

(No Model.)

2 Sheets—Sheet 1.

L. F. BETTS.

LANTERN.

No. 397,624.

Patented Feb. 12, 1889.

FIG. 1.

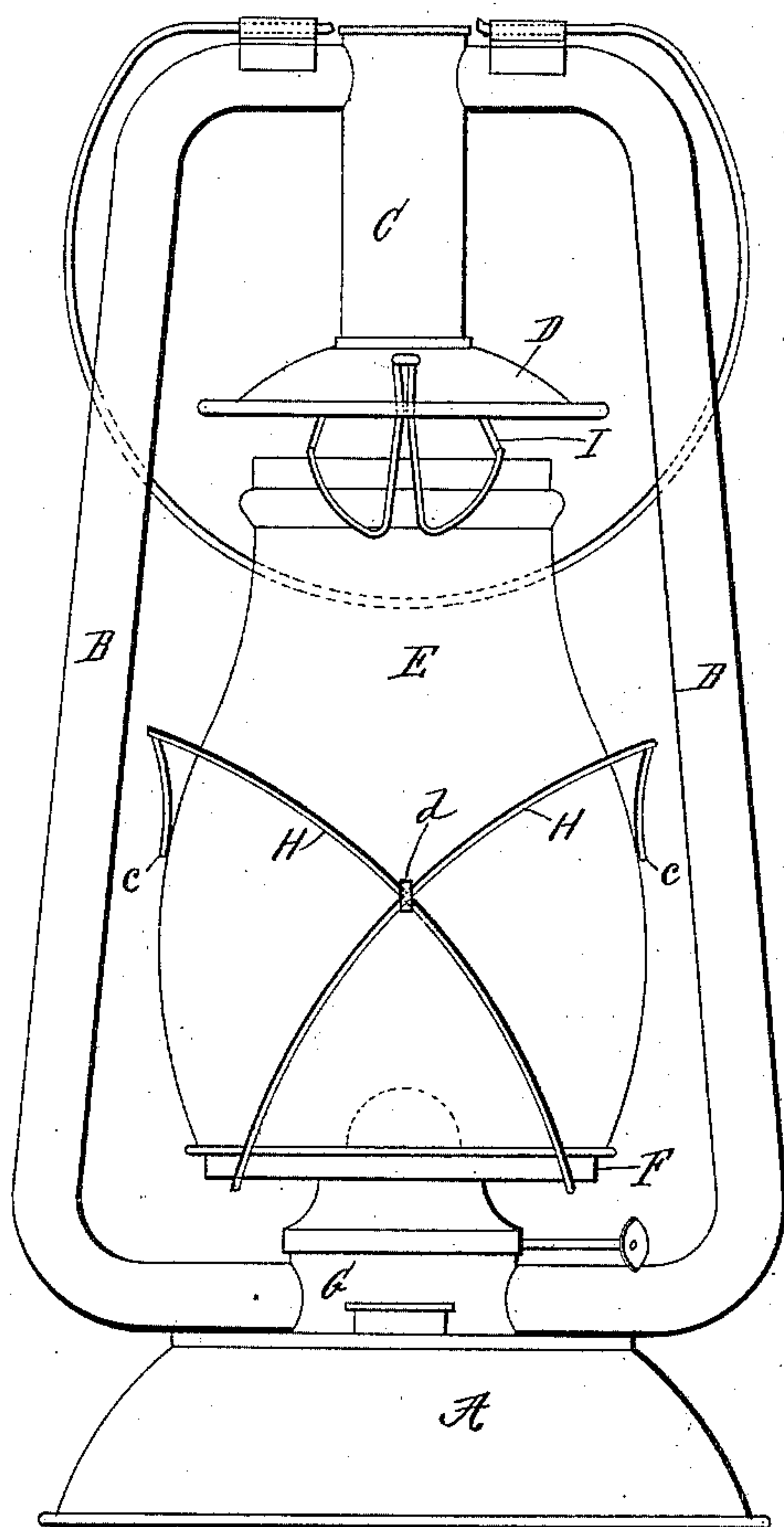
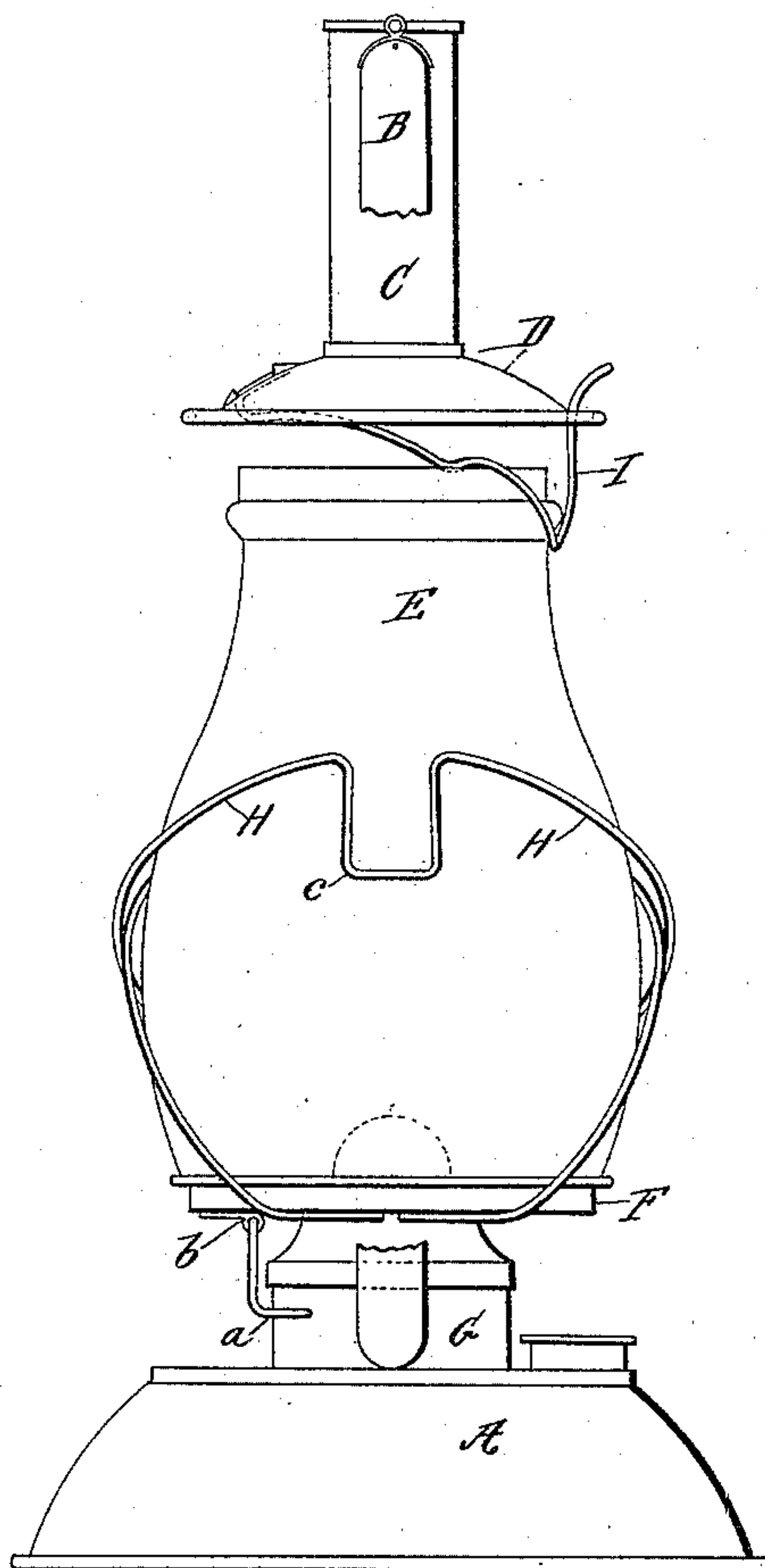


Fig. 2.



Witnesses.
John Buckler,
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Inventor:
Lewis F. Betts,
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Attorney.

(No Model.)

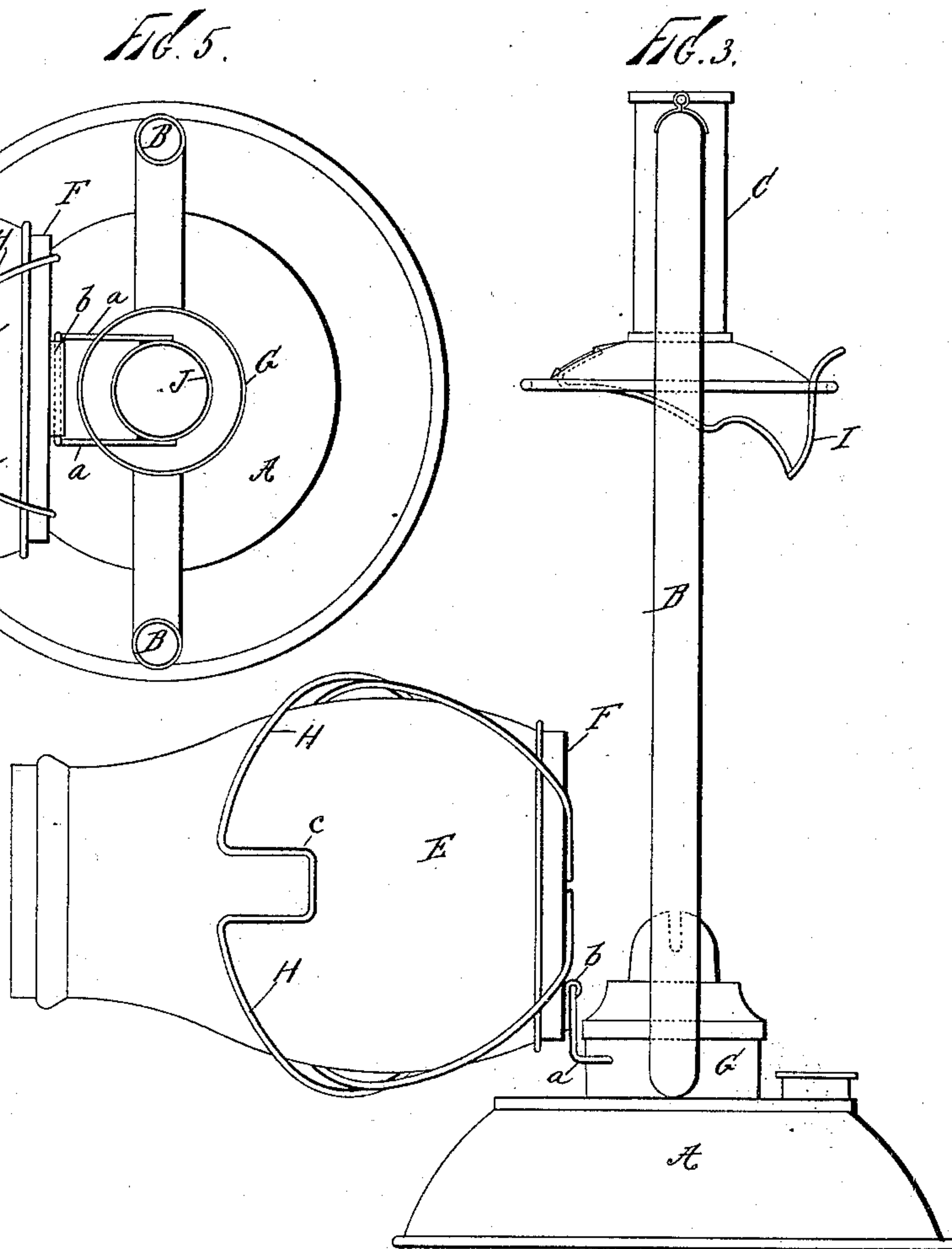
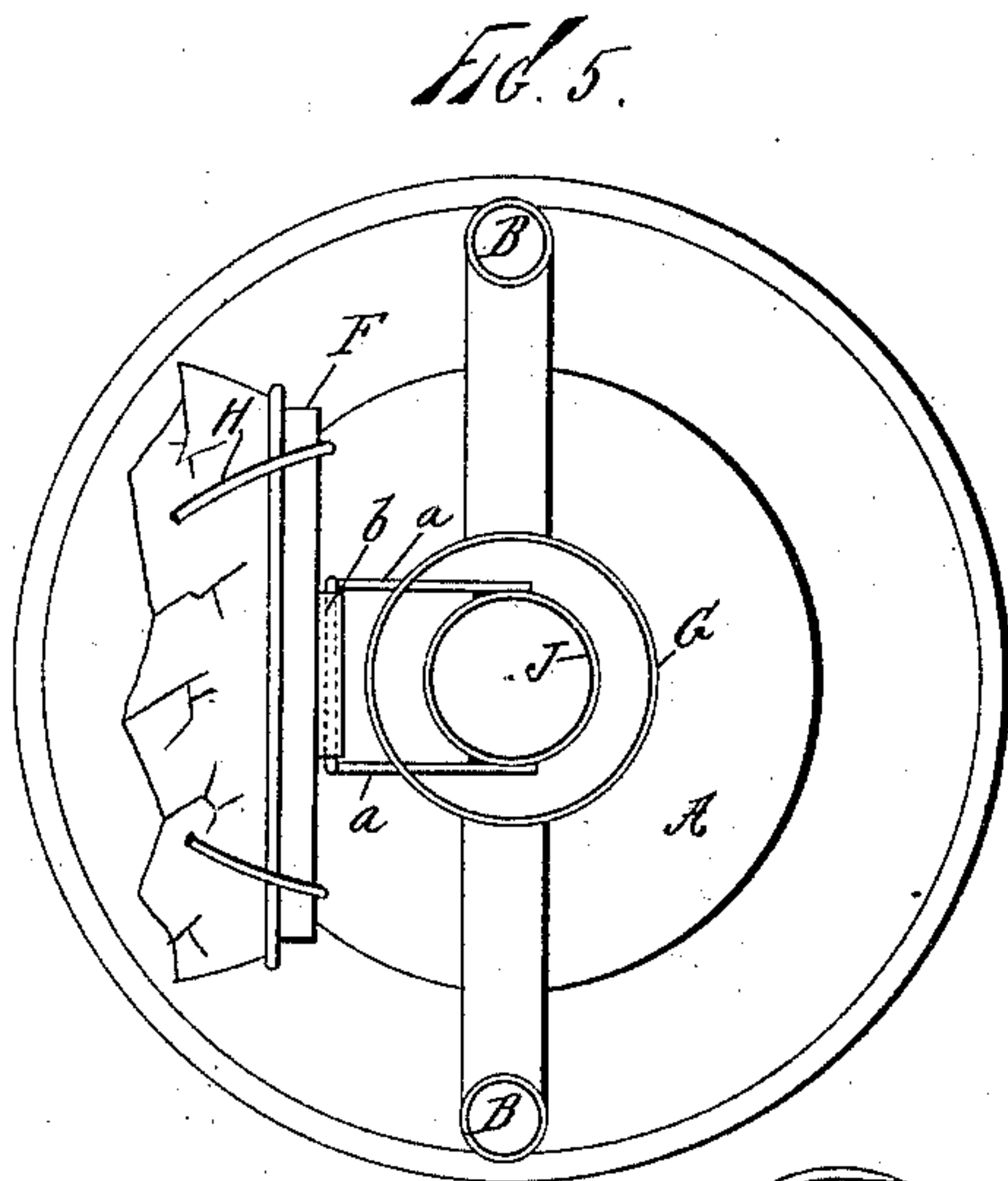
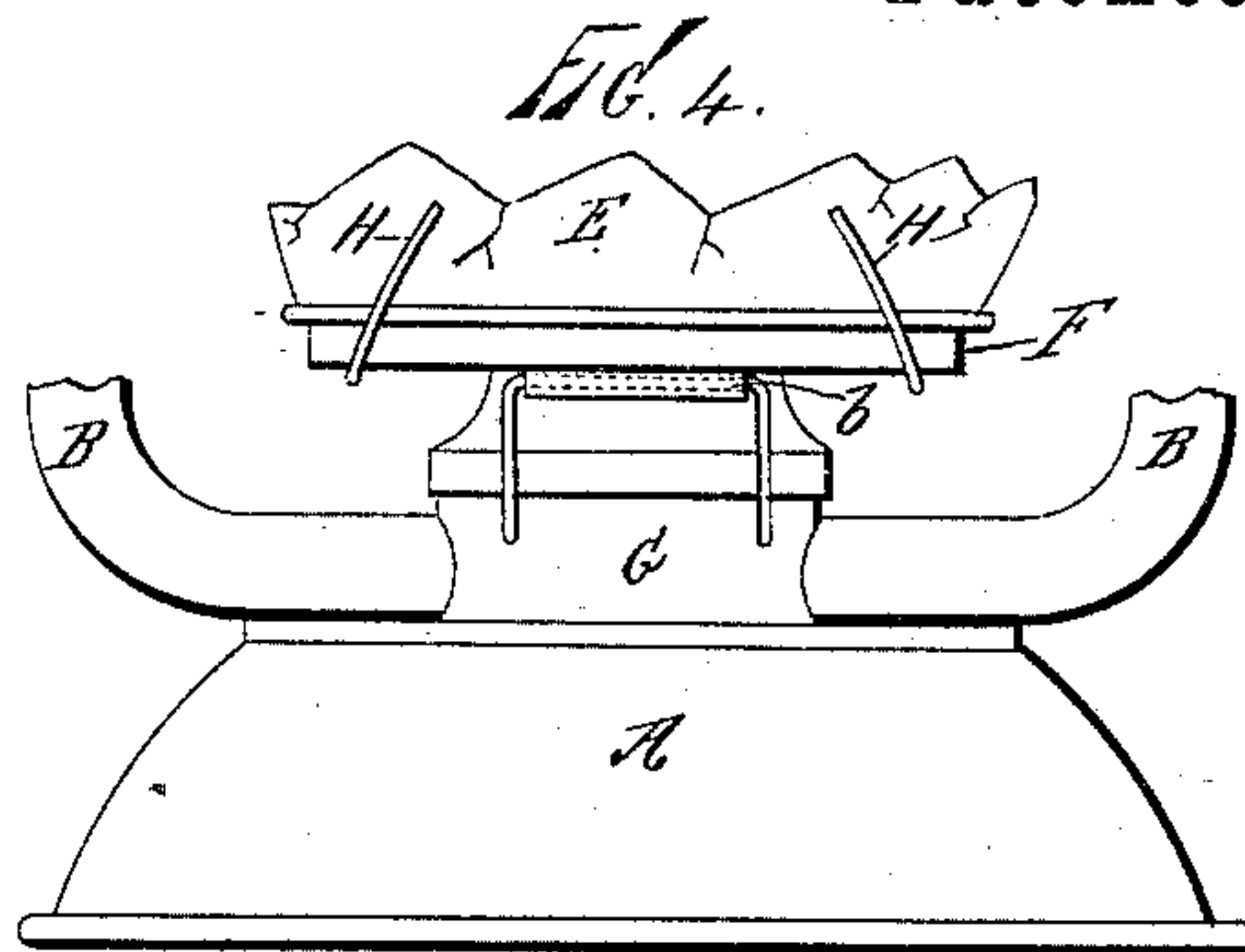
2 Sheets—Sheet 2.

L. F. BETTS.

LANTERN.

No. 397,624.

Patented Feb. 12, 1889.



Witnesses:
John Buckle,
L. H. Osgood,

Inventor:
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Attorney.

UNITED STATES PATENT OFFICE.

LEWIS F. BETTS, OF NEW YORK, N. Y., ASSIGNOR OF TWO-THIRDS TO THE R. E. DIETZ COMPANY, OF SAME PLACE, AND TO THE STEAM GAUGE AND LANTERN COMPANY, OF ROCHESTER, NEW YORK.

LANTERN.

SPECIFICATION forming part of Letters Patent No. 397,624, dated February 12, 1889.

Application filed December 20, 1887. Serial No. 258,483. (No model.)

To all whom it may concern:

Be it known that I, LEWIS F. BETTS, of New York city, county and State of New York, have invented certain new and useful Improvements in Lanterns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention has relation to lanterns or lamps, especially (but not necessarily) those of the tubular variety, and has for its object the production or provision of simple, cheap, and effective means for sustaining, protecting, and adjusting the globe or flame-protector.

To accomplish this object and to secure other and further advantages in the matters of construction and operation, my improvements involve certain new and useful arrangements or combinations of parts as well as peculiarities of construction, all of which will be herein first fully described, and then pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a front elevation, and Fig. 2 a side view, of a tubular lantern having my improvements applied in connection therewith, the greater part of the tube being omitted from the latter figure. Fig. 3 is a side view showing the globe or flame-protector turned down or back, as for lighting, trimming, extinguishing, cleaning, &c. Fig. 4 is a rear elevation of a portion, showing the hinge; and Fig. 5 a plan view showing the manner of mounting and securing the hinge, the burner being omitted to facilitate the illustration.

In all these figures like letters of reference, wherever they occur, indicate corresponding parts.

A is the oil-pot; B B, side air-tubes; C, a central air-pipe; D, a dome, and E a globe or flame-protector. These are prominent elements of a tubular lantern or lamp and may be arranged in any way.

The globe E rests upon a metallic base or bottom, F, which is hinged so that it may be turned back to uncover the burner or permit the removal of the globe. To render the

hinge firm and secure, its lower portion is made of wire of suitable size and strength, the horizontal parts *a a* passing through the outer wall of the air-chamber G, touching the burner-collar J within the air chamber, and united with said collar by solder or equivalent means. This affords a rigid support and brace for the hinge and is easily and quickly applied. The bottom plate is hinged to this wire, as at *b*, and when the plate is turned back, as in Fig. 3, the vertical portions of the wire-support prevent it from passing a point at which the globe may be held from contact with the oil-pot.

The guard for the globe is composed of two wires or two branches of one wire, as H H, crossing each other at front and back or between the tubes and secured to the bottom plate. By my present improvement I make this guard not only to protect the globe, as described in a previous application for patent, but further to hold the globe upon the bottom plate until purposely removed, so that when turned back to uncover the burner the globe may retain its seat upon the bottom plate and need not be detached. For this purpose I bend the wires or branches H H, thereby forming loops, as *c c*, which bear upon the globe at points just above the swell therein. These loops may be of any size and shape. The branches H H are secured one to the other, at the points where they cross, by solder or by clips or other devices, as at *d*, Fig. 1, and the branches so secured yield beyond their points of union, so that the globe is pressed constantly to its seat upon the bottom plate. To detach the globe, it is withdrawn from the guard in the direction of its length and against the action of the spring-wire, and it cannot be detached in any other way or direction. It is adjusted to place by forcing the larger part or swell past the loops.

To sustain the globe in its working position, a spring, I, is employed. This is attached to the dome, the rear part or heel of the spring being located well above the globe and the front part bent down, substantially as shown, so as to bear upon the upper margin of the globe when in place with sufficient power to hold it from accidental disarrangement. The

front portion of this spring also operates as a stop, arresting the globe in its forward movement at the proper point, so as to avoid damage to the hinge and to facilitate the final adjustment of the globe. The globe being in the position shown in Fig. 1, the burner may be uncovered by simply raising the spring I and turning the globe back. The globe may be then instantly snapped back to place beneath spring I. The bearing of spring I is wide enough to counteract any tendency of the globe to move between the bearing-points of the guard-wires. By arranging the spring as shown there is left a free space under its heel, through which the globe may move without interference. The construction and arrangement of the hinge leave the top of the oil-pot outside the air-chamber free of obstruction. By the arrangement shown the globe is completely guarded, properly held, and the object of the invention fully accomplished.

I do not wish to be understood as making any broad claim herein to crossed guard-wires which are attached to the perforated bottom plate, that feature forming the subject of my previous application above referred to; but,

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

1. In a lamp or lantern, the combination of the air-chamber, burner-collar located therein, the hinged bottom plate, and the support for the hinge, the said support passing through

the wall of the air-chamber and being secured upon the burner-collar, substantially as explained.

2. In a lamp or lantern, the combination of the oil-pot, burner-collar, air-chamber, hinged bottom plate, and support for the hinge thereof, said support comprising horizontal and vertical portions of which the horizontal portions extend through the air-chamber and are located above the top of the oil-pot, and the vertical parts supporting the hinge axis, substantially as and for the purposes set forth.

3. In combination with the hinged bottom plate and the globe resting thereon, the crossed guard-wires bearing upon the globe at points above the swell therein, and arranged to hold the globe upon the bottom plate as the latter is moved upon the hinge, substantially as and for the purposes set forth.

4. In combination with the globe, the guard-wires crossing each other and secured together at the crossings, as explained, said wires bearing upon the globe at points above the swell therein, and arranged to yield above their points of union to permit the withdrawal and insertion of the globe, substantially as explained.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

LEWIS F. BETTS.

Witnesses:

I. J. ALLEN,
FRED DIETZ.