

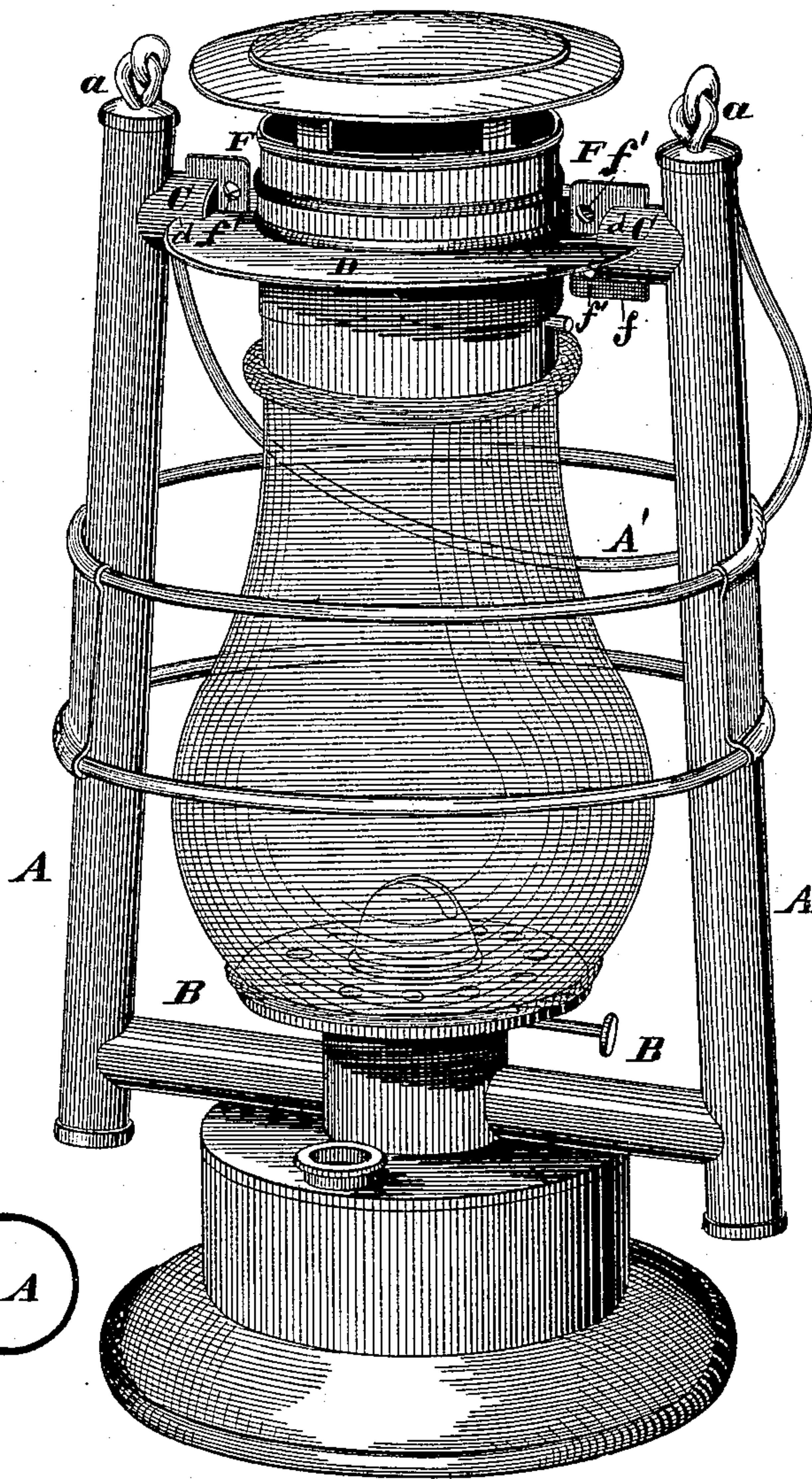
(No Model.)

J. HIRTH.  
LANTERN.

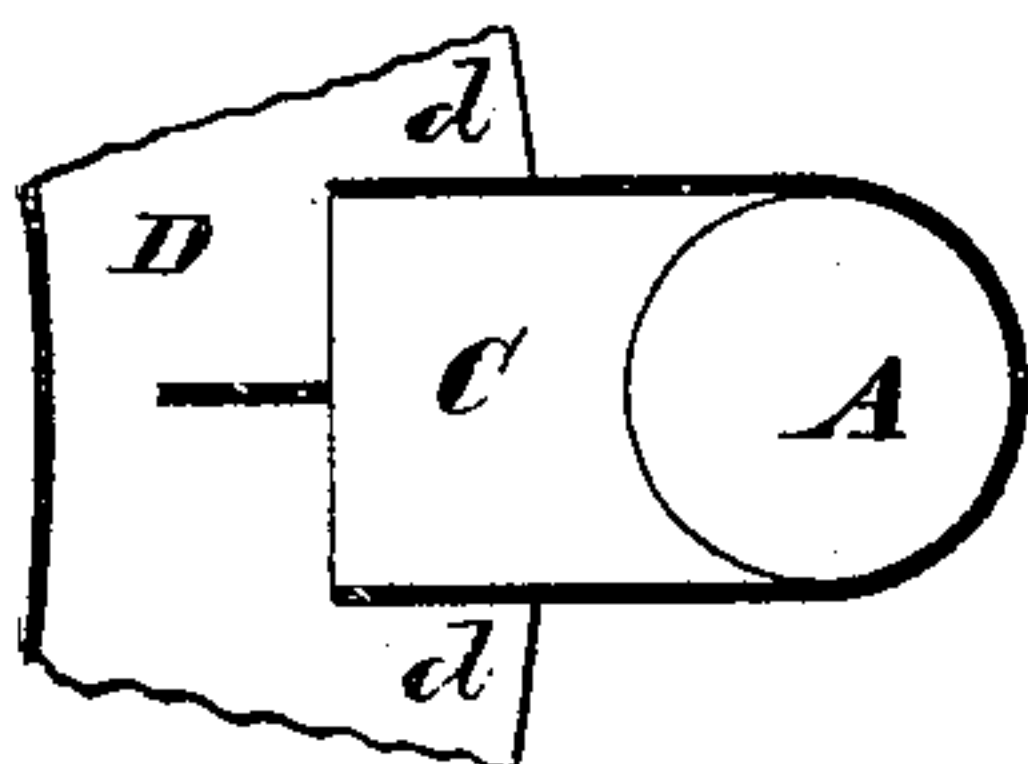
No. 246,774.

Patented Sept. 6, 1881.

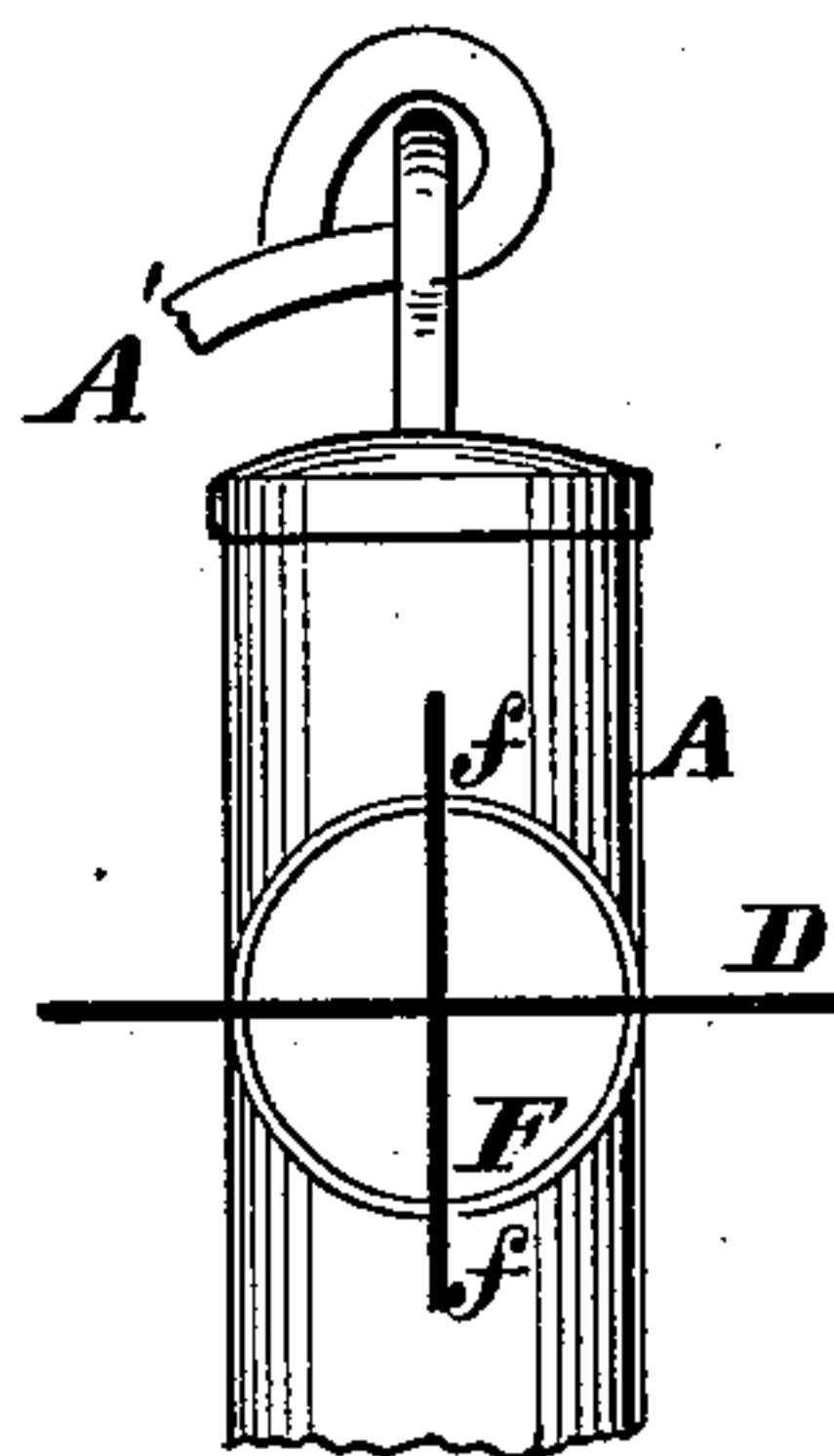
*Fig. 1.*



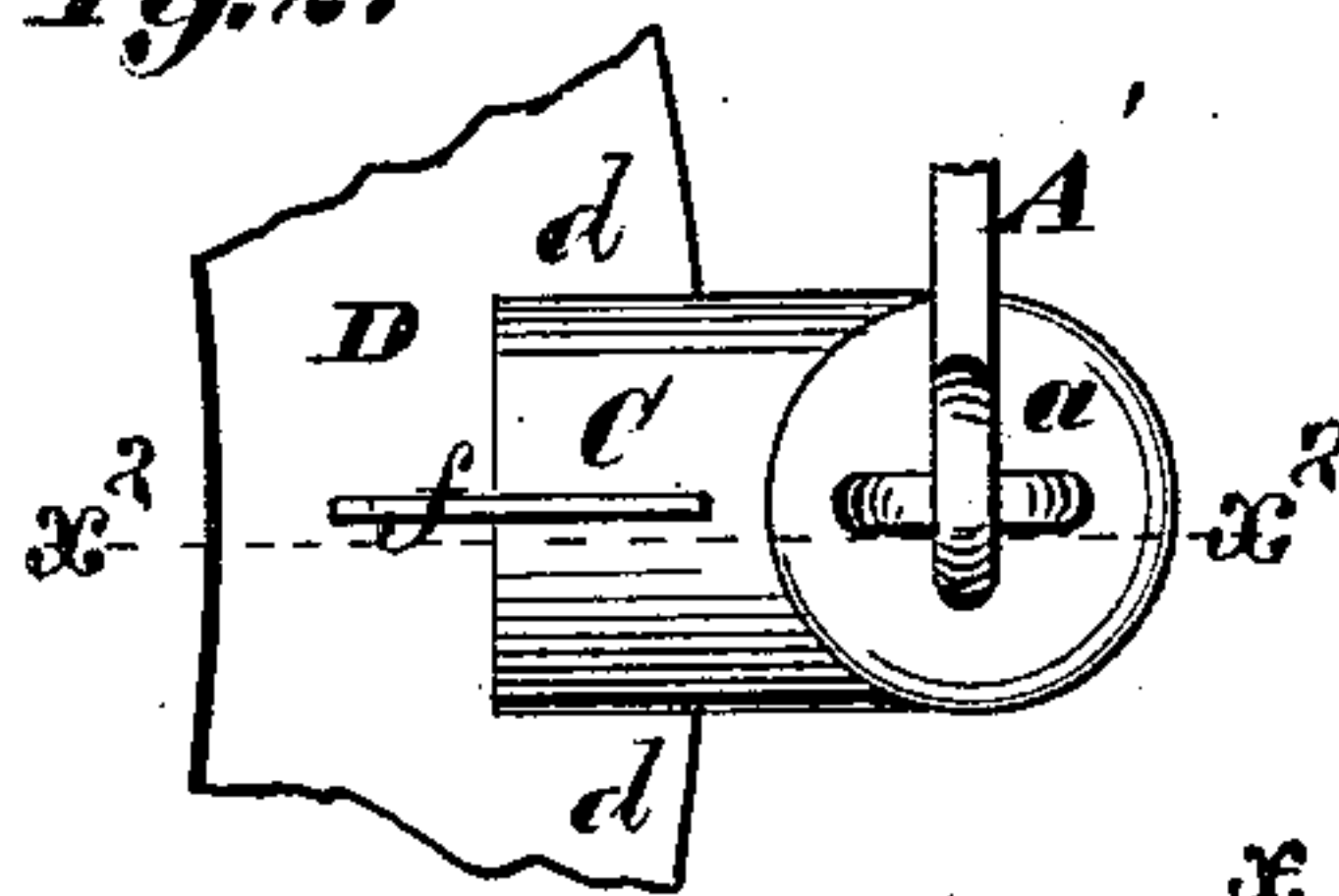
*Fig. 4.*



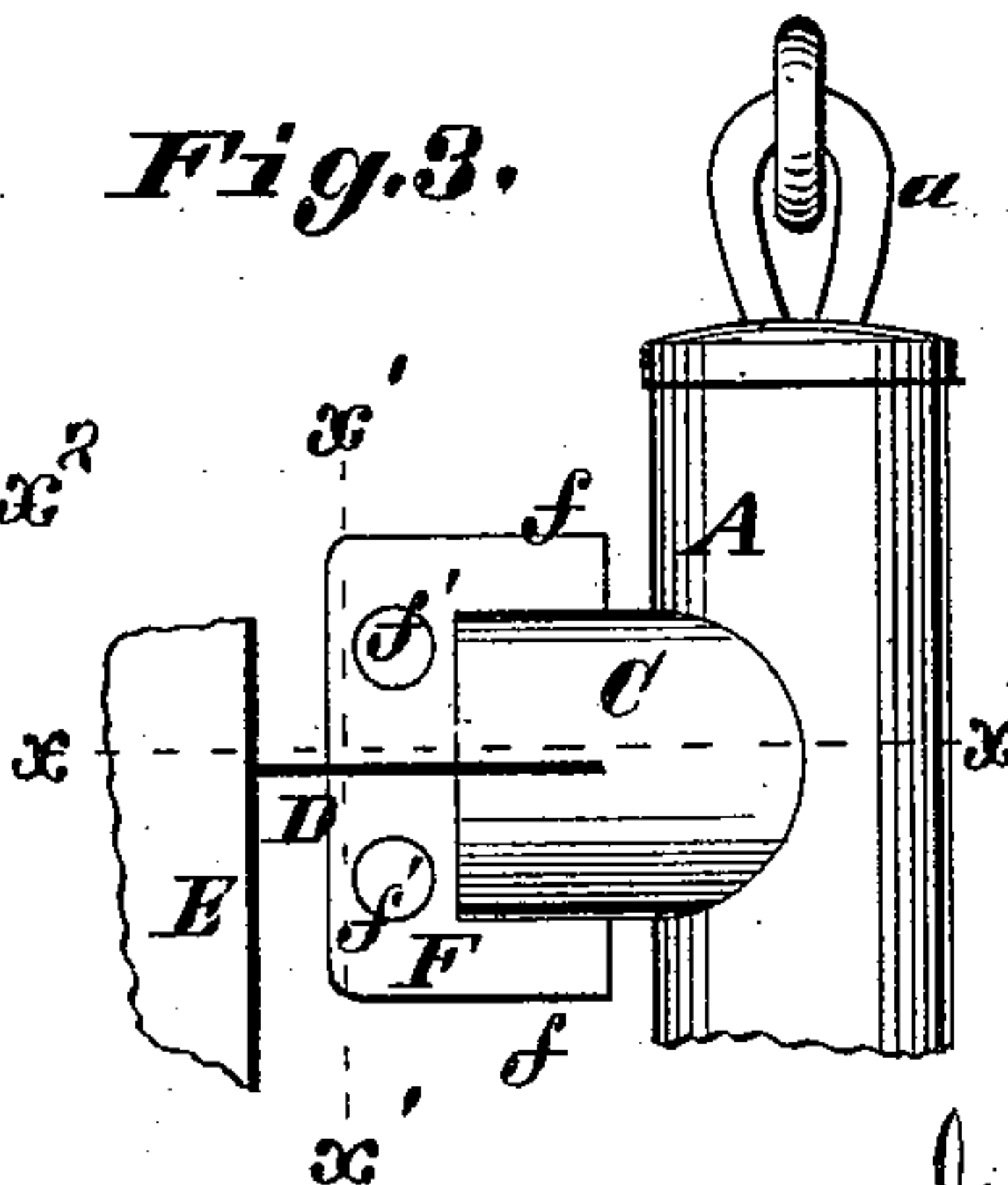
*Fig. 5.*



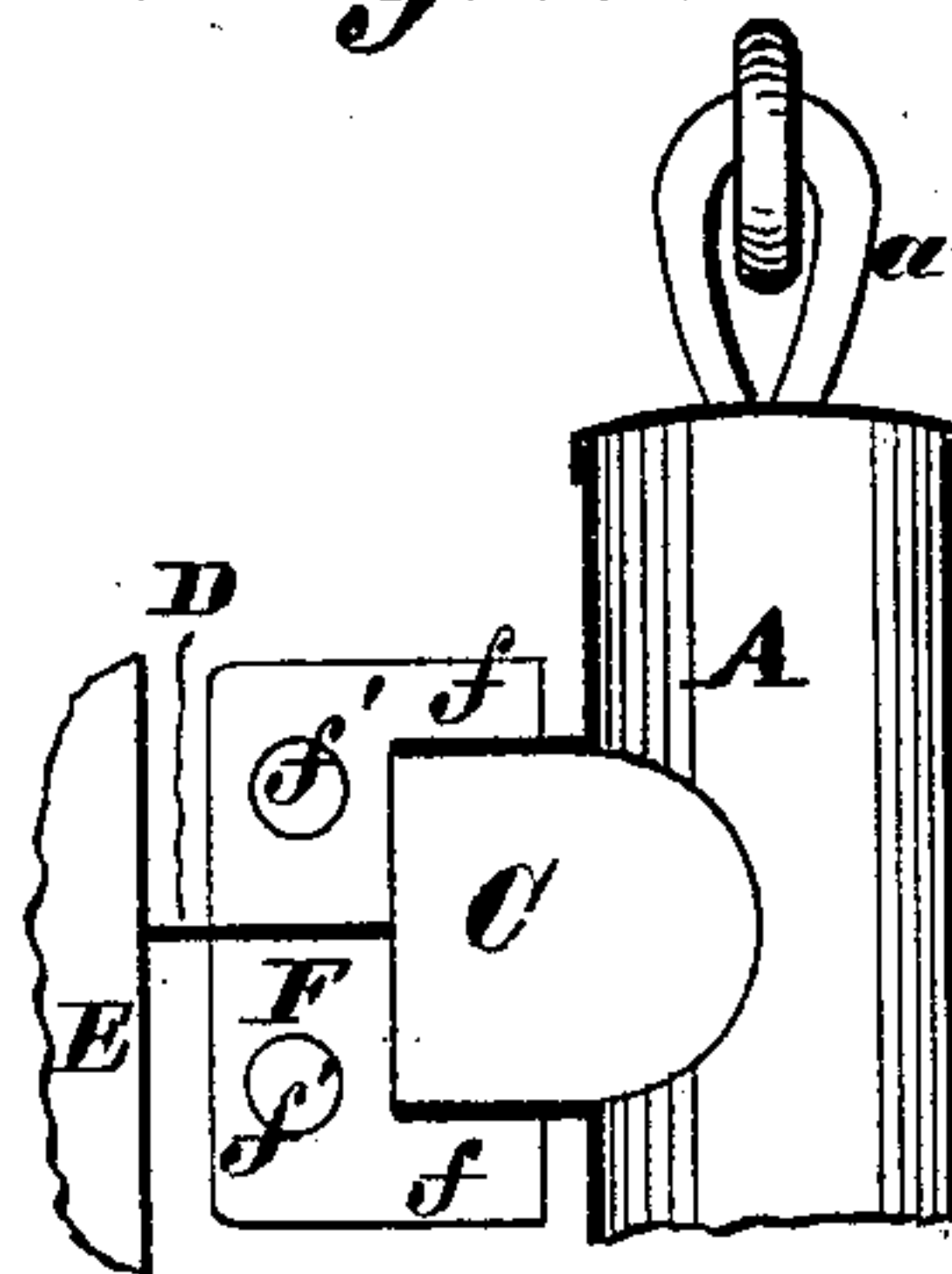
*Fig. 2.*



*Fig. 3.*



*Fig. 6.*



*Attest:*

*Charles Pickles*

*Geo. H. Knight.*

*Inventor.*

*Joseph Hirth*  
*By Knight Bros.*

*Atty.*



# UNITED STATES PATENT OFFICE.

JOSEPH HIRTH, OF ST. LOUIS, MISSOURI.

## LANTERN.

SPECIFICATION forming part of Letters Patent No. 246,774, dated September 6, 1881.

Application filed June 10, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH HIRTH, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Lanterns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to that class of lanterns in which air is fed to the burner through air-tubes receiving air through openings guarded by plates; and this invention consists wholly in a peculiar construction by which, in high or irregular winds, too much air is prevented from entering the tubes, and thus causing the extinguishment of the light or the flickering of the same, and the consequent smoking of the globe.

It will be observed, when my invention is hereinafter fully described with reference to the drawings, that a certain amount of air, and that amount only, will at all times enter the tubes, regardless of the direction of the wind or of the position in which the lantern is carried.

My improvement consists in combining with vertical tubes having horizontal short tubes or feeders at near their upper ends an annular horizontal flange and vertical perforated plates, each crossing said flange, both flange and plates being cut away to receive said short tubes, forming wings around and four separate and distinct entrances to each short tube, as hereinafter described.

In the accompanying drawings, Figure 1 is a perspective view of a complete lantern of the character mentioned, showing my improvement applied. Figs. 2, 3, 4, 5, and 6 are detail views, illustrative of my invention, Fig. 2 being a top view; Fig. 3, a side view; Fig. 4, a section on line  $x x$ , Fig. 3; Fig. 5, a section on line  $x' x'$ , Fig. 3; and Fig. 6, a section on line  $x^2 x^2$ , Fig. 2.

As above inferred, the main body of the lantern is of common construction, so that a description of the same will be unnecessary, and the specification will be confined to a description of the features wherein my invention lies.

A A are the vertical tubes, which communicate at bottom with the burner-chamber by means of tubes B B. The extreme upper ends of the tubes A are closed by caps  $a a$ , to which the bail or handle A' is secured.

C C are short tubes communicating with and extending horizontally inward from the tubes A, near their upper ends, toward the globe or cap of the lantern. The mouths of the tubes C C (or that end of them which faces globe) have located before them, both horizontally and vertically, in the first case the annular flange D, which surrounds and is secured to the ring or collar E, in which the cap of the lantern has vertical movement, and in the second place the vertical plates F, secured to the annular flange D. Portions of the flange are cut away to receive the mouths or inner ends of the tubes D, as that within the tubes, the flange does not extend, and wings  $d d$  are formed. The middle portions of the plates F are also cut away, forming wings  $f f$  for the same purpose—viz., to receive the inner ends of the said tubes. The wings extend some distance outside the tubes toward the vertical tubes, as shown. It is essential to have these wings extending above and below the tubes, for otherwise the wind would sweep around above or below the tubes and enter their mouths; but by having these wings the current of air is directed upward or downward and the difficulty is avoided.

$f' f'$  are perforations in the plates F, to allow the passage of air in high winds. The inner ends of the tubes C are soldered to the flange D and plates F.

As a modification of the tubes C, the upper ends of the tubes A may be bent horizontally inward and their mouths divided into four entrances, as described in reference to the tubes C.

As a matter of course, the lower ends of the tubes may be bent inward to communicate with the burner-chamber, thus dispensing with the tubes B.

I am aware that the openings to air-tubes in lanterns have been guarded by crossed plates, and I do not therefore claim such, broadly.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

5 The combination, with the tubes A A, having horizontal short tubes C C at near their upper ends, of the annular horizontal flange D and vertical perforated plates F F *f' f'*, crossing said flange, both flange and plates be-

ing cut away to receive said short tubes, forming wings *d d f f* around and four separate 10 and distinct entrances to each horizontal tube, as and for the purposes set forth.

JOSEPH HIRTH.

Witnesses:

SAML. KNIGHT,  
GEO. H. KNIGHT.