

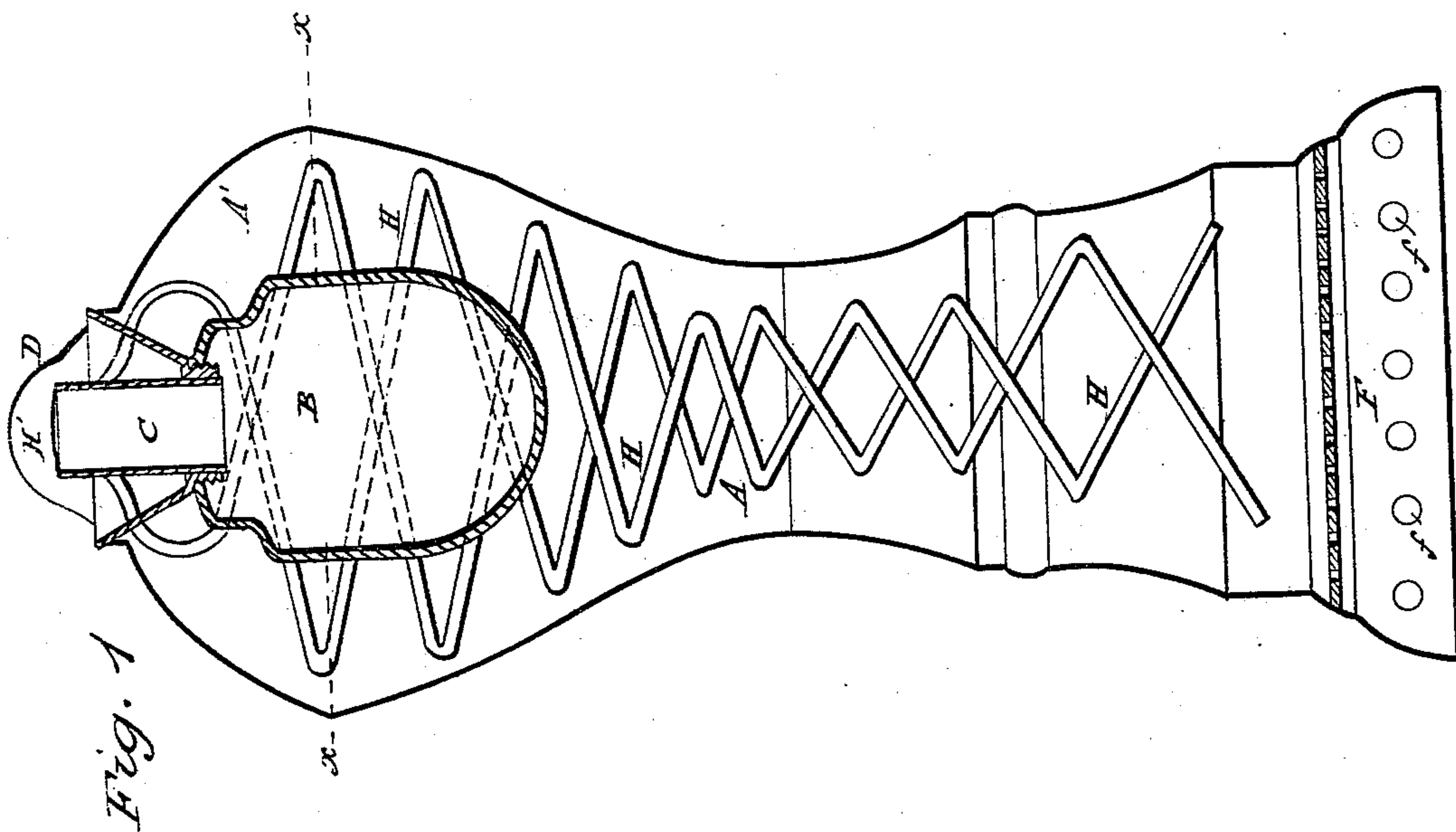
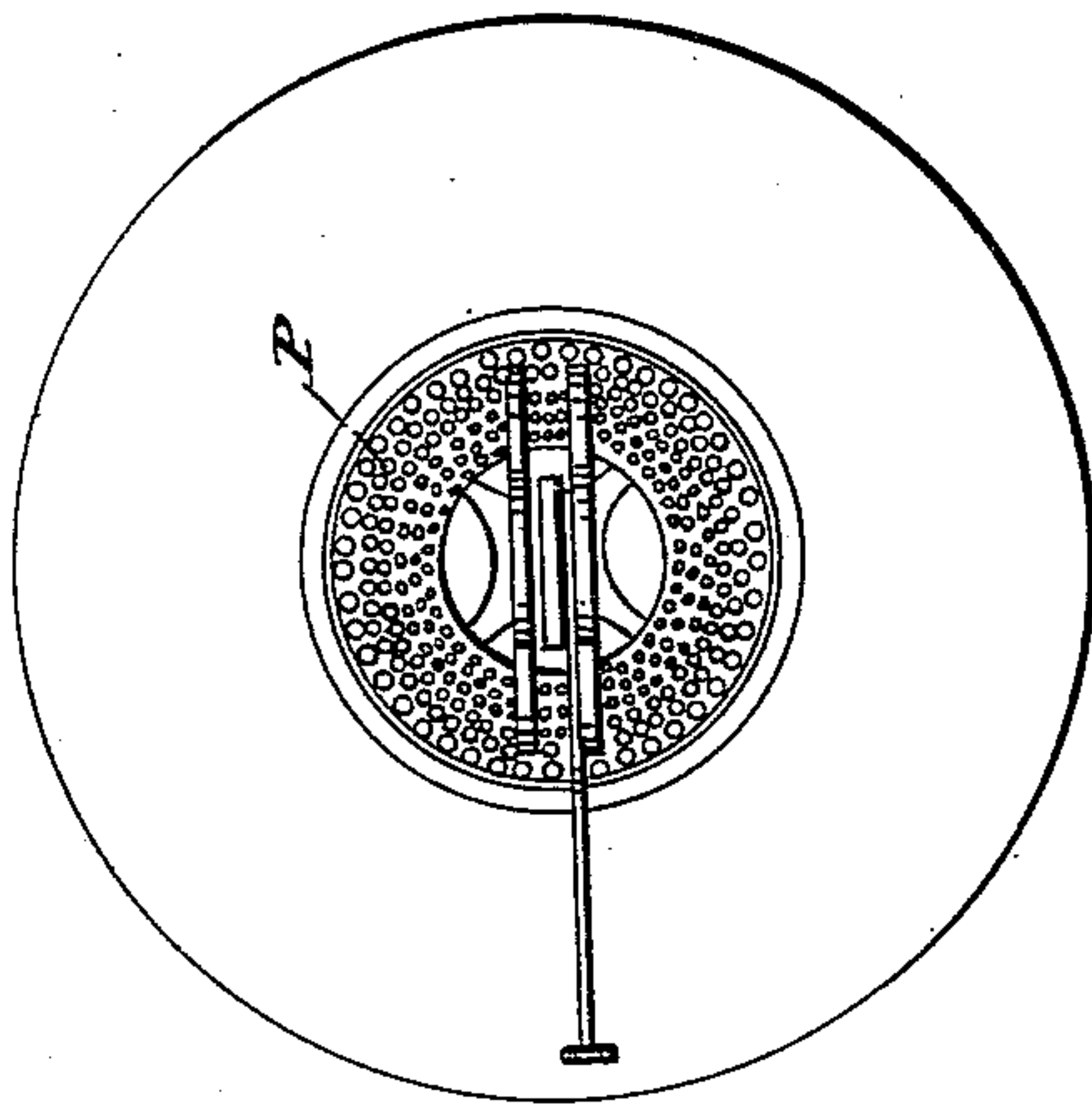
H. M. BEIDLER.

Lamp.

Patented May 7, 1867.

No. 64,474.

Fig. 2



Witnesses:

Jos. L. Coombs  
J. J. Coombs

Inventor:

H. M. Beidler

# United States Patent Office.

HENRY M. BEIDLER, OF CHICAGO, ILLINOIS.

*Letters Patent No. 64,474, dated May 7, 1867.*

## IMPROVEMENT IN LAMPS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, HENRY M. BEIDLER, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Kerosene Lamps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is to produce a cheap and convenient lamp for burning kerosene and other similar oils with a clear flame, free from smoke, without the use of a glass chimney. I effect this by feeding the flame with air from below, conducted up through a hollow or tubular case. It is well known that kerosene oil will burn with a clear flame, free from smoke, without the use of the ordinary glass chimney, if a sufficient quantity of air can be supplied to the flame from below, entering the cone or dome deflector. To produce this upward current of air several devices have heretofore been resorted to. Some have used fans operated by clock-work; others have created an upward current by rarefying the air in the tubular case by means of a small auxiliary lamp in its base; and others, again, have rarefied the air in said tubular case by means of steam generated in a boiler over the illuminating flame, and conducted in pipes to a jacket surrounding said tubular case. All these devices, however, are either expensive or more or less inconvenient.

My invention consists in creating said upward current by rarefying the air in the tubular case by means of a metallic conductor or conductors conveying heat from the illuminating flame down into the interior of said tubular case. In the accompanying drawings—

Figure 1 is a vertical section of a lamp constructed pursuant to my invention; and

Figure 2 is a plan view of the top of said lamp.

A is the tubular case, which may be made of any suitable material, but which I prefer to make of glass, or some other slow conductor of heat. A' is a cap, fitting on to the tubular case A at *x* like a common box lid. This cap should be of metal, as it is desirable that it should become somewhat heated by the illuminating flame. B is the oil-cup, C the wick-tube, and D the dome or cone. H is a copper wire, so bent that it will stand in the form of a square hasp by the side of the wick-tube, and nearly in contact with it, rising slightly above it, as seen at H'. There are two of these wires bent precisely alike, one on each side of the wick-tube. The ends of these wires pass through the perforated plate under the dome down into the tubular case, where they may be coiled, as shown in the drawings. When the wick is lighted the wire will be rapidly heated by the flame, and in a very short time sufficient heat will be conducted down into the tubular case to rarefy the air therein and cause an ascending current, which will pass through the perforated plate P under the dome, and be fed to the flame, causing it to burn with a clear, bright light, free from smoke. F is the base of the lamp-stand, open at the bottom, with a series of holes, *ff*, to admit the air, which passes through the perforated plate G in entering the tubular case A.

Instead of a round wire, it is manifest that flat strips of metal, or metal tubes, may be used as a conducting medium. It is also manifest that other metals besides copper may be used for this purpose, but that metal which will most rapidly conduct heat will be the best.

Having thus fully described my invention, and the mode of carrying it into effect, what I claim as new, and desire to secure by Letters Patent, is—

A metallic conductor to conduct heat from the illuminating flame of a lamp down into a tube or hollow case below, to rarefy the air therein, and cause an ascending current of air to feed the flame, substantially as described.

HENRY M. BEIDLER.

Witnesses:

Jos. L. COOMBS,

J. J. COOMBS.