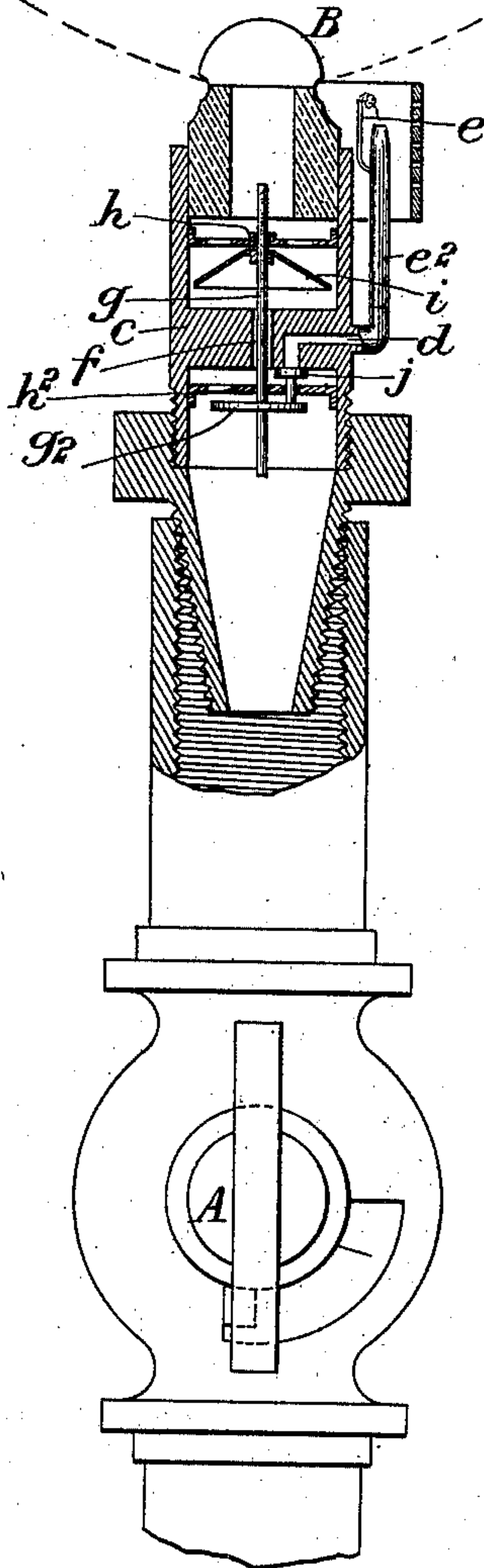


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY A. KENT, OF LONDON, ENGLAND.

GAS LAMP OR BURNER.

SPECIFICATION forming part of Letters Patent No. 654,458, dated July 24, 1900.

Application filed May 23, 1899. Serial No. 717,953. (No model.)

To all whom it may concern:

Be it known that I, HENRY ANDREW KENT, engineer, a subject of the Queen of Great Britain and Ireland, and a resident of 59 Middleton road, Bowes Park, London, England, have invented certain new and useful Improvements in Gas Lamps or Burners, (for which I have applied for a patent in England, No. 6,051, dated March 20, 1899,) of which the following is a specification.

My invention has for its object to provide a gas lamp or burner or burners which can be lighted by means of material which will become ignited when gas comes in contact therewith or by means of a pilot-light, the lighting being effected by means of the pressure of the incoming gas itself without the use of a by-pass tap or of a device depending on the expansion of metal for its operation.

According to my invention I arrange in the passage by which gas passes to the burner or burners a device which controls two passages for gas, one to the main burner or burners and another to the igniting device or pilot-light or igniting devices or pilot-lights in such a manner that when the gas-tap is first turned to a small extent the gas passes through the passage leading to the igniting device or devices or pilot light or lights, but not to the passage leading to the main burner or burners, as the pressure of the small amount of gas thus admitted is insufficient to cause the last-named passage to be opened. Thereafter when the tap is further turned on and a greater quantity of gas admitted the passage to the main burner or burners is opened and the gas passes to the said burner or burners and is ignited, the same movement which opened the said passage for gas to the main burner or burners closing that for gas to the igniting device or devices or pilot light or lights, it being understood that when an igniting device or igniting devices depending for its or their ignition on contact of the gas is or are used the supply of gas to the igniting device is entirely cut off when the gas is burning at the main burner or burners, while when a pilot light or lights is or are used there can be always a passage for a small amount of gas thereto through the tap to keep it alight, but a further amount of gas will pass to the pilot when the gas-tap is first opened for

creating a sufficient flame to light the main burner, and the passage for gas to the pilot-light is again closed completely by the valve controlling the passage to the pilot, or it is closed to a small passage when the flame is to be burned at all times at the pilot, when said valve has in it an opening equivalent to that through the tap when in its closed position.

The following is a convenient arrangement according to my invention, presuming one burner and one igniter to be used. I will describe this with reference to the accompanying drawings, representing vertical sections, with the parts shown in Figure 1 in the position they are in when the gas is unlighted, and Fig. 2 showing the parts in the position they assume when the gas is lighted.

In the gasway, between the gas-tap A and the burner B, I provide a disk or block *c*, having in it a passage *d* for gas to the pipe *e*², leading to the igniter *e*, and another passage *f* for gas to the burner B. Carried by a vertical spindle *g*, mounted so as to be capable of moving up and down in guides *h h*², (shown as in disks perforated for the passage of gas,) is a valve or hood *i*, presenting a comparatively-large surface to the gas and (when the gas is not turned on sufficiently to raise it) closing the passage *f* for gas to the burner B. When the gas-tap A is first turned on to a small extent, (which may be indicated by a spring-catch entering a recess or by a pointer,) the pressure of gas is not sufficient to raise the valve or hood *i* to open the passage for gas to the burner B; but gas passes by the passage *d* (which is open) and pipe *e*² to the igniter *e*, and the gas is ignited thereat. When the gas-tap A is further turned, the pressure exerted by the additional quantity of gas admitted is sufficient to open the passage *f* for gas to the burner B by acting on the valve or hood *i*, and so gas passes to the burner B and is ignited thereat by the igniter *e*, the movement thus effected acting, by means of a disk *g*², secured to the vertical spindle *g*, on a valve *j*, (mounted in the lower guide-disk *h*²,) which closes the passage *d* for gas to the igniter *e*, as shown in Fig. 2. The parts remain in this position as long as the lamp is burning. When the tap A is turned to extinguish the light, the valve or hood *i* descends and closes the pas-

sage *f* for gas to the burner B, and as the disk *g*² leaves the stem of the valve *j* the said valve *j* descends and opens the passage *d* for gas to the igniter, ready for gas to pass to the
5 igniter when the gas-tap A is again operated as aforesaid.

My invention can be applied to gas-lamps of various kinds—such as gas-lamps of the ordinary kind, incandescent gas-lamps, re-
10 generative gas-lamps, and the like—the passages for the gas to supply the igniter and main burner, respectively, being led thereto by pipes or passages arranged to suit the particular kind of lamp to which the invention
15 is applied.

I claim as my invention—

1. A gas-burner having a pilot-burner and a main burner with passages leading to both burners, a spindle passing freely through the
20 passage to the main burner, a hollow conical valve mounted on said spindle and acting as a cut-off valve to the main burner, and a projection on said spindle, and an independently-movable valve operated by said projec-
25 tion to close the passage to the pilot-burner when the spindle is moved by gas-pressure acting upon the conical valve to open the passage to the main burner, substantially as de-
scribed.

30 2. The combination of a gas-tube, a pas-

sage for gas through said tube to the burner, a pilot-tube, a passage for gas from the gas-tube to the pilot-tube, a valve normally closing the gas-passage to the burner, a rod or spindle connected to said valve, a projection
35 on said rod or spindle, and an independently-movable valve operated by said projection to close the passage to the pilot-tube when the main-burner valve is moved by pressure of the gas to admit gas to said burner. 40

3. A gas-burner having a pilot-light and a main burner with passages leading to said pilot-light and burner, a spindle having a projection thereon, a valve controlling the pas-
45 sage to the main burner and adapted to be moved through the medium of the pressure of gas, an independently-movable valve controlling the passage to the pilot-light and adapted to be moved by the projection on the
50 spindle when the main-burner valve is moved to open the passage leading to the main burner, substantially as described.

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

H. A. KENT.

Witnesses:

WILLIAM JOHN WEEKS,
JOHN EDWARD NEWTON.