J. J. WEYER.

INVERTED BURNER.

APPLICATION FILED FEB. 15, 1909.

935,241. Patented Sept. 28, 1909.

Fig. 1.

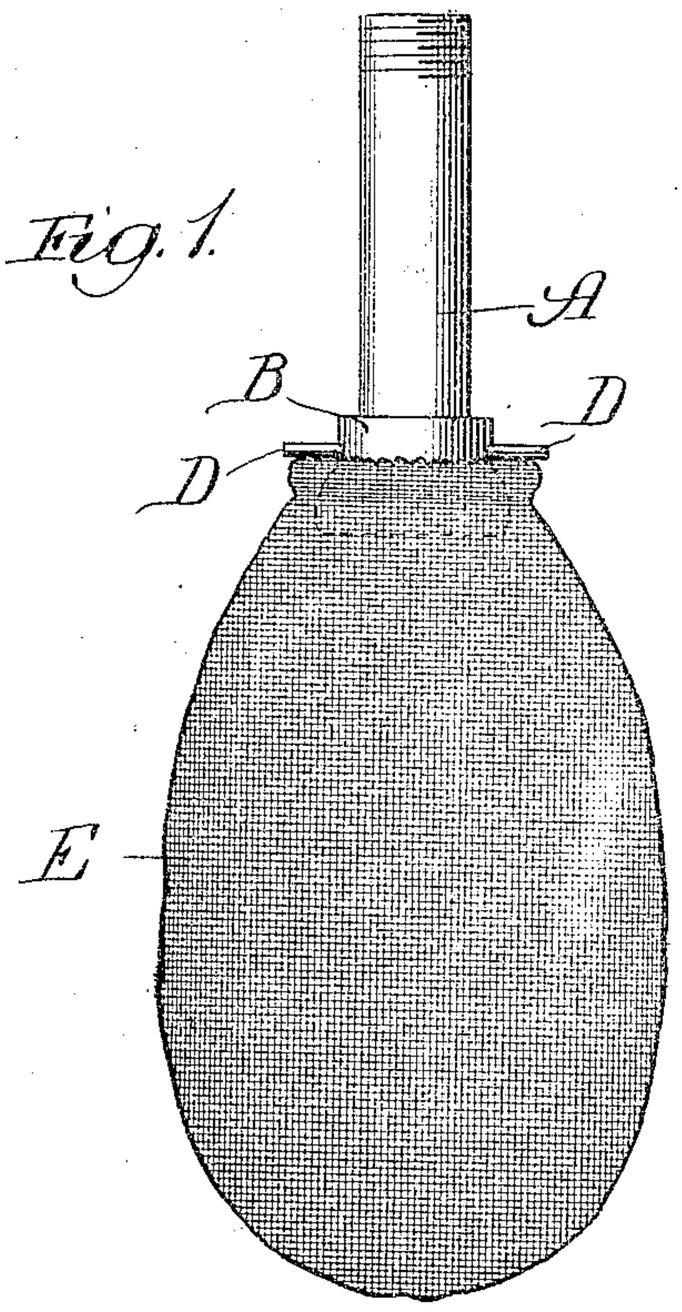


Fig. 2.

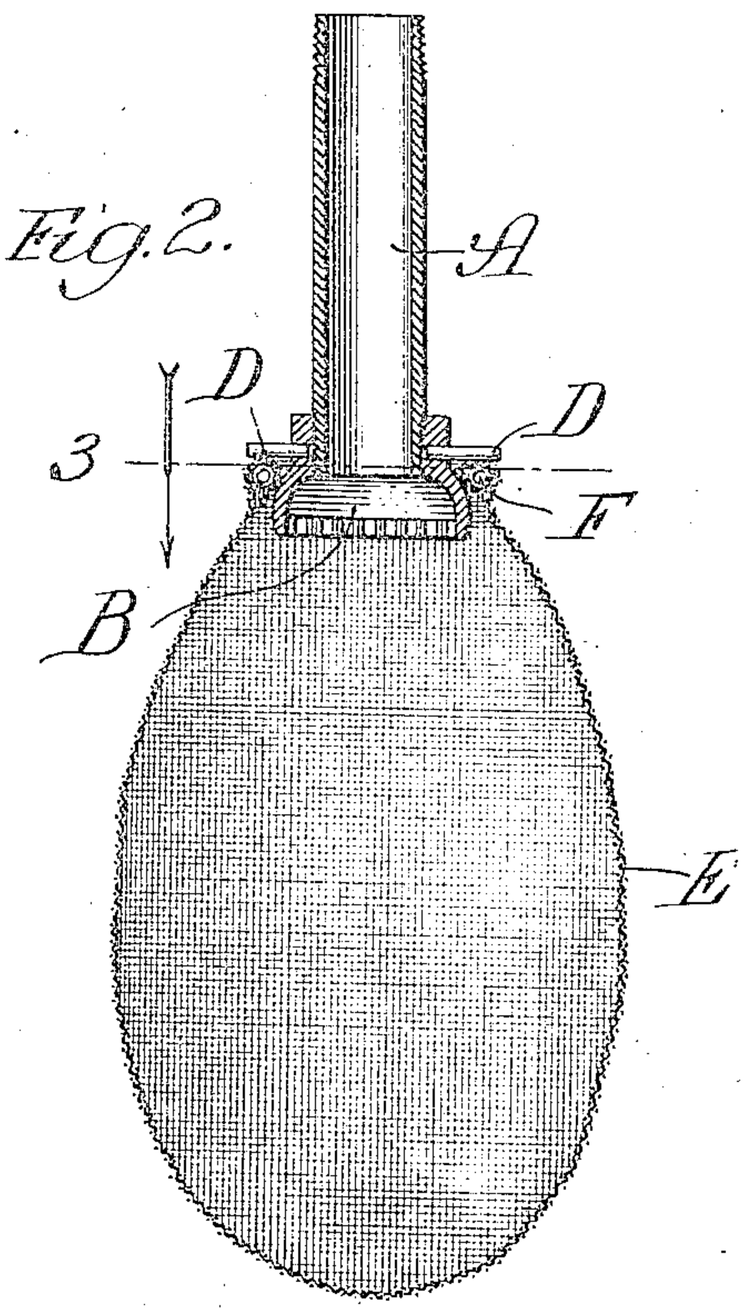
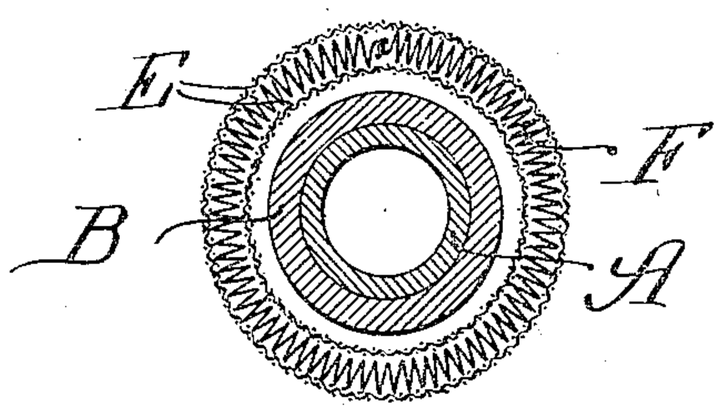


Fig. 3.



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UNITED STATES PATENT OFFICE.

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INVERTED BURNER.

935,241. Specification of Letters Patent. Patented Sept. 28, 1909.

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To all whom it may concern:

Be it known that I, JOSEPH J. WEYER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Inverted Burners, of which the following is a specification.

My invention relates to certain new and useful improvements in inverted burners, and is fully described and explained in the specification and shown in the accompanying drawing, in which:

Figure 1 is an elevation of my improved device; Fig. 2 is a central vertical section therethrough, and Fig. 3 is a horizontal section in the line 3 of Fig. 2, looking downward.

Referring to the drawing, A is a vertical tube, such as is commonly used in inverted gas-burners, the same being connected in practice to any suitable source of a combustible mixture of gas and air adapted when burned to form the usual inverted Bunsen flame. It is obvious that the tube A may form part of the gas system proper, or may be supplied with a mixture of gasolene vapor and air, or with other combustible gas as the case may be. The manner in which the gas is generated mixed with air forms no part of my present invention, and such means are therefore not illustrated. The lower end of the tube A carries a tip B, which is downwardly flaring at its lower edge and carries the usual gauze C to prevent back-firing. The tip B also carries two laterally projecting pins D slightly above the flaring lower-portion of the tip.

E is an inverted rag mantle, of the type commonly in use. By rag-mantle, those skilled in the art understand to be meant a mantle of fabric impregnated with the chemical substances necessary to produce the proper degree of luminosity when heated to incandescence, the fabric-material not being burned out, but remaining in its soft or textile condition. The upper margin of the rag-mantle E is formed into a hem in which is inserted an endless coil-spring F which may, in practice, be constructed in a satisfactory manner of German silver, although other materials can be used. By an endless-spring, I mean one such as is illustrated in the drawing where the two ends of the original spring are joined together to form an annulus.

The normal size of the spring F is considerably smaller than the flaring lower end of the tip B, and the spring can very readily be slipped over the flaring portion of the tip when its resiliency will cause it to take the position shown in Fig. 2 above the flaring end of the tip and beneath the projecting pins D. The mantle will be held by this means firmly fixed in position against movement in either direction, and when so positioned the fabric can be burned out in the way which has long been common practice.

My device is particularly advantageous because of the extreme ease with which fresh mantles can be placed in position. There are many purposes for which inverted lamps are used, where the mantles require frequent replacement, this being particularly true in lamps of the portable type, which are frequently moved from place to place. The time consumed in applying mantles of the usual form is a very large element in the maintenance of lamps of this character, and anything which will minimize the effort required is exceedingly desirable. Mantles provided with the endless annular spring at their upper edges, as here shown and described, can be placed in position in the manner indicated in a very small fraction of the time required for placing other rag mantles in place. Furthermore, the construction is one which makes it possible to apply mantles of the same kind to lamps of practically every type upon the market.

I realize that considerable variation is possible in the details of construction of my improved device, without departing from the spirit of my invention, and I do not intend therefore, to limit myself to the specific form herein shown and described.

What I claim as new and desire to secure by Letters Patent, is—

1. A rag mantle provided at its open end with a resilient member adapted to contract and tightly grip the burner tube when the mantle is placed thereon.

2. A rag mantle provided at its open end with a spring member adapted to contract and tightly grip the burner tube when the mantle is placed thereon.

3. The combination with a burner-tube in inverted position provided with an enlarged lower-portion, of a rag-mantle and an endless spring incorporated in the upper-edge

of the rag-mantle and adapted to be passed over the enlarged portion of the burner-tube to support the mantle.

4. The combination with a burner-tube in inverted position and provided with an enlarged lower-portion, of a stop above said lower-portion, a rag-mantle and an endless spring incorporated in the upper edge of the rag-mantle and adapted to be slipped over the enlarged lower-portion of the tube, and being confined between the same and said stop.

JOSEPH J. WEYER.

In presence of—
CHAS. E. GAYLORD,
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