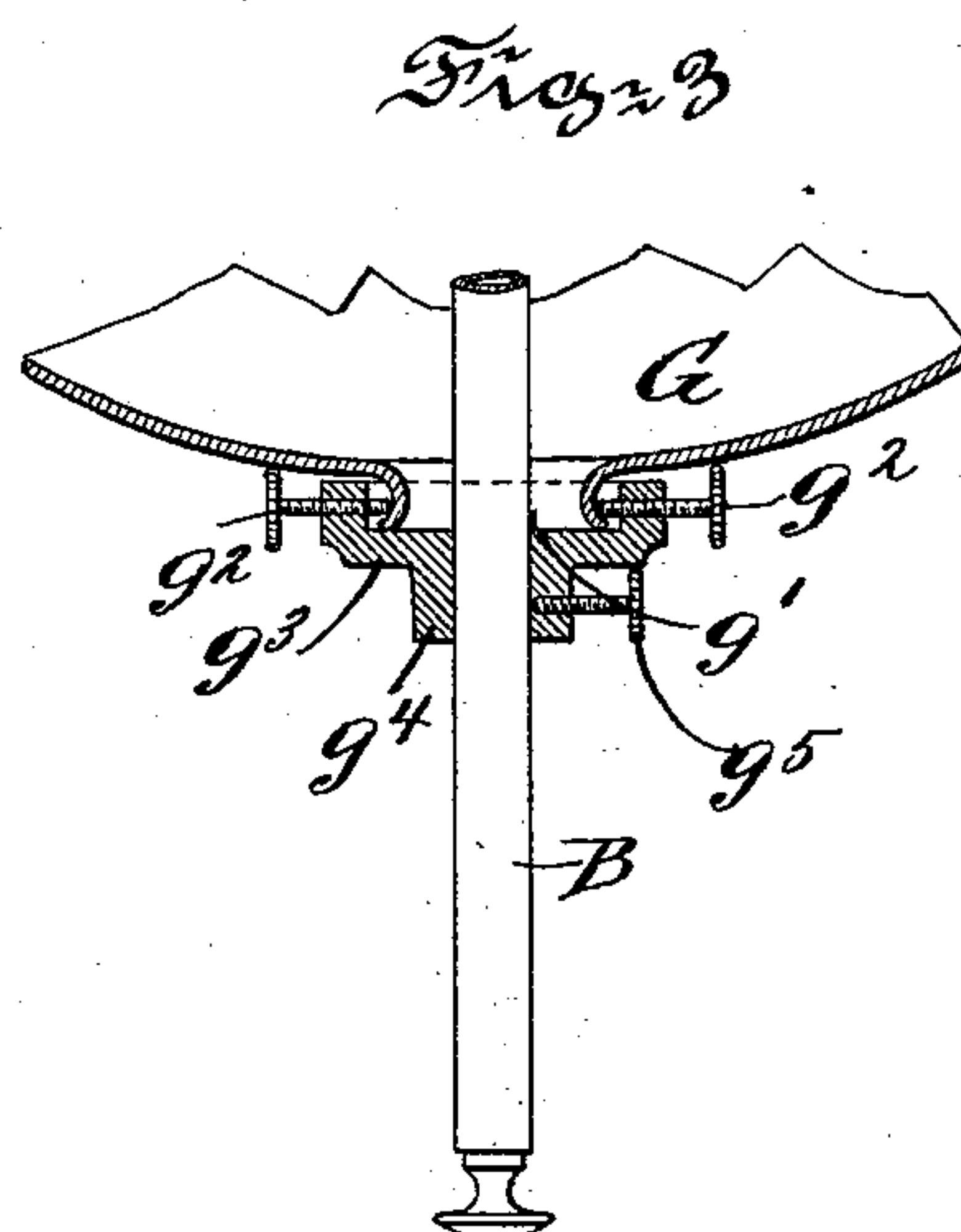
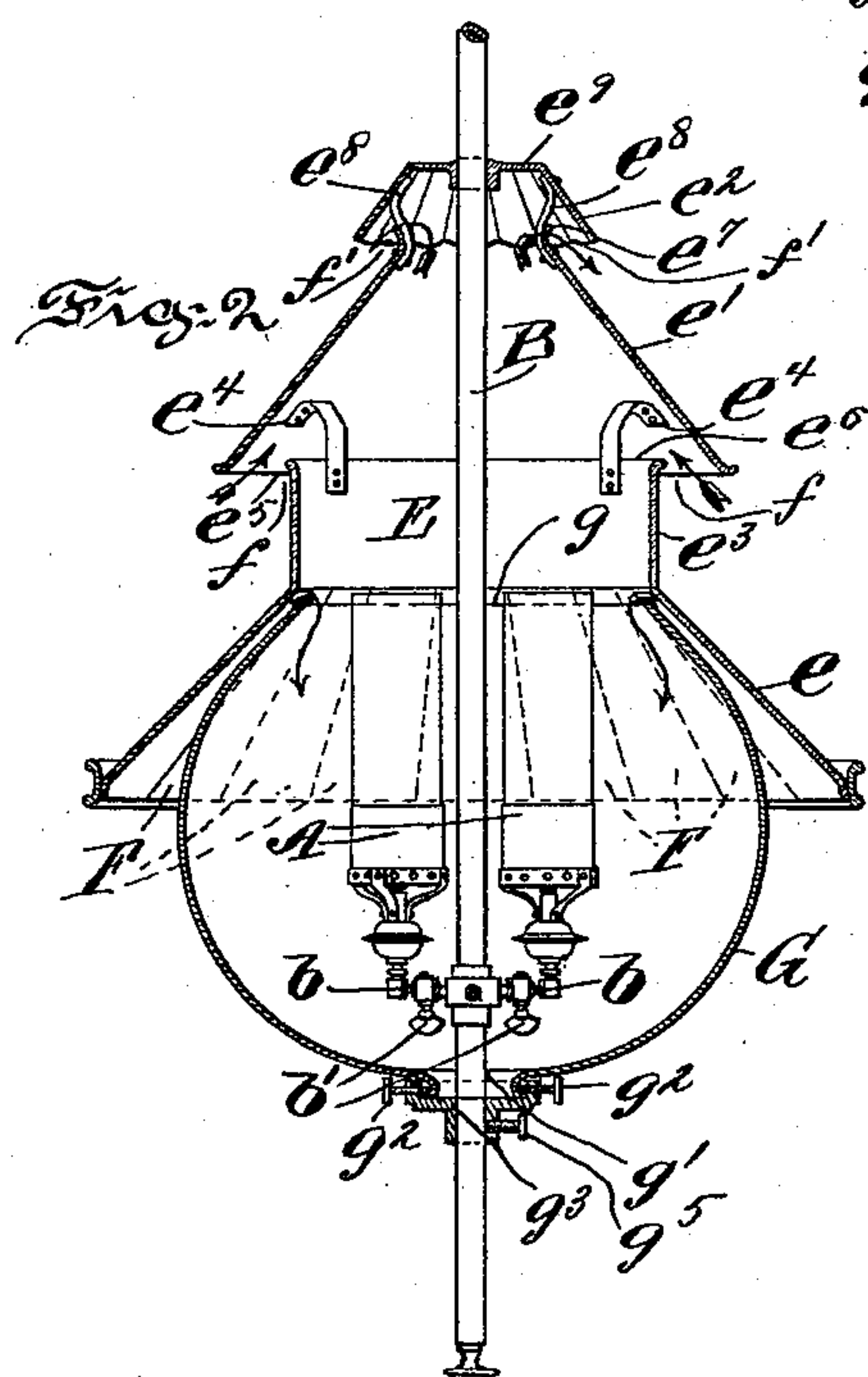
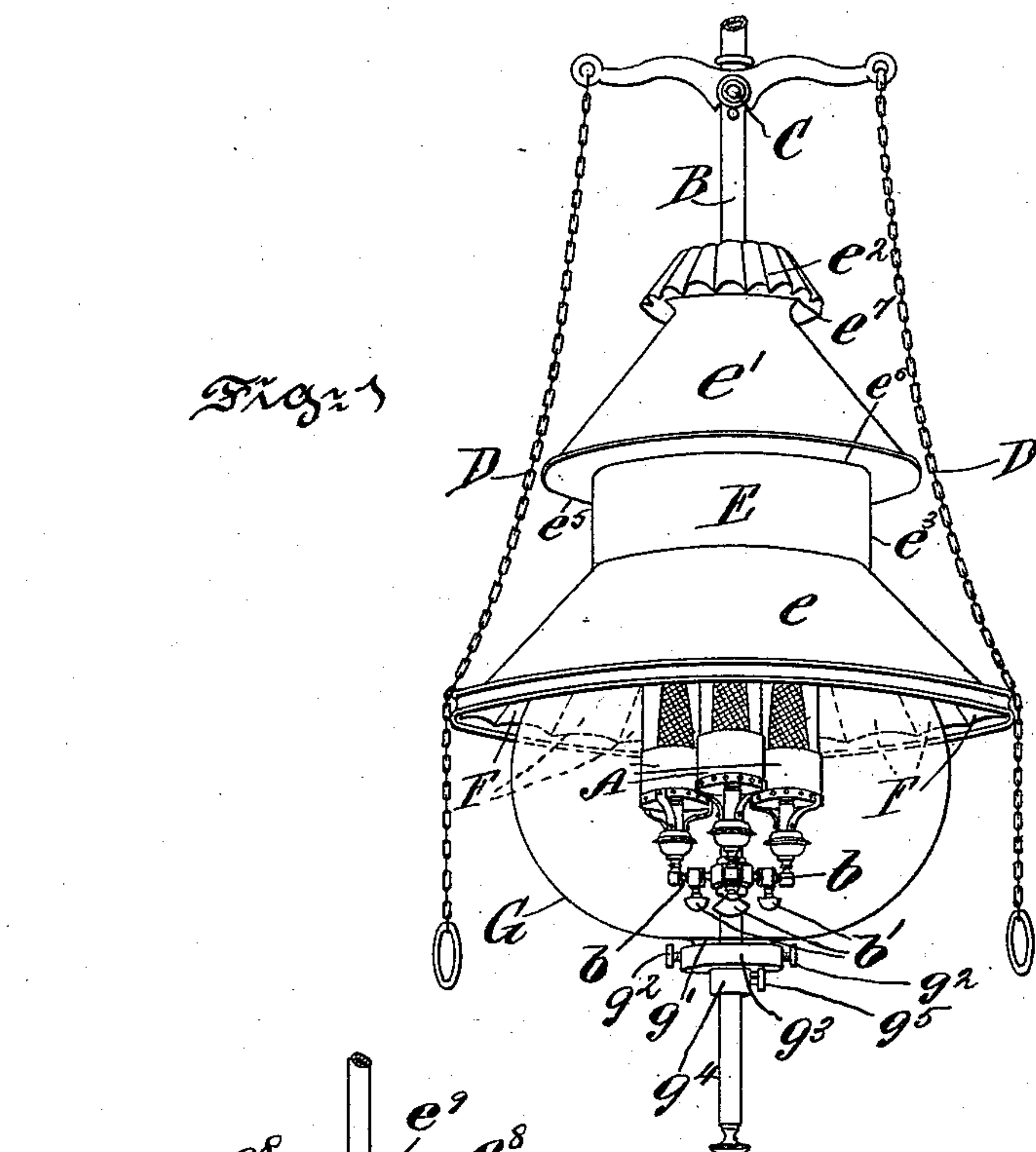


(No Model.)

G. F. KLEMM.
GAS ARC LANTERN.

No. 541,619.

Patented June 25, 1895.



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UNITED STATES PATENT OFFICE.

GEORGE F. KLEMM, OF PHILADELPHIA, PENNSYLVANIA.

GAS-ARC LANTERN.

SPECIFICATION forming part of Letters Patent No. 541,619, dated June 25, 1895.

Application filed April 4, 1895. Serial No. 544,391. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. KLEMM, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Gas-Arc Lanterns, of which the following is a specification.

My invention has relation to a gas arc lantern of that class wherein the gas lamps are arranged in a group or cluster and partially inclosed by a globe after the fashion of an arc electric light; and in such connection it relates particularly to the general construction and arrangement of such a lantern.

The principal objects of my invention are first, to provide a gas arc lantern of simple, efficient and durable construction adapted to meet the requirements and perform the functions of a first class gas arc lantern; second, to provide in a gas arc lantern an adjustable or movable support for the globe surrounding the lamps, whereby the draft to the gas lamps may be regulated and the lamps made accessible for the purpose of lighting; and third, to provide in a gas arc lantern a reflecting hood adapted to feed in the necessary fresh air to the lamps and to exhaust by suction the burned impoverished heated air from the interior of the lantern and discharge the same to the atmosphere.

My invention consists of a gas arc lantern constructed and arranged substantially in the manner hereinafter described and claimed.

The nature, characteristic features and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a perspective view of a gas-arc lamp embodying the main features of my invention. Fig. 2 is a central longitudinal section of the gas-arc lamp, illustrating the construction and arrangement of the reflecting-hood and the adjustable support for the globe; and Fig. 3 is an enlarged sectional view of the adjustable support for the globe.

Referring to the drawings, A, represents a group or cluster of gas lamps, which may if desired be of the Welsbach type. These lamps are fed by a main tube or pipe B, the branches *b*, thereof leading to each lamp be-

ing provided with a key or cock *b'*, and the main tube or pipe B, being provided with a main key or cock C, of the ordinary well known construction operated by means of the chains D. Secured to the tube B, above the lamps A, and surrounding the same is a hood E, provided on its interior at its lower end with a series of reflecting facets or faces F, adapted to reflect the light from the lamps downward. This hood E, consists of a series of separate sections *e*, *e'* and *e''* united together in the following manner: The lower section *e*, is open at both ends and carries the reflecting surfaces F, the lower portion being formed conical for that purpose. The conical portion terminates in a cylindrical portion *e''*, which supports by means of straps *e'''*, or other suitable means the flaring or cone-shaped middle section *e'* open at both ends, the lower end *e''*, of which projects downward below the upper end *e'''*, of the cylindrical portion *e''*, of the lower section *e*. In the same manner the upper portion *e'''*, of the middle sections *e'*, is made cylindrical and supports by means of straps *e'''*, the convoluted conical upper section *e''*, the upper portion of which is closed by a plate *e'''*, which serves to secure the entire hood E, to the tube B.

It will be observed that between the sections *e* and *e'*, there is an air passage or space *f*, and between the sections *e''* and *e'''*, a series of convoluted air passages *f'*.

The lamps A, are inclosed by a globe G, the upper edge or rim *g*, of which extends upward into the hood E. The bulb of the globe is perforated as at *g'*, surrounding the tube B, at that point. The neck of the globe is secured by screws *g''*, in a holder or bracket *g'''*, which holder or bracket is provided with a sleeve or collar *g''''*, surrounding the tube B, and adapted to slide thereon. The sleeve or collar *g''''*, carrying the holder or bracket *g'''*, and globe G, is fastened in required position to the tube B, by means of a set screw *g''''''*, or other suitable means the equivalent of that illustrated in Figs. 2 and 3, of the drawings.

In operation, the gas is turned on into the main tube B, by opening the cock C, by means of one of the chains D, and is fed through the branches *b*, the cocks or keys of which are opened, to the cluster of lamps A. To light the lamps the holder or bracket *g'''*, with its

globe G, is lowered by releasing the sleeve g^4 , from the tube B, and sliding the same in a downward direction on the said tube. A taper or other lighter is then inserted between
 5 the globe and section e , or between the sections e and e' above the lamps A, and thereby readily ignited. The globe and its holder or bracket g^3 , are then pushed upward if the
 10 former mode of lighting the lamps is resorted to, until the rim g , approaches the interior of the hood e , a sufficient distance to permit of the entrance of required draft which may be regulated at pleasure by adjusting the holder or bracket on the tube B. The discharge of
 15 the products of combustion arising from the burning lamps A, and the drawing in of fresh air to the burners are facilitated by the construction of the superposed sections e , e' and e^2 . As the heated air from the lamps passes
 20 upward through the sections e and e' , fresh air is drawn in under the lower portion of the lower section e , and over the rim of the globe G. Fresh air is also drawn under the lower portion of the middle section e' , and through
 25 the same and is discharged through the openings f' , of the upper section e^2 , carrying with it the products of combustion.

Should for any reason one of the lamps A, become useless, such lamp may be extin-
 30 guished by turning its cock or key b' , by hand or otherwise.

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

A gas are lantern, comprising a cluster of
 35 lamps; a main supply tube therefor, a globe inclosing said lamps and adjustably supported on said supply tube, a hood secured to said tube at its upper end and projecting downward over the upper rim of said globe but
 40 wholly disconnected therefrom, said hood consisting of a lower conical reflecting section open at both ends and terminating in a cylindrical projection, a middle section open at both ends of substantially similar shape
 45 as the lower section and having its lower flaring end extending around the cylindrical projecting portion of the lower section and united thereto and an upper convoluted conical section closed at its upper end and having its
 50 open convoluted flaring end extending around the conical end of the middle section and united thereto, substantially as and for the purposes described.

In testimony whereof I have hereunto set
 55 my signature in the presence of two subscribing witnesses.

GEORGE F. KLEMM.

Witnesses:

THOMAS M. SMITH,
 RICHARD C. MAXWELL.