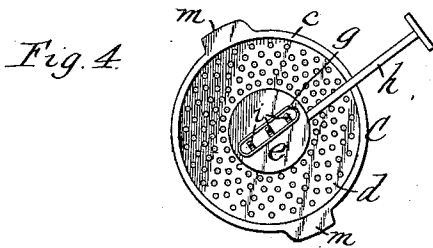
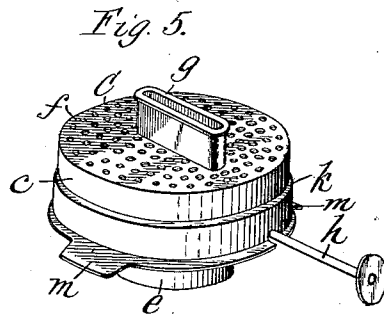
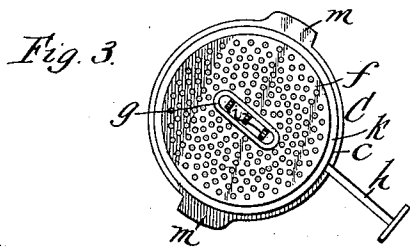
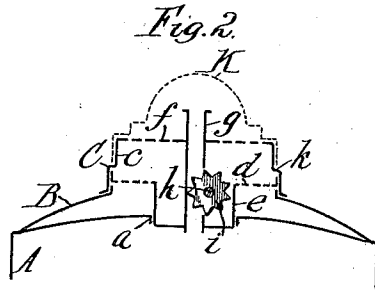
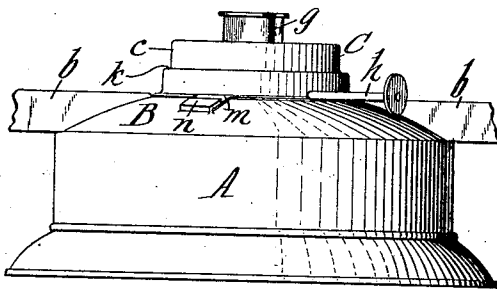
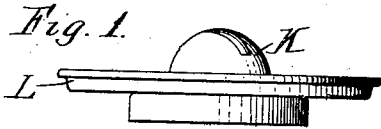


F. DIETZ.
 LANTERN BURNER.
 APPLICATION FILED MAR. 11, 1912.

1,067,593.

Patented July 15, 1913.



Witnesses:
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UNITED STATES PATENT OFFICE.

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LANTERN-BURNER.

1,067,593.

Specification of Letters Patent.

Patented July 15, 1913.

Application filed March 11, 1912. Serial No. 682,965.

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 of New York and State of New York, have invented a new and useful Improvement in Lantern-Burners, of which the following is a specification.

This invention relates to the burners of tubular lanterns and has the object to produce a burner of simple construction which is easily attached to the air chamber upon which it is mounted and which causes the air for the support of the flame to pass from the air chamber to the flame in a steady current, notwithstanding that the lantern may be exposed to violent and variable blasts of air.

In tubular lanterns provided with burners of ordinary construction a violent blast of air entering the air supply tubes or passages is usually transmitted from the air chamber through the burner to the flame with almost unbroken force. The excessive supply of air so furnished to the flame depresses the latter and causes the flame to flutter and to be greatly reduced in size and in illuminating capacity, the flame sometimes withdrawing entirely into the burner cone. When the air supply is variable, normal and violent at intervals, the flame is large and luminous when the air supply is normal and becomes small and of little illuminating power when the air supply is excessive, and the light furnished by the lantern is correspondingly unsteady and unsatisfactory.

One object of this invention is to avoid this variable character of the flame under these conditions.

In the accompanying drawings: Figure 1 is a side elevation of the lower part of a tubular lantern provided with this improved burner, the burner cone and globe plate being raised from the burner. Fig. 2 is a vertical section through the burner and the air chamber with the burner cone indicated by dotted lines. Fig. 3 is a top plan view of the burner. Fig. 4 is a bottom plan view of the burner. Fig. 5 is a perspective view thereof.

Like reference characters refer to like parts in the several figures.

A represents the oil pot of a tubular lantern having in its top plate a burner socket *a*.

B represents the air chamber secured upon

the oil pot and open at the top for the reception of the burner C.

b represents the lower portions of the air tubes communicating with the air chamber.

The burner comprises an imperforate peripheral wall *c* which is seated with its lower edge upon the open top of the air chamber. The lower portion of the burner is formed by an annular, approximately horizontal, perforated bottom plate *d* which is provided with a downwardly extending central shank *e* adapted to be seated in the burner socket *a* and made preferably of straight cylindrical form. The upper portion of the burner is formed by a horizontal perforated plate *f* which is preferably formed in one piece with the peripheral wall *c*.

g represents the wick tube which is secured at its lower end to the bottom of the hollow shank *e* and near its upper end to the perforated top plate *f* above which it projects.

h represents the wick-raiser shaft extending through the upper portion of the hollow shank and *i* represents the wick-raiser wheels secured to this shaft within the shank.

The peripheral wall *c* of the burner is preferably provided with a shoulder *k* upon which the burner cone K rests, which latter is detachable from the burner and which may be secured to the globe plate L.

The lower edge of the peripheral wall *c* of the burner is preferably provided with laterally-projecting wings *m* which are adapted to be engaged beneath locking lips *n* on the air chamber by a slight turning movement of the burner, thereby securing the latter to the air chamber.

The air passes upwardly from the air chamber through the lower perforated plate *d* of the burner, thence through the space between the lower and upper perforated plates which operates as a quieting chamber, and thence through the perforated upper plate *f* into the burner cone. In passing through these perforated plates and through the space or chamber between the same violent air currents become diffused and quiet and pass to the flame in a steady current, thereby maintaining the flame of a uniform luminous size and character and preventing the objectionable flattening and cutting down of the flame which occurs when a strong blast strikes the same. The wick

tube is exposed to the air in the burner and is cooled thereby, thus preventing the overheating of the wick tube and the formation of gases in the tube resulting therefrom.

5 I claim as my invention:

1. A burner for tubular lanterns adapted to be removably seated upon the air chamber of the lantern, such burner comprising an annular perforated bottom plate, an attaching shank depending centrally from said plate, an imperforate peripheral wall extending upwardly from said bottom plate, a perforated top plate extending inwardly from the upper end of said peripheral wall, and a wick tube extending from the bottom of said shank upwardly through said top plate, said parts of the burner being rigidly secured together, substantially as set forth.

2. The combination with an oil pot having a burner socket, and an open-topped air chamber secured upon the same and connected with the air tubes, of a burner removably seated upon the air chamber and comprising an annular perforated bottom plate, an attaching shank depending centrally

from said plate and seated in said socket, an imperforate peripheral wall, a perforated top plate, and a wick tube extending from the bottom of said shank upwardly through said top plate, said parts of the burner being rigidly secured together, substantially as set forth. 30

3. In a tubular lantern, the combination with an oil pot having a burner socket in its top and an air chamber secured upon the oil pot and provided with locking lips, of a burner comprising an imperforate peripheral wall seated upon said air chamber and having laterally projecting wings adapted to be engaged with said lips, upper and lower perforated plates secured to said wall, an attaching shank extending downwardly from the lower perforated plate and seated in said socket, and a wick tube, substantially as set forth. 45

Witness my hand in the presence of two subscribing witnesses.

FREDERICK DIETZ.

Witnesses:

ERNEST C. EVERETT,
F. W. VAN DUYN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."