

No. 618,684.

Patented Jan. 31, 1899.

A. KEYSSER.
INCANDESCENT GAS LAMP.

(Application filed Feb. 8, 1898.)

(No Model.)

Fig. 2.

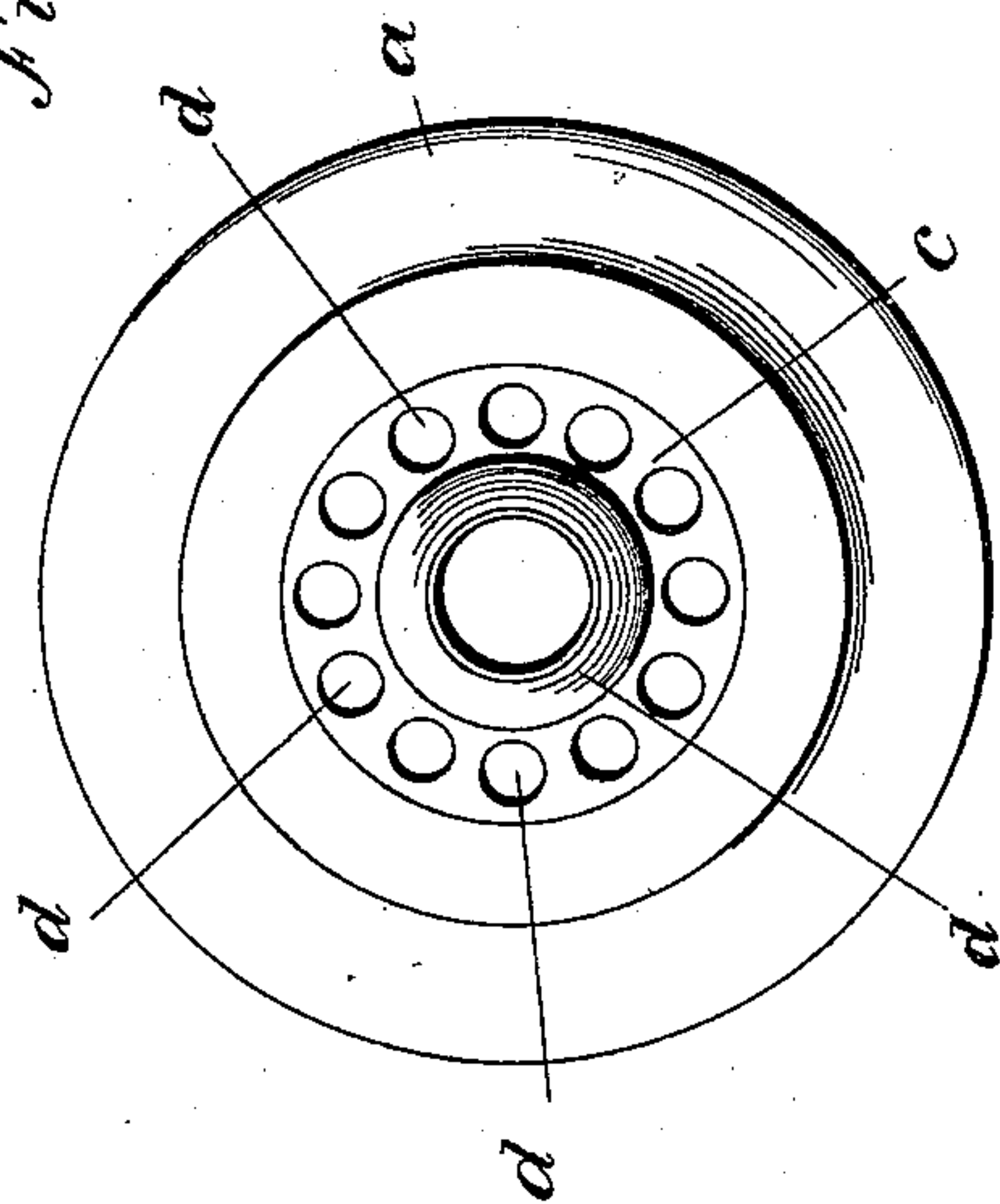


Fig. 3.

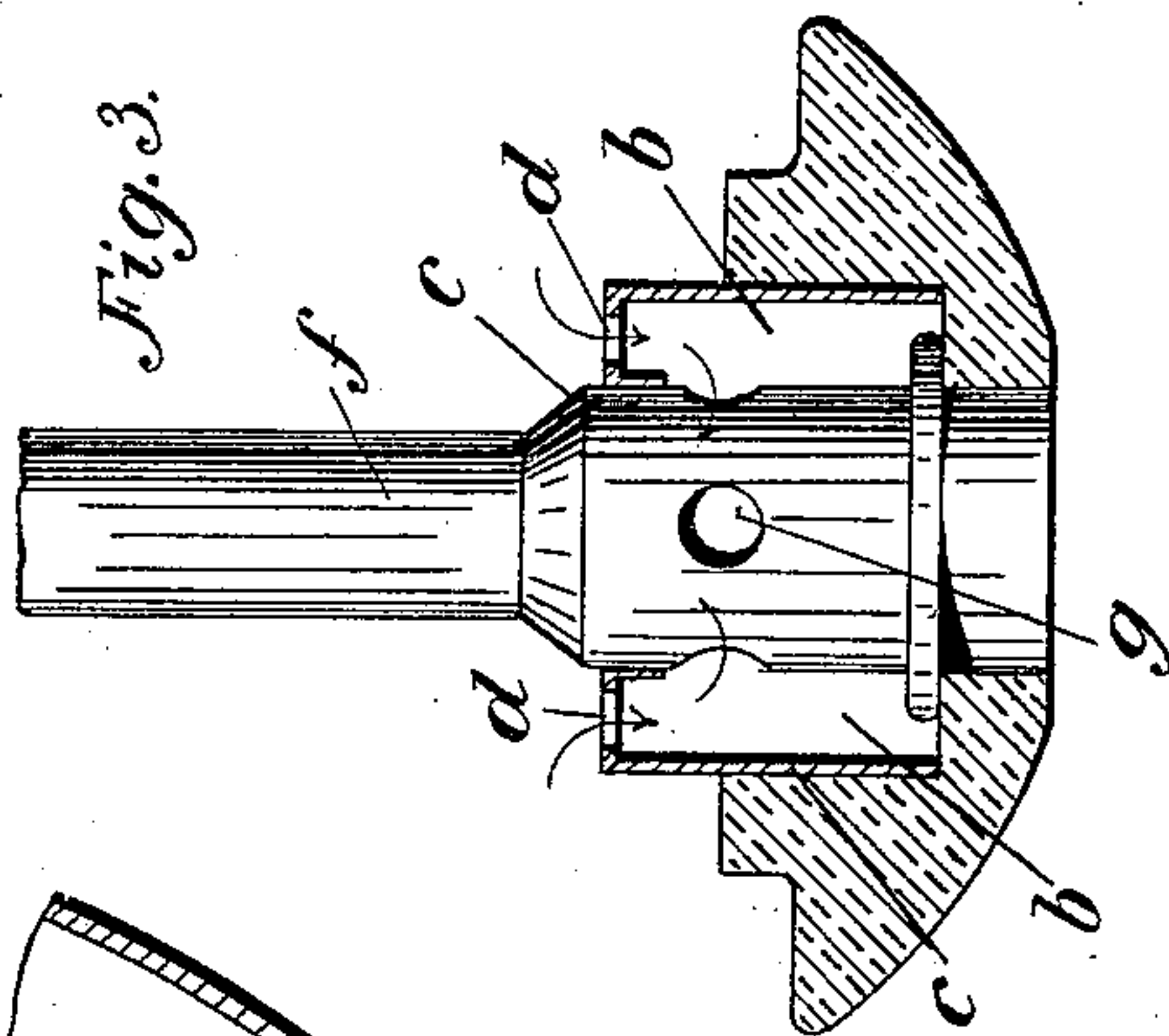
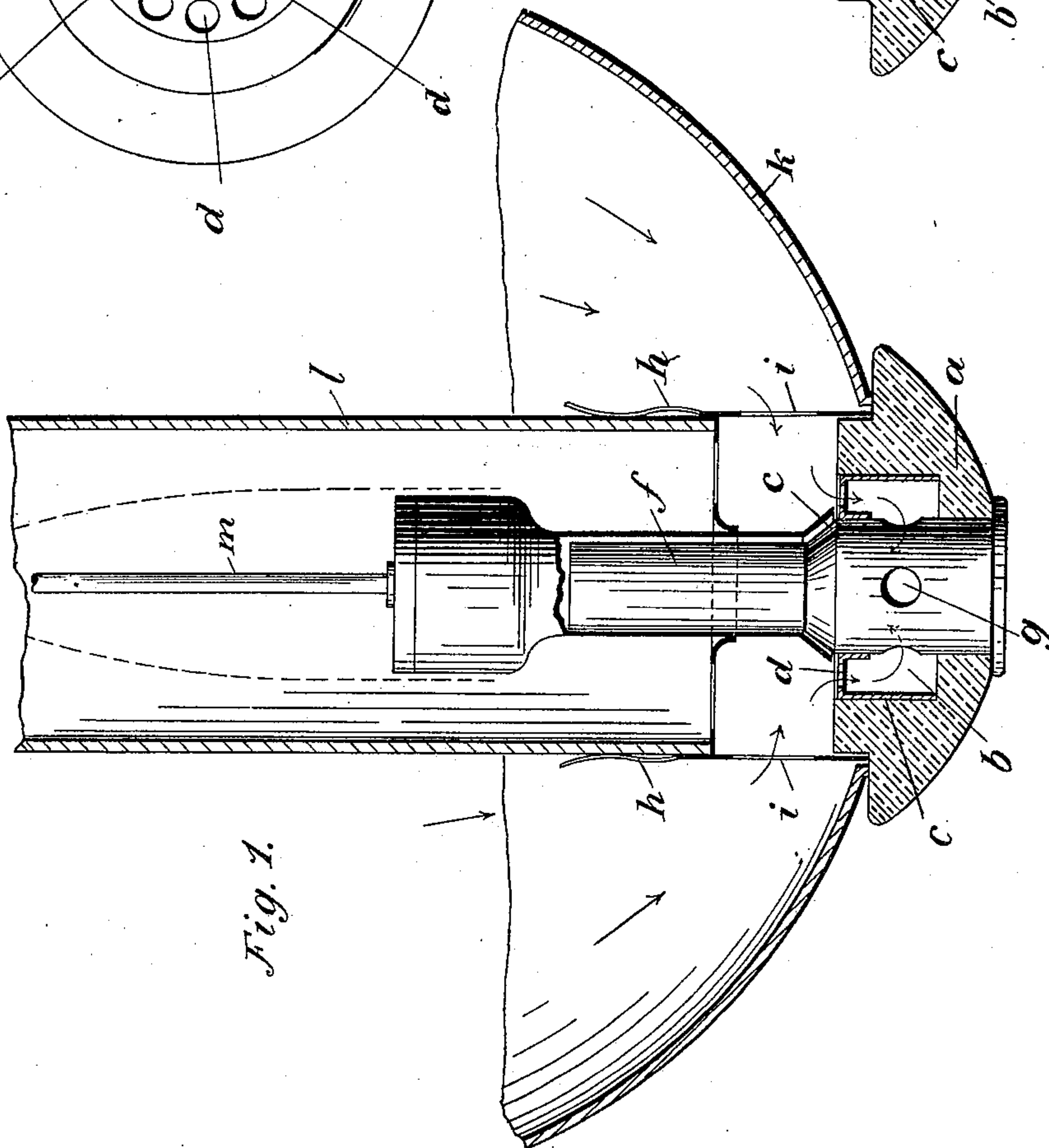


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

ADALBERT KEYSSER, OF HANOVER, GERMANY.

INCANDESCENT GAS-LAMP.

SPECIFICATION forming part of Letters Patent No. 618,684, dated January 31, 1899.

Application filed February 8, 1898. Serial No. 669,496. (No model.)

To all whom it may concern:

Be it known that I, ADALBERT KEYSSER, gentleman, of 26 Thiergartenstrasse, Hanover, Germany, have invented Improvements in Incandescent Gas-Lamps, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to incandescent gas-lamps; and it has for its object to protect the incandescent mantle from direct draft, while also insuring a higher illuminating effect.

The invention consists in heating the air before it comes in contact with the illuminating-gas, similarly to the principle of a Siemens regenerator-lamp.

According to this invention the air is not drawn in directly from below, but flows from the top down between a globe and the chimney and into a chamber and whence it enters the inlet-apertures of the Bunsen burner. By this means not only does the air become considerably heated, but the extremely-sensitive incandescent mantle is also completely protected from direct draft and will therefore last longer than heretofore. The flame burns quite steadily, so that the improved arrangement is suitable for use in very exposed situations—such as, for instance, in doorways, staircases, warehouses, street-lamps, &c.

The invention is illustrated in the annexed illustrative drawings, in which—

Figure 1 is a vertical section, and Fig. 2 a partial plan, of one arrangement of incandescent lamps embodying the improvements. Fig. 3 is a vertical section illustrating a modified construction.

Referring first to Figs. 1 and 2, the globe-carrier *a*, which is suitably made of porcelain, glass, or the like, is hollowed out internally, so as to form a chamber *b*. Into this chamber there is inserted a casing *c*, having air-inlet apertures *d* formed in its upper end, Figs. 1 and 2. This casing is also preferably provided with a flange *e*, by which the ordinary Bunsen burner *f* is partially guided. Further guidance is afforded by the globe-carrier *a*. The air entering from the top and flowing down between the chimney *l* and the globe *k*, which are shaped to suit the requirements in each case, flows in the direction of

the arrows through the holes *i* in the burner-gallery *h* and passes through the apertures *d* into the chamber *b*. Thence the air, which has by this means become highly heated, flows through the inlet-apertures *g* of the Bunsen burner and is carried along by the current of gas, which flows from below up through the Bunsen burner. In this manner the mantle, which is supported by the rod *m*, is not exposed to direct draft, and the incandescent light acquires, in addition to its well-known ordinary good qualities, also those which accrue from the regenerative principle. A steady intense light is obtained, while the tearing or bursting of the incandescent mantle, which results from the direct impact of the air, is obviated. Also cracking or breaking of the cylinder is avoided, because the mantle is not broken by the draft of air, which is kept off, it being a well-known fact that the cylinder cracks chiefly in consequence of irregular expansion, due to the small tongues of flames which burn through the broken places of the damaged mantle and impinge against the chimney, and thus heat the latter unequally. Further, the peculiar construction of the burner allows the globe to be set lower down than in the burners hitherto employed, so that, for instance, sun-burners or candelabra which are fitted with the new arrangement acquire a more pleasing appearance.

The lamp illustrated in Fig. 3 somewhat differs in detail from that shown in Figs. 1 and 2, in that the burner *f'* is seated on the bottom of the cavity in the globe-carrier *a'* instead of being passed through the carrier, as in Figs. 1 and 2. To permit this, the casing *c'* is raised above the globe-carrier *a'*, as shown in the figure. In other respects the construction is the same as that first described.

Incandescent gas-burners on the hereinbefore-described regenerative principle may obviously be constructed in the most various forms—for example, as sun-burners, as electrical imitations, in which a glass bulb represents the globe and cylinder together, as hanging lamps, garden-lamps, lamps with reflectors, illuminating devices for shop-windows, &c. It is immaterial what kind of gas

is burned. Petroleum, spirit, oil, ordinary illuminating-gas, and also acetylene, &c., may be employed.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A gas-burner, having a globe-carrier provided with a chamber, a casing inserted in the chamber and having an air-aperture in its upper end, a burner received in the globe-carrier and extended through the casing, the burner having an aperture communicating with the casing, a chimney supported on the globe-carrier and into which the burner extends, and a globe supported on the globe-carrier and inclosing the chimney, so that the air may pass downward between the chimney or cylinder and the globe, into the casing and thence into the burner.

2. A gas-burner, having a globe-carrier provided with a cavity, a casing set into said cavity and having an inlet-orifice at its upper portion, and also having a burner-passage with a downwardly-extending flange, a burner proper passing from the globe-carrier and through the casing and engaged with the flange thereof, a chimney supported on the

globe-carrier and inclosing the upper portion of the burner proper, and a globe inclosing the chimney or cylinder and sustained on the globe-carrier, so that the air may pass downward between the globe and the chimney and into the chamber and thence to the burner proper.

3. A gas-burner having a globe-holder with a chamber therein, a burner proper held by the globe-holder and entered into the chamber, the chamber opening at the top and the burner proper having communication with the chamber at the lower portion of the burner, a chimney encircling the burner proper and located above the globe-holder, and a globe mounted on the globe-holder and surrounding the chimney, the chimney being arranged so as to permit the air to pass down between the globe and chimney and into the cavity of the globe-holder.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

ADALBERT KEYSER.

Witnesses:

DAVID MAX MENZEL,
KIRKE LATHROP.