(No Model.)

N. TROWBRIDGE.

LAMP BURNER.

No. 306,788. Patented Oct. 21, 1884.

Fig. 1.

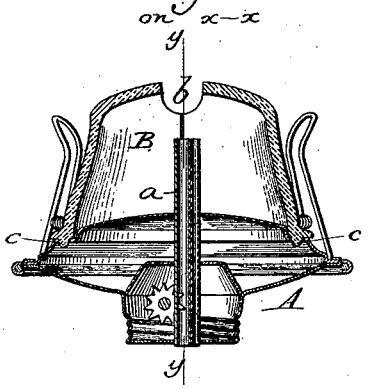


Fig. 2.

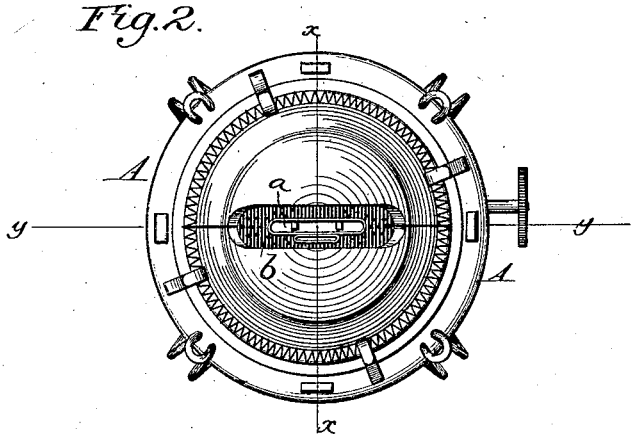
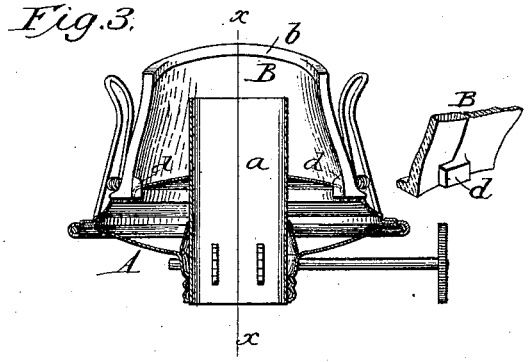


Fig. 3.



WITNESSES

Sidney P. Hollingsworth

Harry Shipley

INVENTOR

Newton Trowbridge

By Philip T. Dodge

Attorney

UNITED STATES PATENT OFFICE.

NEWTON TROWBRIDGE, OF TOPEKA, KANSAS.

LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 306,788, dated October 21, 1884.

Application filed December 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, NEWTON TROWBRIDGE, a citizen of the United States, residing at the city of Topeka, in the county of Shawnee and State of Kansas, have invented new and useful Improvements in Lamp-Burners, of which the following is a specification.

My invention relates more particularly to that class of lamps for petroleum and similar oils which have a burner provided with a cone containing an elongated opening or slit through which the flame ascends.

The object of the invention is to provide a transparent cone which will permit a better distribution of the light than those constructed of metal, and which will at the same time be free from danger of breakage on account of the high temperature and sudden changes of temperature to which it is subjected.

To this end it consists in a cone constructed of glass, in two or more sections or segments, and in means whereby the segments are locked in position with respect to each other and to the body of the burner, and by which they are held in close contact with a yielding pressure, so that they may readily expand and contract without being disabled or broken.

Referring to the accompanying drawings, Figure 1 represents a vertical central cross-section of a lamp-burner having my improvements embodied therein, the section being taken in the line *x x* of Fig. 2. Fig. 2 is a top plan view of the burner. Fig. 3 is a vertical cross-section on the line *y y*.

Referring to the drawings, A represents the body or base portion of the burner, designed to receive and sustain the chimney, and provided, as usual, with an upright flattened wick-tube, *a*.

The foregoing parts and the other parts usual in burners of this class may be constructed in the ordinary form and manner, except as to the details hereinafter specified.

B represents my improved cone mounted on the base portion over and around the wick-tube, and provided, as usual, with an elongated opening or slit, *b*, in the top for the passage of the flame. The cone may be made in all respects of the same form as the ordinary sheet-metal cones, but is composed of glass or equivalent transparent material, and is divided vertically into two or more parts. It is preferred to make the division at the ends of the slit or opening, as shown in the drawings; but it may be otherwise divided in special cases, if preferred.

In order to hold the two parts in the proper relation to each other, I provide one or both with lips *d*, each adapted to overlap the adjacent edge of the other part.

In order to maintain the cone firmly in position on the burner, and particularly to prevent its horizontal rotation, which would bring the edges of the flame in contact with the glass and result in its destruction, I provide the sections with depending studs or shoulders *c*, adapted to enter or interlock with corresponding depressions in the top of the body.

It will be observed that by means of the two series of lugs the cone is prevented from moving its position in either direction, and that the edges of the two parts are held directly against each other, so that the passage of air between them is prevented.

In order to confine the parts of the cone securely in position, but permit them to yield as they expand and contract, I make use of elastic and yielding and elastic devices to attach the same to the body of the burner. The preferred device for this purpose is a spiral spring, arranged in position to encircle and bear upon the lower edge of the cone, and united to the burner at any desired number of points in its length. Usually four points of connection are sufficient. The spring thus applied will yield, in order to permit the insertion of the cone, and will act thereon, when in position, with a yielding pressure.

Having thus described my invention, what I claim is—

1. The combination, substantially as hereinbefore described and shown, of the lamp-burner having a flat wick-tube, and a divided glass cone provided with shoulders to engage the burner and prevent the rotation of the glass thereon.

2. The divided glass cone provided with interlocking studs on their contiguous edges, and also with studs or shoulders to engage the body or support.

3. In combination with a divided glass cone, a support therefor, and elastic connecting devices, substantially as described, acting to confine the parts in close contact and permitting them to expand or contract.

Witnesses: NEWTON TROWBRIDGE.

W. H. POOR,

SEYMOUR DAVIS.