(No Model.)

G. E. SLAUGHTER.

GAS LAMP.

No. 343,344. Patented June 8, 1886.

Fig. 1.

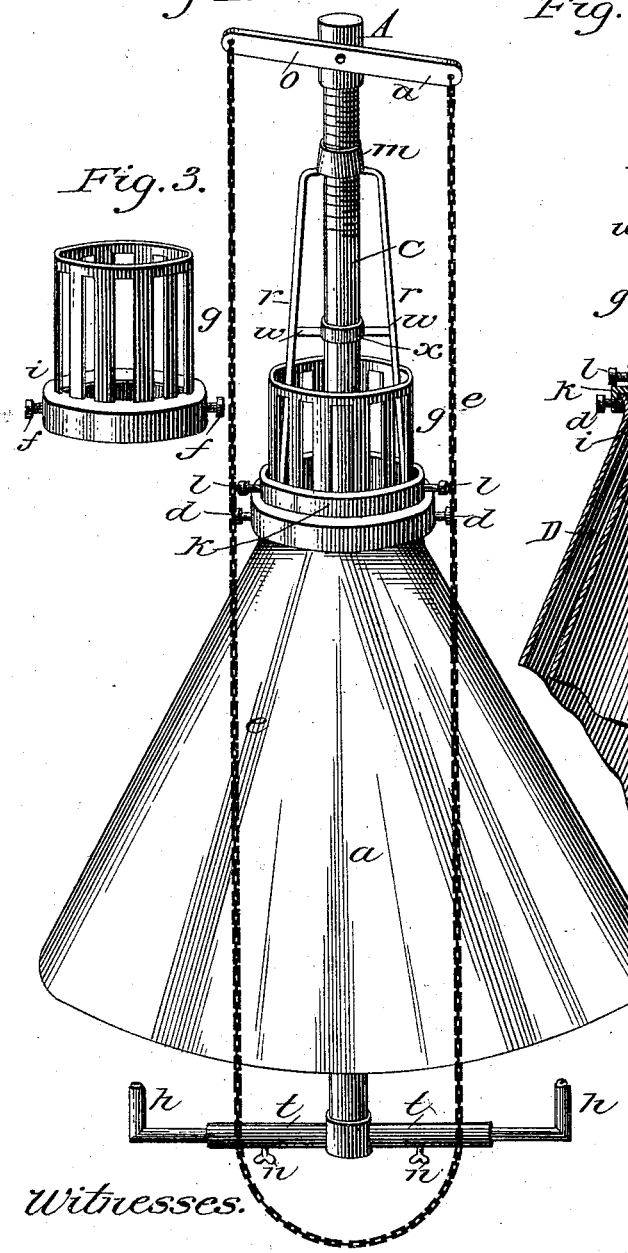


Fig. 2.

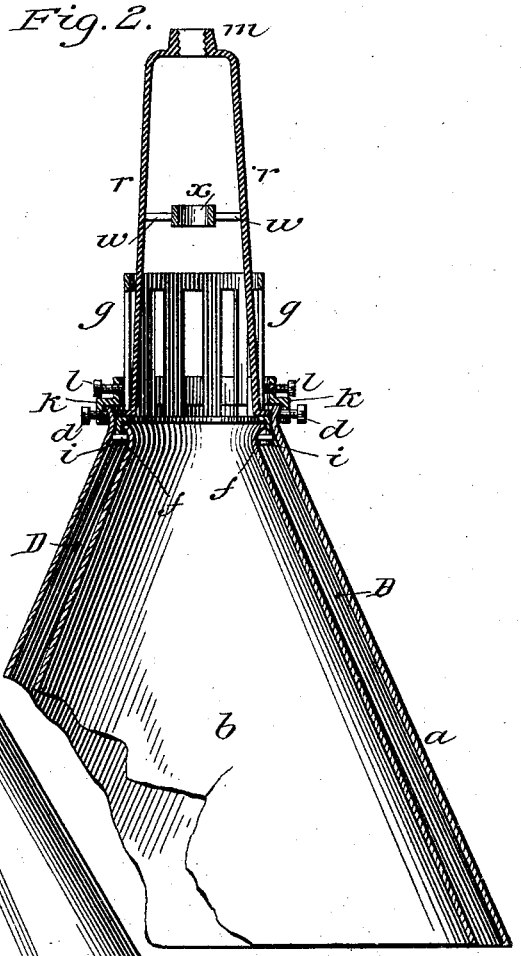
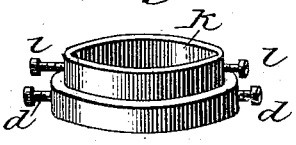


Fig. 3.

Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE E. SLAUGHTER, OF ATLANTIC, IOWA.

GAS-LAMP.

SPECIFICATION forming part of Letters Patent No. 343,344, dated June 8, 1886.

Application filed February 20, 1886. Serial No. 192,006. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. SLAUGHTER, a citizen of the United States, residing at Atlantic, in the county of Cass and State of Iowa, have invented a new and useful Improvement in Gas-Lamps, of which the following is a specification.

My invention relates to certain improvements in lamps having a reflector secured to them.

The objects of my improvements are, first, to provide a gas-lamp which will heat or warm the gas before it is consumed; second, to provide a lamp when hung above store-counters or other objects which will reflect nearly all the light downward upon them; third, to provide a lamp having its reflector protected from the heat of the gas-flames. I attain these objects by the device illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my gas-lamp. Fig. 2 is a central vertical section of the entire lamp excepting the pipes. Fig. 3 is a detailed perspective view of the protector-holder and extension. Fig. 4 is a detailed perspective view of the reflecting-shade holder.

Similar letters refer to similar parts throughout the several views.

The upper end of the coupling A is fitted to receive the threaded end of an ordinary gas-pipe, and into its lower end is screwed the pipe C. In the coupling, above the pipe C, is a stop-cock, which can be turned so as to open and close the pipe by means of the lever *o*, which is secured to the stop-cock and has the chain *e* attached to its ends. The upper end of the pipe C is threaded for several inches. The ring *m* has its aperture grooved to fit the threaded end of the pipe C, and has firmly secured to it two or more arms, *r r*, which project downward and pass inside of the slotted extension *g*, and firmly connect with the protector-holder *i* near its base. The ring *x* having the arms *w w*, which connect with the arms *r r*, has an aperture of suitable size to allow it to move easily upon the pipe C. The protector-holder *i* is hollow and open at each end. It has a slotted extension, *g*, which projects upward through the reflecting-shade holder *k*. The extension portion is not quite as large as that part to which the glass protector *b* is secured. The extension *g* of the holder *i* and the enlarged portion of the holder, to which the protector *b* is secured, are integrally formed of one casting. The slots are for the escape of the air, which passes through the air-space D, and that part of the extension which is not cut away by the slots provides a rest or support for and to which the holder *k* is secured.

The protector *b* is made of glass, and is secured to the holder *i* near its base. It can be secured to the holder in any convenient manner, usually by means of the screws *f f*.

The reflecting-shade holder *k* is hollow and open at each end. The upper part of it is made of suitable size to receive the extension *g* of the holder *i*, and the lower portion large enough to receive the base of the holder *i*, and leave a space between the bases of the holders of sufficient size to allow the top of the reflecting-shade to enter. The top part of the reflecting-shade holder has the screws *l l*, and its base the screws *d d*.

The reflecting-shade *a* is opaque, and is made of glass having its outside tinned or silvered similar to an ordinary mirror, thus making its inside a mirror. It can be made of any material that will reflect the light, and it is secured to the base of the holder *k* by means of the screws *d d*, so that it can be removed when desired.

The protector *b* and the reflecting-shade *a* are both hollow and open at each of their ends. The circumference of each is the greatest at its base, and the smallest near its top, and each is secured to its holder by screws touching it upon its outside where its circumference is the smallest.

The reflecting-shade *a* is made of sufficient size to pass over and cover the protector *b* and leave an air-space, D, between them. The holder *k*, having the reflecting-shade secured to it, can be moved upward and downward upon the extension *g*, and held at any desired point upon it by means of the screws *l l*.

The size of the air-space D is increased when the reflecting-shade and its holder are moved upward, and decreased when they are moved downward.

The lower end of the pipe C is closed, and

it has entering it near its base several branch pipes, *t t*, having secured to them the gas-jets *h h*. Each of the branch pipes has a stop-cock, *n*.

The reflecting-shade *a* can be made of the shape of a half-globe, or in any other form that will reflect the light downward.

When the lamp is in use, a current of air enters the base of the protector *i*, and passes through it, which deflects the flames toward the pipe C, and the pipe becomes very hot and heats the gas before it reaches the jets *h h*, and my experience has demonstrated that the gas when so heated produces more light to the amount consumed than it otherwise would. The air in the space D becomes hot and rises and passes into the room through the slots in the extension *g*, causing the cold air to enter and take its place. The protector *b*, with the air circulating between it and the reflecting-shade protects the reflecting-shade from the intense heat of the flames, so that the coating upon its outside will not be melted or destroyed. Without the protector and air-space the heat of the flames soon damages the shade. The shape of the reflecting-shade and its being opaque and its inside a mirror causes the light to be reflected downward with great brilliancy and power. When the branch pipes *t t* are open, the flow of the gas to all the jets can be checked or stopped by means of the stop-cock in the coupling A; but if it is desired to check or stop the flow of the gas to one or more jets, and not to the others, it can be done by means of the stop-cocks *n n*. By turning the ring *m* the distance between the gas-jets and the tops of the reflecting-shade and protector can be adjusted.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the holder *i*, having the slotted extension *g*, the glass protector *b*, secured to the base of the holder *i*, the holder *k*, secured to the outside of the extension *g*, the reflecting-shade *a*, secured to the base of the holder *k*, and the support, the downward extending arms of which pass inside of the extension *g* and fasten firmly to the holder *i* near its base, all substantially as shown and set forth.

2. The combination of the holder *i*, having the slotted extension *g*, and having the screws *f*, the glass protector *b*, secured to the base of the holder *i*, the holder *k*, having the screws *l* and *d*, secured to the outside of the extension *g*, the reflecting-shade *a*, secured to the base of the holder *k*, the air-space D, the arms *r r*, the lower ends of which are firmly secured to the holder *i* near its base, the arms *w w*, secured to the arms *r r*, the ring *x*, secured to the arms *w w*, and the ring *m*, having its aperture threaded, secured to the upper ends of the arms *r r*, all constructed and arranged substantially as shown and described.

3. The herein-described gas-lamp, consisting of the holder *i*, having the slotted extension *g*, and screws *f*, the protector *b*, secured to the base of the holder *i*, the holder *k*, having the screws *l* and *d*, secured to the outside of the extension *g*, the reflecting-shade *a*, secured to the base of the holder *k*, the arms *r r*, secured at their lower ends to the holder *i* near its base, the arms *w w*, secured to the arms *r r*, the ring *x*, secured to the arms *w w*, the ring *m*, having its aperture threaded, secured to the upper ends of the arms *r r*, the pipe C, having its upper outside portion threaded and being secured to the ring *m*, which receives its threaded portion, the pipes *t t*, having the stop-cocks *n n*, which enter the pipe C near its base, and the jets *h h*, entering the pipes *t t*, all combined, constructed, and arranged substantially as described and shown.

GEORGE E. SLAUGHTER.

Witnesses:
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