

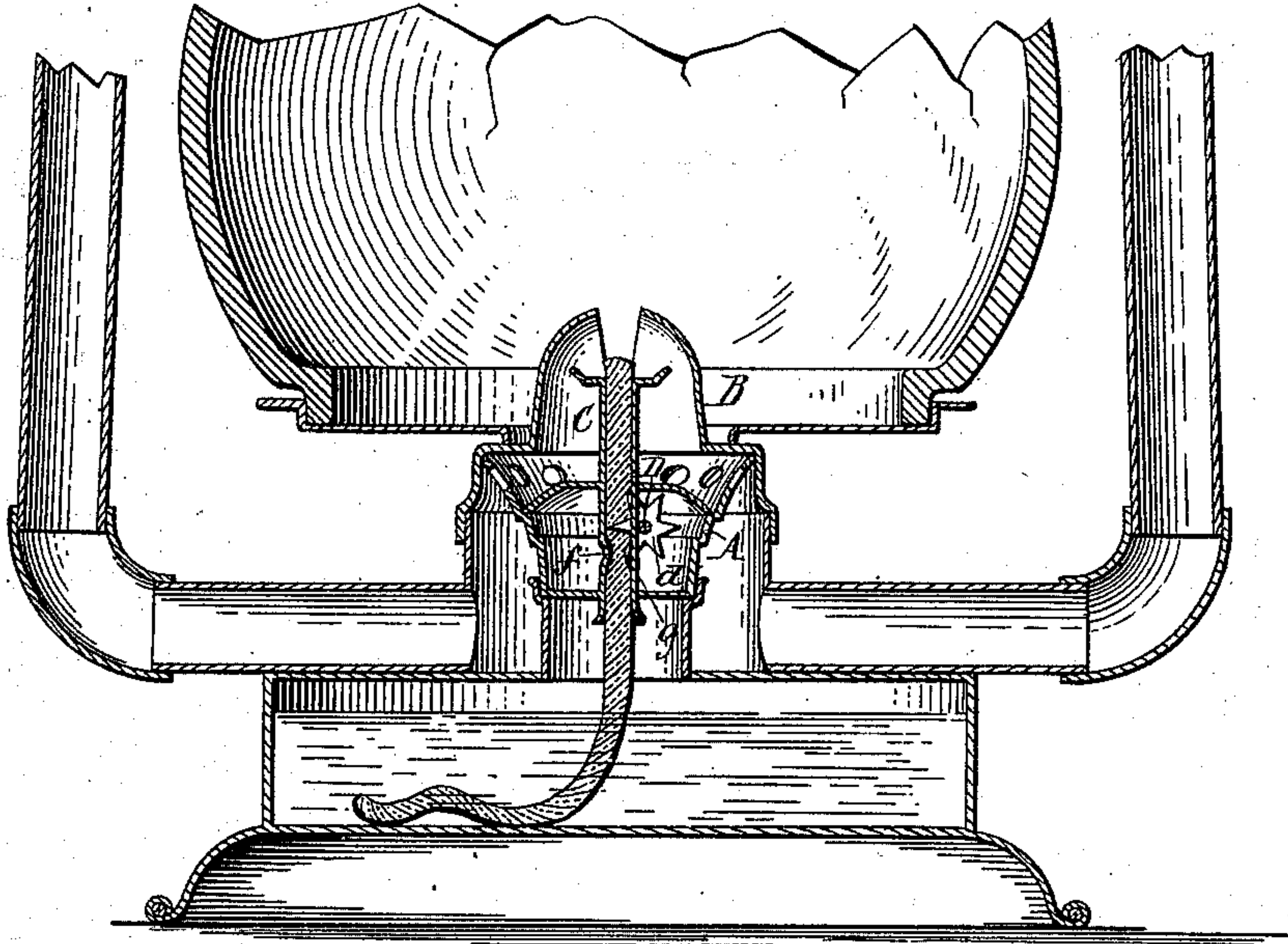
(No Model.)

S. ADAMS.  
LAMP BURNER.

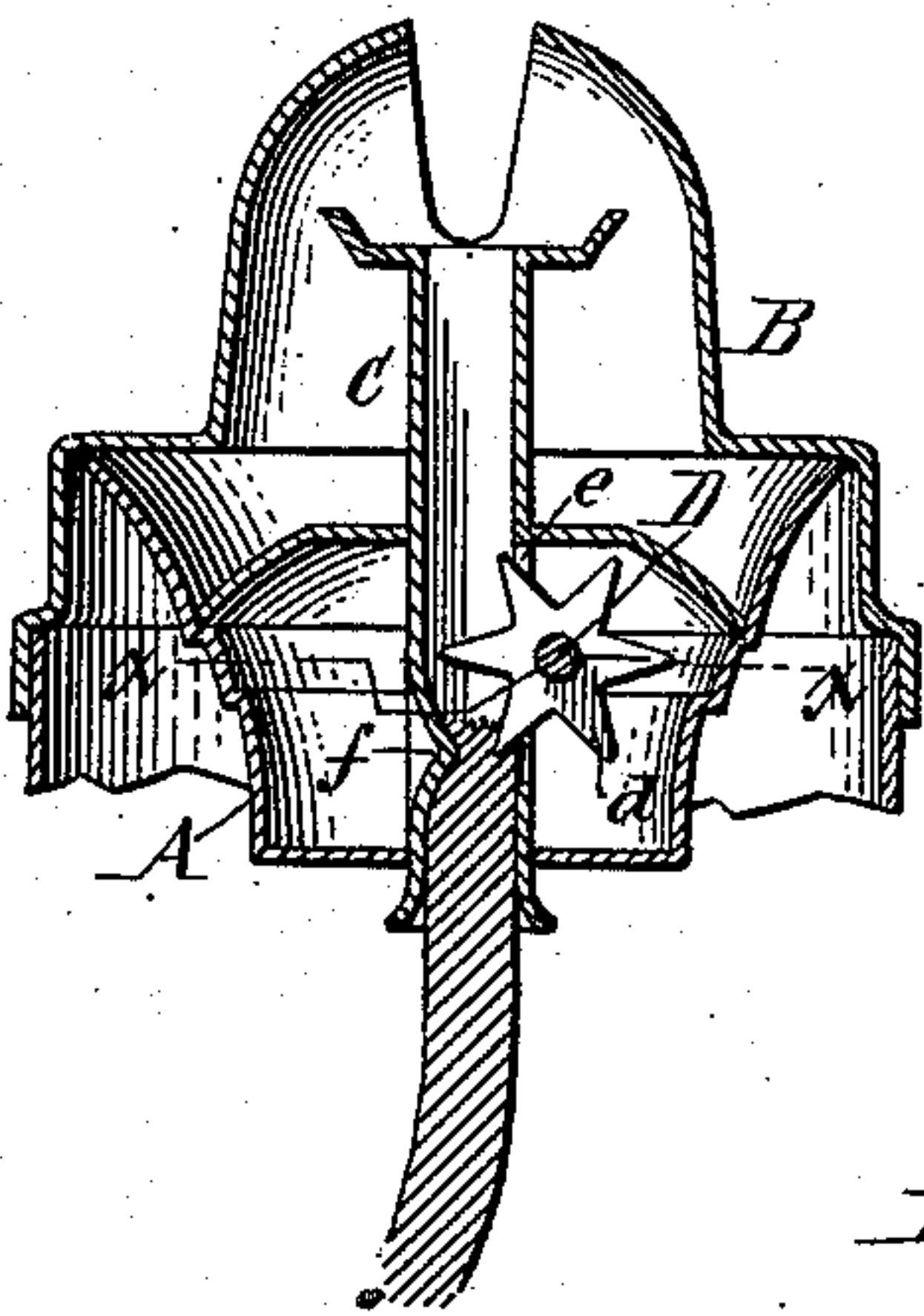
No. 413,704.

Patented Oct. 29, 1889.

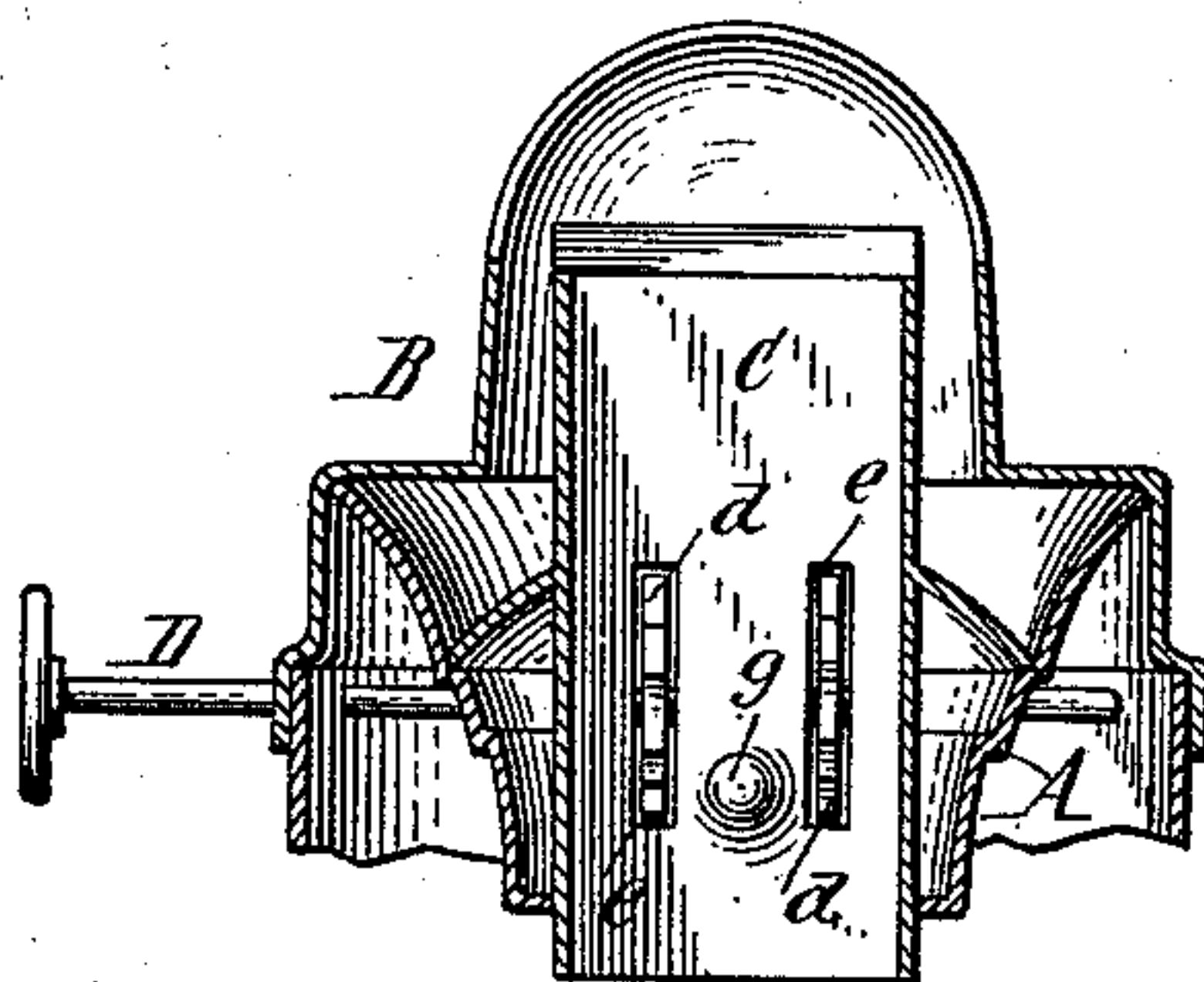
*Fig. 1.*



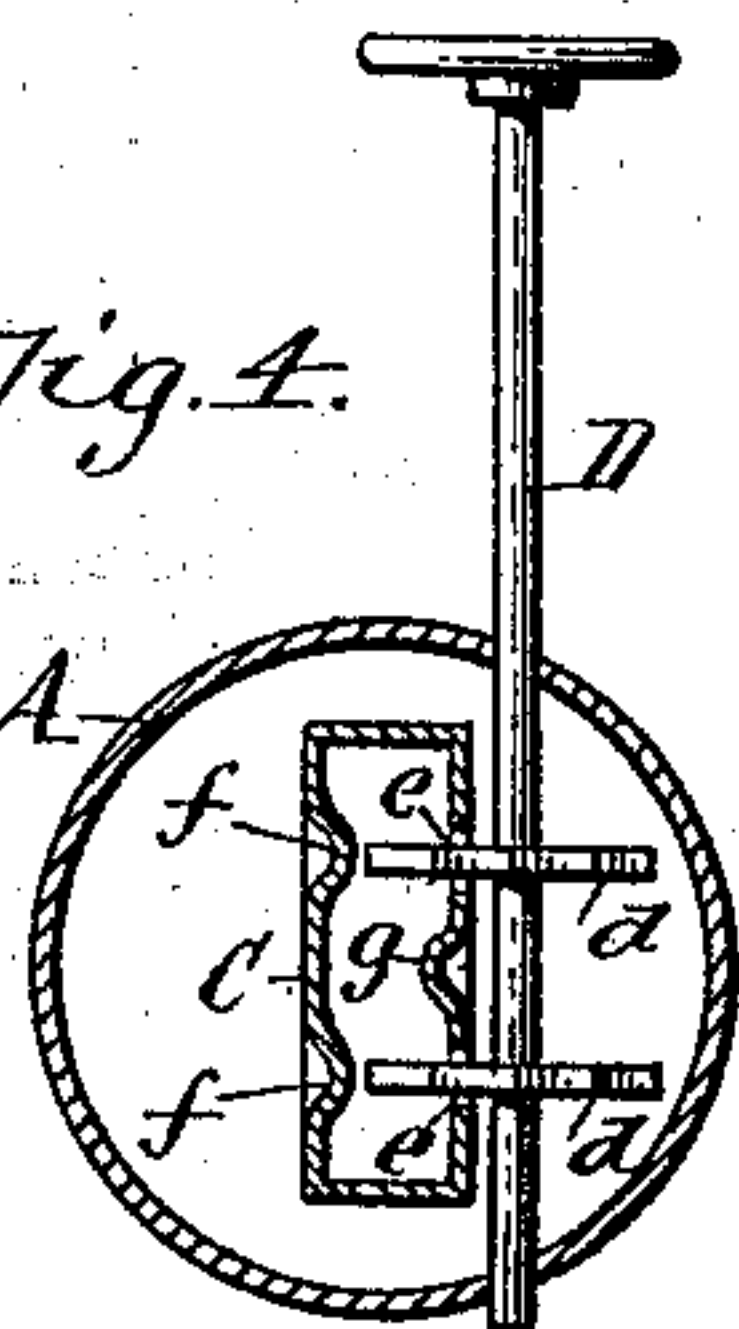
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:

*Thos. L. Goppo*  
*C. F. Geyer*

*Samuel Adams, Inventor.*  
*By Edward Wilhelm*  
*Attorney.*



# UNITED STATES PATENT OFFICE.

SAMUEL ADAMS, OF CHICAGO, ILLINOIS.

## LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 413,704, dated October 29, 1889.

Application filed July 5, 1889. Serial No. 316,549. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL ADAMS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Burners for Lamps and Lanterns, of which the following is a specification.

The object of this invention is to prevent the wick from being turned down in the wick-tube so far as to become disengaged from the toothed wheels of the wick-adjuster and drop into the oil-pot, which is liable to occur in burners as now usually constructed.

My invention consists, principally, of projections formed in the wick-tube below the adjusting-wheels, whereby the opening of the wick-tube is contracted immediately below the wheels, and the wick is held against further downward movement as soon as the wheels lose a firm grip on the wick.

My invention consists, further, of a projection which prevents the wick from interfering with the rotation of the wheels, as will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional elevation of the lower portion of a tubular lantern provided with my improved burner. Fig. 2 is a sectional elevation of the burner. Fig. 3 is a similar view at right angles to Fig. 2. Fig. 4 is a horizontal section in line *x x*, Fig. 2.

Like letters of reference refer to like parts in the several figures.

A represents the shell of the burner, B the burner-cone, and C the flat wick-tube.

D represents the spindle or shaft of the wick-adjuster, and *d d* the toothed wheels thereof. The spindle is arranged outside of the wick-tube and journaled in openings in the shell A. The wheels *d d* project into the wick-tube through vertical slots *e*, formed in one of the broad walls of the tube.

*f f* represent projections formed on the inner side of the opposite wall of the wick-tube facing the toothed wheels and slightly below the same, so as to contract the wick-tube immediately below the wheels. These projections are preferably formed by indenting the wall of the wick-tube from the outside, as represented in the drawings.

When the wick has been turned down so

far that the toothed wheels have lost their firm grip upon the wick, the contraction of the wick-tube below the wheels, caused by the projections *f f*, prevents the wick from dropping down through the wick-tube into the oil-pot, but holds the upper end of the wick in contact with the lower portions of the wheels, as represented in Fig. 2, so that by unskillful or careless manipulation of the wick-adjuster the wick cannot be turned down out of reach of the wheels. Upon turning the wheels in an opposite direction, so as to raise the wick, the teeth of the wheels resume their grip upon the wick, overcome the slight resistance offered by the projections, and move the wick upwardly.

*g* is a projection formed on the wick-tube between the slots *e*, through which the wheels project, for the purpose of preventing the wick from being forced into the slots, which would cause the wheels to be obstructed, so as to render their rotation difficult or impossible. The projections *f* facing the wheels tend to crowd the wick against these slots, and the projection *g* holds the wick away from the slots and prevents any interference with the free working of the wheels.

In a burner provided with my improvement the wick-adjuster can be turned freely without danger of losing the wick, thereby doing away with the necessity of observing carefully how far the wick is turned down. My improvement is extremely simple in construction, and can be applied to burners at trifling expense.

I claim as my invention—

1. The combination, with the wick-tube and the wick-adjusting wheels, of projections which extend into the wick-tube below said wheels and contract the tube, whereby the wick is prevented from dropping out of reach of the wheels in turning it down, substantially as set forth.

2. The combination, with the wick-tube having slots in one of its walls for the wick-adjusting wheels and the wick-adjusting wheels projecting into the wick-tube through these slots, of projections formed on the opposite wall of the wick-tube and extending into the wick-tube below said wheels, substantially as set forth.

3. The combination, with the wick-tube



having slots in one of its walls for the wick-  
adjusting wheels and the wick-adjusting  
wheels projecting into the wick-tube through  
these slots, of a projection formed on the slot-  
5 ted wall of the wick-tube, whereby the wick  
is held away from the slots, substantially as  
set forth.

4. The combination, with the wick-tube  
having slots in one of its walls for the wick-  
10 adjusting wheels and the wick-adjusting  
wheels projecting into the tube through these  
slots, of a projection formed on the slotted

wall of the wick-tube, whereby the wick is  
held away from the slots, and projections  
formed on the opposite wall of the wick-tube 15  
below the wheels, whereby the wick is held  
in reach of the wheels when turned down,  
substantially as set forth.

Witness my hand this 1st day of July, 1889.

SAMUEL ADAMS.

Witnesses:

THEO. L. POPP,  
C. D. HOWE.