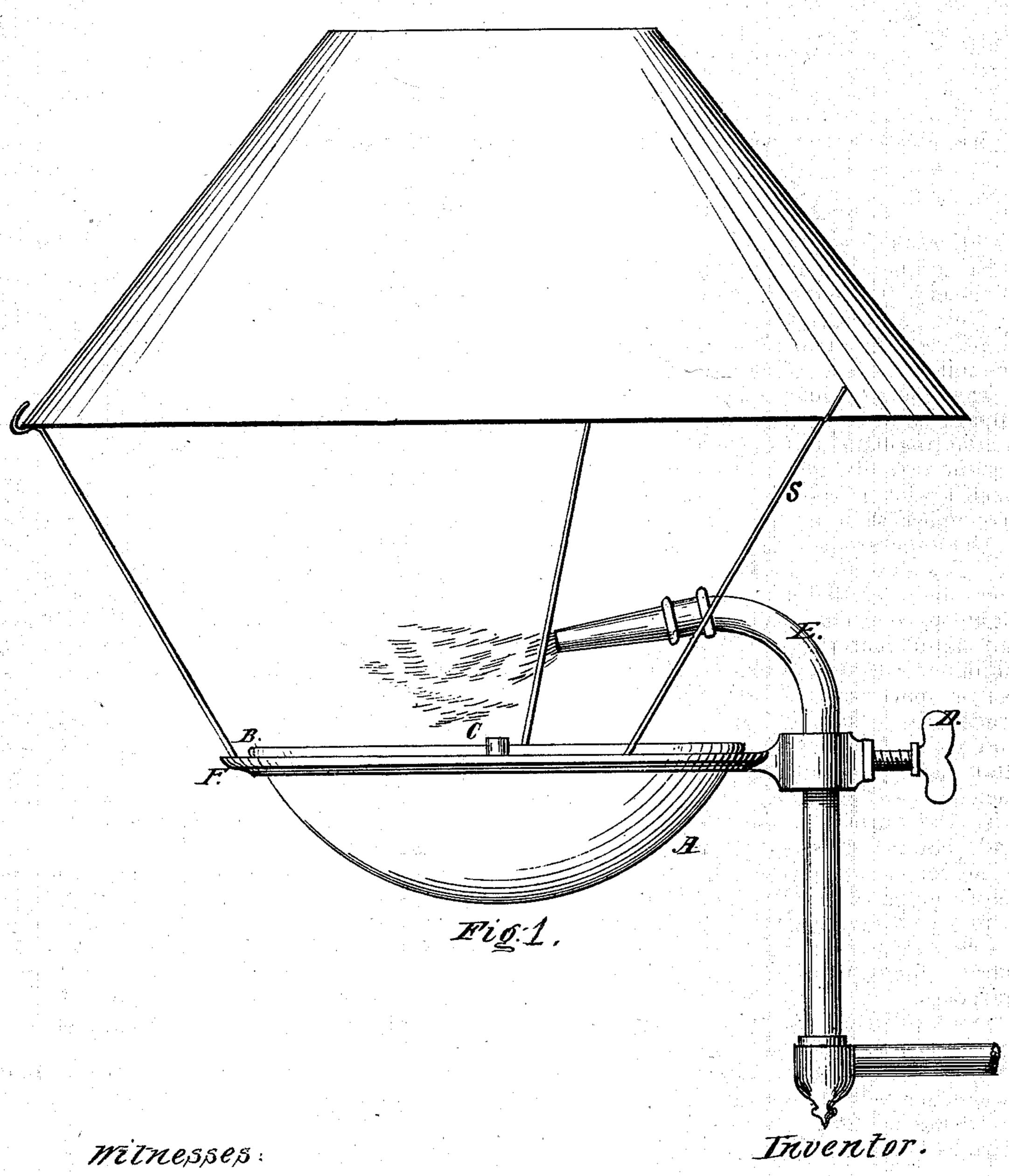
## J. A. THOMPSON. Illuminating Apparatus.

No. 146,109.

Patented Dec. 30, 1873.



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## UNITED STATES PATENT OFFICE.

JAMES A. THOMPSON, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN ILLUMINATING APPARATUS.

Specification forming part of Letters Patent No. 146,109. dated December 30, 1873; application filed June 14, 1873.

To all whom it may concern:

Be it known that I, James A. Thompson, of the city of Brooklyn, county of Kings, State of New York, have invented a new and useful Improved Illuminating Apparatus, of which the following is a specification:

The object of this invention is to furnish an apparatus to be used in connection with an illuminating-flame for concentrating and directing the rays of light, which will better adapt itself to that purpose, and be more useful and economical than any light now in use.

The apparatus consists of two concavo-convex glasses united together by means of a cement and metallic band or rim, so that an airtight space or chamber is formed for holding any liquid material. The upper glass of the illuminator has an orifice for filling the chamber or space with liquid. Said orifice has a glass tube or stopper for excluding the dust and acting as a vent. In connection with the illuminator is an adjustable rest or holder, attached to and working on the tube connected with the burner, for holding the illuminator and shade, a set-screw for retaining the rest or holder in any required position, which will hereafter be more fully described.

In the accompanying drawings, Figure 1 is a side view of my improved illuminating apparatus for attachment to gas-fixtures and like purposes.

Similar letters of reference indicate corresponding parts.

A represents the illuminator, composed of two concavo-convex transparent glasses, of any desired diameter and depth, the two united together by any suitable cement and the metal-

lie band or rim B, thus forming an air-tight chamber or space for holding the liquid material. The upper glass of the illuminator contains a small orifice, for the purpose of filling the chamber or space with liquid. In the orifice is placed the small glass tube or stopper C, to prevent dust from entering, and also to give vent for the expansion of the liquid, caused by the heat from the flame. In connection with the illuminator A is the adjustable rest or holder F. It consists of a metallic ring for holding the illuminator A, and standards S attached to and above the rest or holder F, for holding the shade. This rest or holder F is attached to and working on the tube E connected with the burner. The whole is held in position by the set-screw D, and is particularly adapted for attachment to any gas-fixtures or like purposes.

My improved illuminating apparatus may be used in any position, so as to throw the light at any desired angle.

Having thus described my invention, I claim as new and useful and desire to secure by Letters Patent—

The herein-described adjustable attachment for gas-fixtures and like purposes, consisting of the metallic rest or holder F, adapted to receive and hold the illuminator or lens A, and provided with standards S to support and hold the shade, and collar and set-screw D, all substantially as described, and for the purpose set forth.

JAMES A. THOMPSON.

Witnesses:

T. B. Mosher, Alex. F. Roberts.