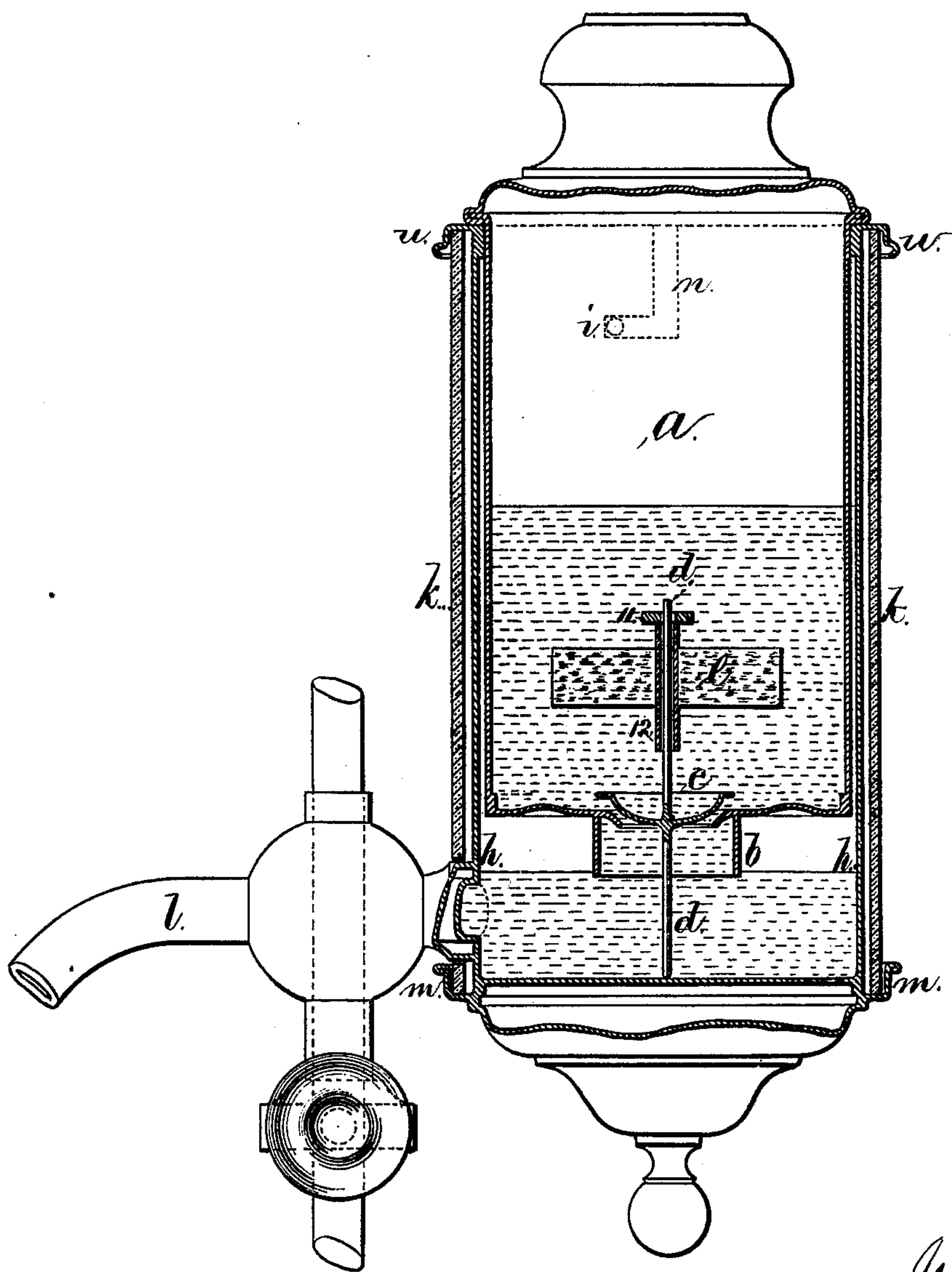


C. F. A. HINRICHS.  
Reservoir for Student-Lamps.

No. 214,134.

Patented April 8, 1879.



Witnesses  
Harold Perrell  
Geo. T. Pinckney

Inventor  
Charles F. A. Hinrichs  
per  
Lemuel W. Perrell  
att'y.

# UNITED STATES PATENT OFFICE.

CHARLES F. A. HINRICHS, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN RESERVOIRS FOR STUDENT-LAMPS.

Specification forming part of Letters Patent No. 214,134, dated April 8, 1879; application filed September 30, 1878.

*To all whom it may concern:*

Be it known that I, CHARLES F. A. HINRICHS, of Brooklyn, in the State of New York, have invented an Improvement in Reservoirs for Student-Lamps, of which the following is a specification.

I apply a tube or cylinder of glass to the outside of the reservoir, into which the fountain is placed, such glass or vitrified exterior being more cleanly than metal and of an ornamental character. The said vitrified reservoir is usually strengthened by a metal lining; but this may be dispensed with.

The fountain is provided with a valve to close and retain the oil when the fountain is full, and to this valve there is a float of cork, or other suitable material, which lifts the valve as the filling of the lamp progresses, and indicates that the reservoir is full by closing the inlet-orifice.

In the drawings my improvement is represented by a vertical section.

The fountain *a* is made of any usual or convenient size, and is preferably cylindrical, and of sheet metal. At the bottom end of the fountain is the rim *b* around the opening for the oil, and the valve *c* on the spindle *d* serves to close this opening when the fountain has been filled and is being introduced into the reservoir, as usual. I, however, apply a float, *e*, of a proper size and displacement upon the spindle *d*, said float being of cork or other suitable material, and it acts to raise the valve while the reservoir is being filled, and finally close the opening by the valve and indicate that the fountain is full.

I prefer to use the tube 12, that passes through the cork and slides freely on the valve-stem. Hence when the fountain is in use the float or its tubular stem will rise against the bridge 11, and the valve be free to fall when the fountain is lifted out of its reservoir or case. This tube 12 does not interfere with the action of the float in closing the valve when the fountain is inverted and being filled.

The vitrified case or reservoir *k* is, by prefer-

ence, made of glass and cylindrical; but it is to be of a size and shape adapted to the reservoir. I have shown the same as outside of the metal case *h*, from which the tube *l* passes to the burner, as usual.

The metallic base *m* receives and incloses the lower edge of the vitrified cylinder or case *k*, and a ring-flange, *u*, at the top of the reservoir *h*, secures the upper end of the vitrified cylinder, the metal parts being soldered together.

It will be apparent that if the vitrified case is so cemented into the base that it will not leak the inside metal reservoir will not be needed. There is a locking device for holding the fountain into the reservoir. The same consists of a pin, *i*, upon the fountain, that passes into an L-shaped slot in the metal reservoir-case *h*, as indicated by dotted lines at *n*. This vitrified reservoir or case is to be more or less ornamental. I sometimes make the same of glass, with figures and ornaments painted or burned upon its surface. Sometimes I make the top or exposed end of the sheet-metal fountain with a vitrified cap or cover; and I also employ a vitrified ornamental cover to the weighted base that sustains the standard and lamp.

I claim as my invention—

1. The combination, with the inverted fountain in a student-lamp and the valve thereof, of a float of cork or similar material around the valve-stem, for the purposes set forth.

2. In combination with the sheet metal of the reservoir, the vitrified case or surface, and the base *m*, and sheet-metal ring *n*, substantially as set forth.

3. The float *e*, provided with a tubular stem, in combination with the valve and stem of the lamp-fountain, substantially as set forth.

Signed by me this 24th day of September, A. D. 1878.

C. F. A. HINRICHS.

Witnesses:

GEO. T. PINCKNEY,  
HAROLD SERRELL.