

(No Model.)

S. S. NEWTON.
Lamp.

No. 235,642.

Patented Dec. 21, 1880.

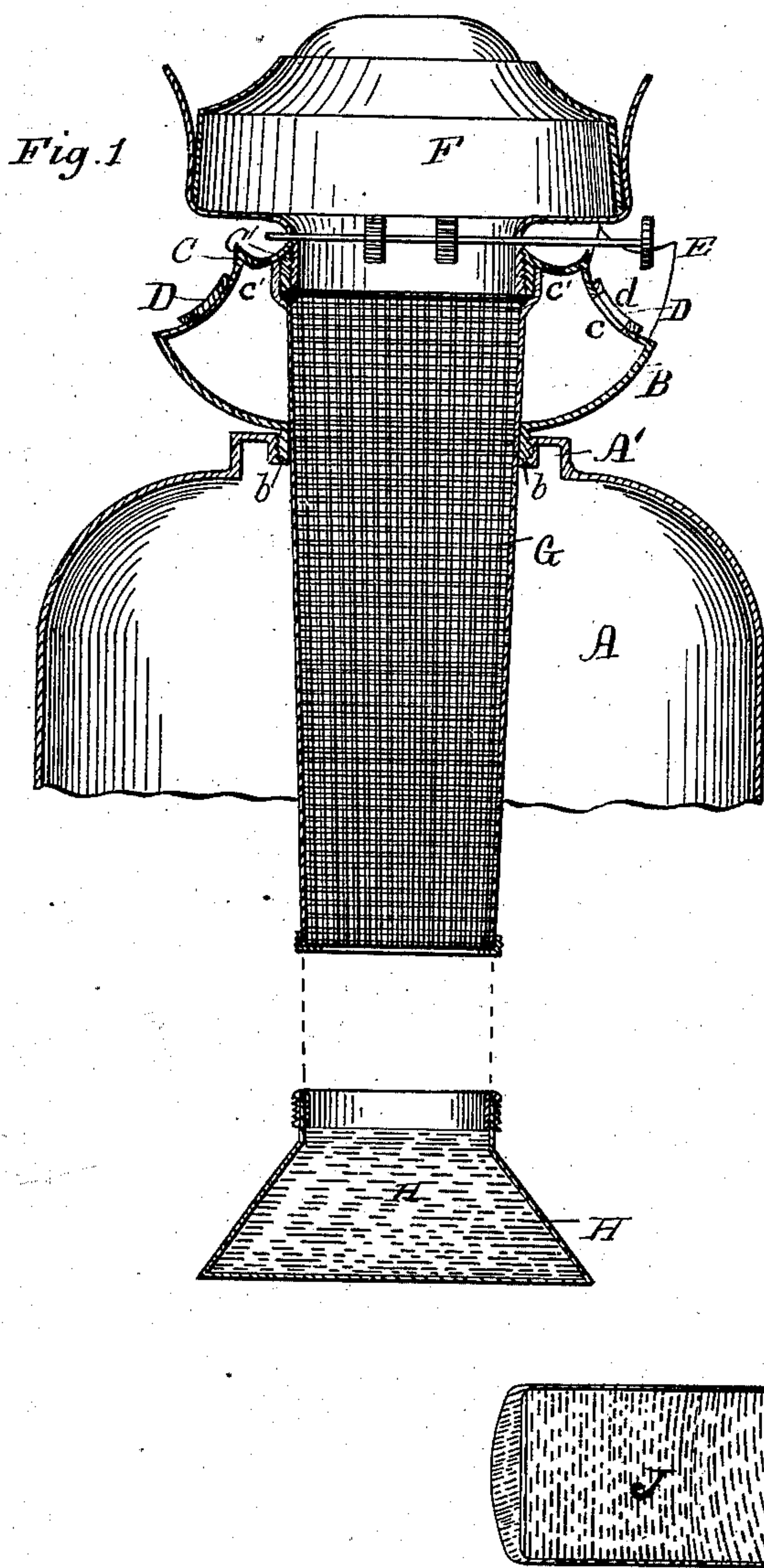
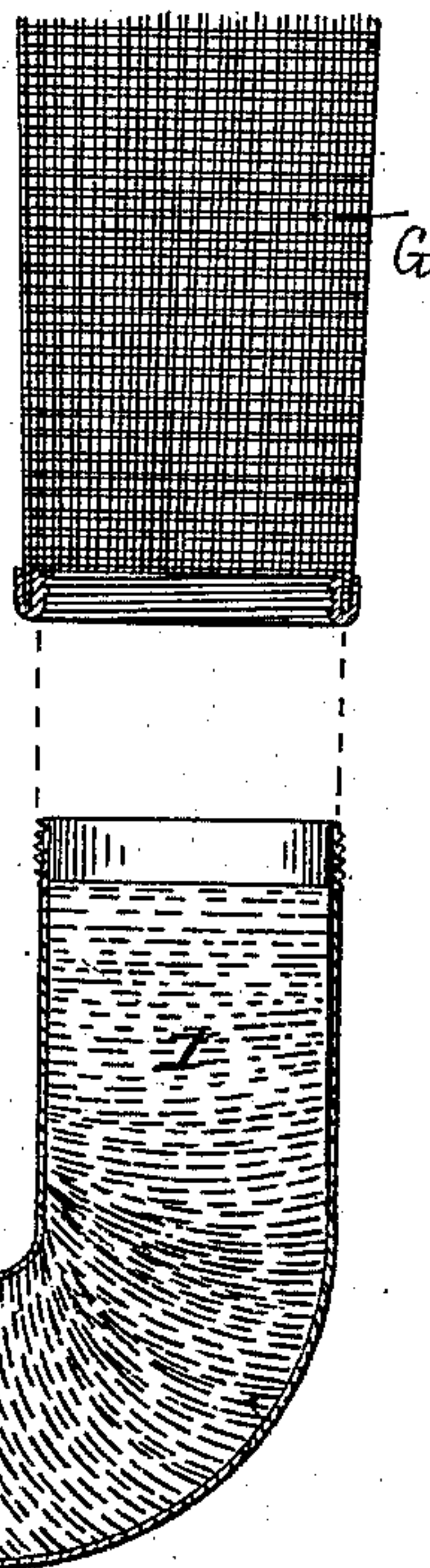


Fig. 2.



Witnesses:
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H. W. Low.

Inventor:
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UNITED STATES PATENT OFFICE.

STEPHEN S. NEWTON, OF BINGHAMTON, NEW YORK.

LAMP.

SPECIFICATION forming part of Letters Patent No. 235,642, dated December 21, 1880.

Application filed October 2, 1880. (No model.)

To all whom it may concern :

Be it known that I, STEPHEN S. NEWTON, of Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Lamps; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical central section of so much of a lamp as is necessary to illustrate my invention. Fig. 2 is a vertical section of a modified construction of the safety-tube.

In the drawings, A represents the body of an ordinary lamp, which may be made from glass, metal, or other suitable material, and A' is the neck thereof. The neck is screw-threaded internally.

B is a cup-shaped plate, the lower side of which is formed into an externally-threaded neck, *b*, adapted to engage with the thread of the neck A'.

C C' is an inversely-curved cup-shaped plate, joined at its lower edge to the upper edge of the plate B, the part C being provided with an opening, *c*, through which to introduce oil when the lamp is to be filled.

D is a ring or collar fitting closely and rotating upon the upper surface of the part C. This ring or collar D is provided with an opening, *d*, of substantially the same size as the opening *c*, so that by rotating the collar D until the openings *c d* coincide the lamp can be filled through these openings, after which the opening *c* can be closed by rotating the collar D a short distance.

The part C' is provided with a number of openings, *c'*, to permit the escape of vapor and the entrance of air. The curved form of this part C' also fits it to serve as a drip-cup to catch oil which passes down the outer surface of the burner and conduct such oil to the interior of the lamp.

When preferred, the collar D may be provided with an upwardly-projecting cylinder or tube, E, the lower end of which surrounds the opening *d*, whereby the tube E may be advantageously used in filling the lamp.

F represents a burner of any usual or approved

construction, screwed into a socket or thimble arranged for its reception in the part C'.

I do not wish to be limited to the construction shown of the parts C C' with reversed curves, nor in fact to their being curved at all, as this part of my construction might be made in the form of a hollow frustum of a cone, with a rib or bead at its upper edge, the collar D being made of a corresponding form and fitting closely below said bead, and thereby maintained in proper working position. One advantage which is due to placing collar D outside the plates C C' is the fact that it can be made to serve as a support for the filling-tube E.

G represents a safety-tube, constructed of wire-gauze or other finely-reticulated material, preferably the former, and secured at its upper end to the outer side of the collar or thimble which projects downwardly from the plates C C'.

By constructing the filling-chamber without communication with the upper end of the safety-tube, and making said tube of such diameter as to fit closely the collar of the lamp, I insure that no fire can pass from the filling-chamber to the interior of the tube or of the lamp below the neck A', thus effectually preventing explosion, my object in attaching the safety-cylinder to the outer side of this collar E being to prevent the rough upper edge of the tube from being exposed, in order that it shall not interfere with the introduction of the wick or other material within the tube.

H is an extension attached to the lower end of the safety-tube G, and is made of asbestos cloth, which can be so compressed as to be readily introduced within the neck A', the object of this extension H being to permit the introduction of a longer wick (by doubling its lower end) than could be introduced were the tube G extended to the bottom of the lamp, because the size of the lower end of said tube—that is, its transverse diameter—is limited by the size of the neck of the lamp, as it will be readily understood that by making this extension of flexible and easily compressible material it may be made of any required size.

I am aware that a tube surrounding and enclosing the wick within the body of the lamp and having a flexible extension has been heretofore employed; but asbestos cloth has never been used in such construction, so far as I am aware, and possesses marked advantages over

any other material that I know of, because persons using these lamps frequently fill the lower portion of the body with water, and the oil itself sometimes contains a small portion of acid, which remains after refining, and asbestos is practically indestructible by such agents.

It will be readily understood that in filling the lamp the oil entering the openings *c d* will flow around the annular space which is formed between the safety-tube *G* and the chamber constructed of the plates *B C C'*, and thus through the tube into the body of the lamp, whereby all possibility of exploding the oil within the lamp during the operation of filling is obviated.

It will be readily seen that this safety-filling attachment can be readily applied to many of the lamps now in market without any alterations of their parts.

I do not wish to be limited to so constructing this chamber that it shall entirely surround the upper end of the safety-tube, as it might be arranged wholly upon one side of said tube and still answer very well the purpose for which it is designed; but I prefer the construction shown, as being more symmetrical in form, and therefore as constituting a more desirable article of sale. Neither do I wish to be limited to attaching the extension *H* or *I J* to the lower end of the safety-tube *G*, because the lower end of said tube might be closed by a flat bottom without departing from that part of my invention which relates to the combination of the

safety-filling chamber with the upper end of said safety-tube.

What I claim is—

1. In a safety-filling attachment for a lamp, the combination, with the safety-tube *G*, extending above the collar of the lamp, of an external filling-chamber arranged between the lamp-collar and the upper end of said safety-tube, the lower part of the chamber being in close proximity to the side of the tube, substantially as set forth.

2. In a lamp attachment, the combination of the filling-chamber provided with opening *c*, the rotating collar *D*, provided with an opening, *d*, and the filling-tube *E*, substantially as set forth.

3. In a lamp attachment, a filling-chamber having its upper portion formed of the inversely-curved plates *CC'*, in combination with the rotating collar *D*, the part *C'* being adapted to serve as a drip-receptacle, substantially as set forth.

4. The herein-described attachment for a safety-tube of a lamp, made of asbestos cloth and adapted to receive a lamp-wick, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

STEPHEN S. NEWTON.

Witnesses:

NERI PINE,
GEO. L. CARRINGTON.