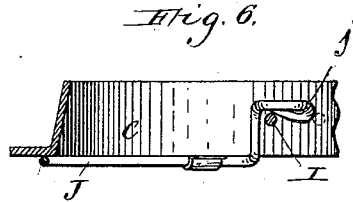
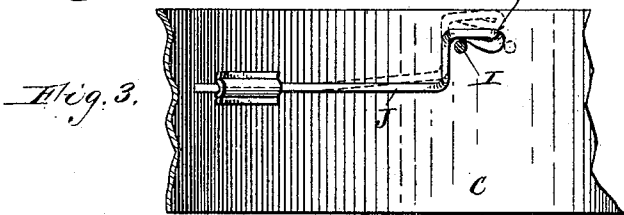
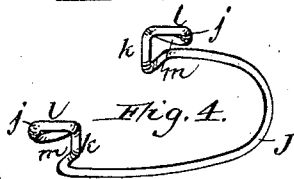
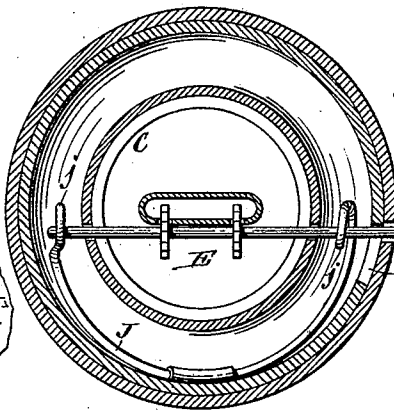
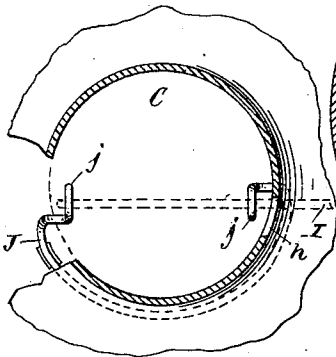
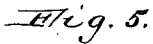
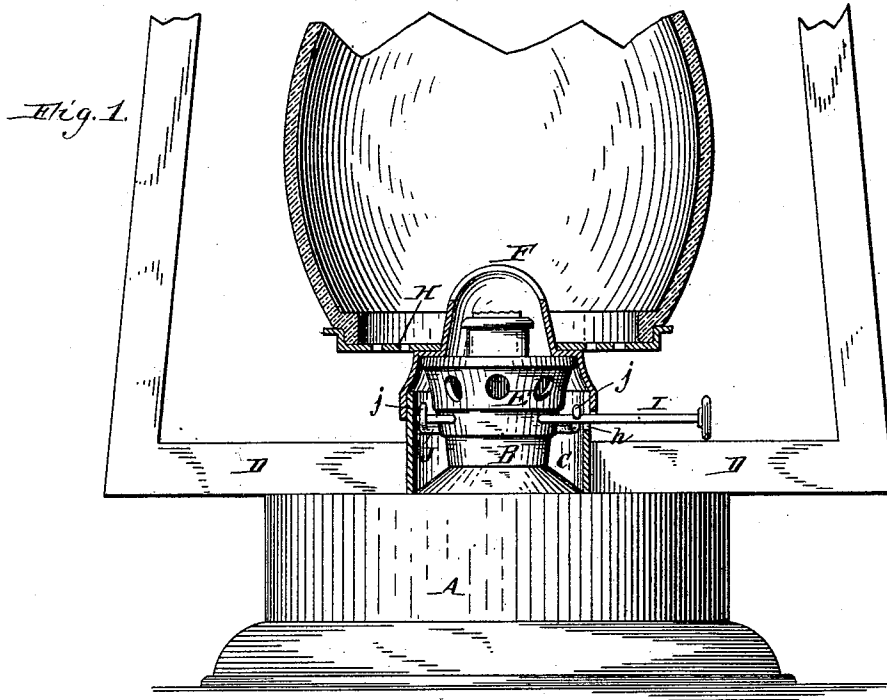


(No Model.)

F. DIETZ.
BURNER FASTENING FOR LANTERNS.

No. 464,496.

Patented Dec. 8, 1891.



Witnesses:
Jacob Nybergbladh
Thos. L. Popp.

Frederick Dietz Inventor.
By Edward Wilhelm
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UNITED STATES PATENT OFFICE.

FREDERICK DIETZ, OF NEW YORK, N. Y., ASSIGNOR TO THE R. E. DIETZ COMPANY, OF SAME PLACE, AND THE STEAM GAUGE AND LANTERN COMPANY, OF SYRACUSE, NEW YORK.

BURNER-FASTENING FOR LANTERNS.

SPECIFICATION forming part of Letters Patent No. 464,496, dated December 8, 1891.

Application filed March 29, 1890. Serial No. 345,876. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK DIETZ, a citizen of the United States, residing at New York, in the county and State of New York, have invented a new and useful Improvement in Burner-Fastenings for Lanterns, of which the following is a specification.

This invention relates to the fastenings whereby an unthreaded or slip burner is secured in the socket of the oil-pot, and has for its object to provide a fastening by which the burner can be tightly secured in the socket to hold the burner securely in place and prevent leakage of oil.

In the accompanying drawings, Figure 1 is a sectional elevation of the lower portion of a tubular lantern provided with my improved burner-fastening. Fig. 2 is a horizontal section on an enlarged scale. Fig. 3 is a fragmentary sectional elevation of the spring-fastening and connecting parts. Fig. 4 is a perspective view of the locking-spring. Fig. 5 is a horizontal section showing a modified construction of the fastening. Fig. 6 is a fragmentary sectional elevation of the same.

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

A represents the oil-pot of a tubular lantern, and B the unthreaded burner-socket secured in the top thereof.

C represents the annular air-chamber surrounding the socket, and D the air-tubes connected with the air-chamber.

E represents the burner, having its lower unthreaded portion or collar constructed to fit snugly in the socket B.

F represents the burner-cone, which is frequently made detachable from the burner, and H represents the perforated plate, which rests on the cone and supports the globe.

I represents the wick-raiser shaft, which penetrates the burner and projects, preferably, on opposite sides therefrom. The short projecting portion of the shaft is arranged within the air-chamber, while its longer portion, to which the hand-wheel is secured, projects through a slot *h* in the air-chamber.

J represents a bow-spring secured centrally to the inner side of the air-chamber, as represented in Figs. 2 and 3, and provided with

locking ends *j*, which engage over the wick-raiser shaft on opposite sides of the burner. These ends are bent upwardly from the main portion of the spring, as shown at *k*, then forwardly, as shown at *l*, and then downwardly and back under the raised horizontal portions *l*, as shown at *m*, thereby forming raised elastic arms having enlarged ends, the lower sides of which incline upwardly toward the upright portions *k*. The locking ends are turned in opposite directions, as represented in Figs. 3 and 4, so that the wick-raiser shaft can be engaged underneath the same by a short turning movement of the burner in its socket. Upon placing the burner in its socket with the wick-raiser shaft opposite the ends of the spring-arms and giving the burner a short turn in the proper direction to move the wick-raiser shaft underneath the ends of the fastening-spring, the wick-raiser shaft engages under the locking ends of the spring-arms and deflects the same upwardly. When the wick-raiser shaft has passed beyond the lowest portions of the enlarged ends of the spring, the downward pressure of the spring holds the shaft against backward movement and seats the burner tightly in its socket. The elasticity of the spring compensates for any irregularities in workmanship, so that a close fit of the burner in its socket is obtained in all cases.

Instead of securing the bow-spring to the air-chamber at its middle, as represented in Figs. 2, 3, and 4, it may be secured near its ends, as represented in Figs. 5 and 6. In the last-named construction the elasticity of that part of the spring which lies between the fastenings is not utilized. The elasticity of the spring-arms themselves is, however, in most cases sufficient to produce the desired effect. In this modified construction it is desirable to form the two spring-arms in one piece, as shown, because it simplifies the construction and effects a stronger and more durable connection with the air-chamber.

It is obvious that a single spring-arm may be used for engagement with the wick-raiser shaft on one side of the burner; but this construction is less desirable, because it is liable to tilt the burner.

I claim as my invention—

1. The combination, with the oil-pot provided with a slip-socket, a burner capable of rotative movement in said socket and provided with a laterally-projecting wick-raiser shaft, and the air-chamber surrounding the burner, of a horizontal spring-catch secured to said air-chamber and adapted to engage over the wick-raiser shaft, whereby the burner is locked by turning it in its seat, substantially as set forth.

2. The combination, with the oil-pot provided with a slip-socket, a burner provided with a wick-raiser shaft, and the air-chamber surrounding the burner, of a horizontal spring secured in said air-chamber and having its free end bent upwardly and forwardly and back underneath the forward bend, forming

a raised and enlarged locking end, which engages with the projection on the burner, substantially as set forth.

3. The combination, with the oil-pot provided with a slip-socket, a burner provided with a wick-raiser shaft projecting on opposite sides, and the air-chamber surrounding the burner, of a bow-spring secured horizontally in the air-chamber and provided with raised and enlarged locking ends engaging over the wick-raiser shaft, substantially as set forth.

Witness my hand this 22d day of March, 1890.

FREDERICK DIETZ.

Witnesses:

FRED VAN DUYN,
JOHN HEANEY.