

S. H. MILLER.
Signal-Lanterns.

No. 144,554.

Patented Nov. 11, 1873.

Fig. 1.

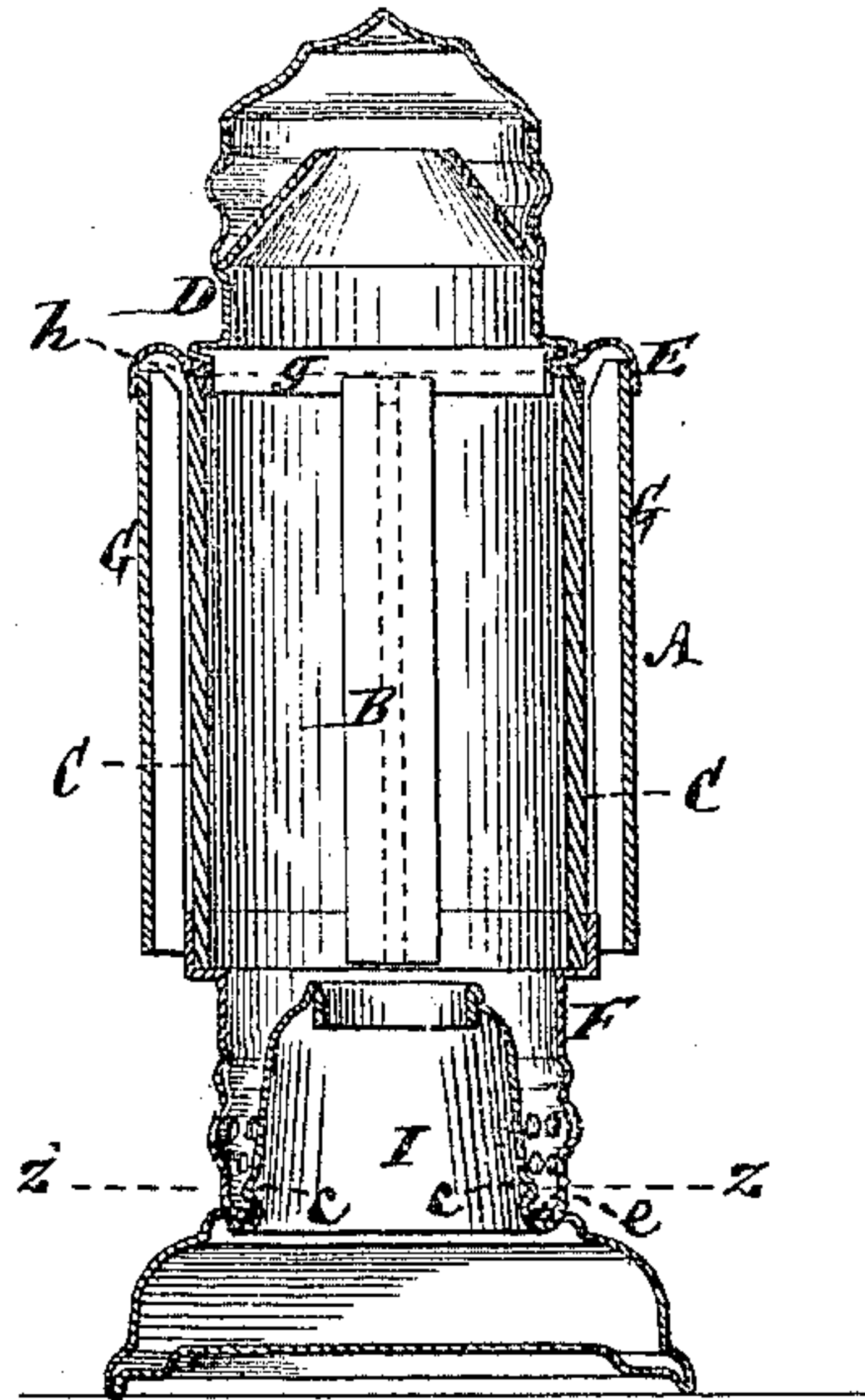


Fig. 2.

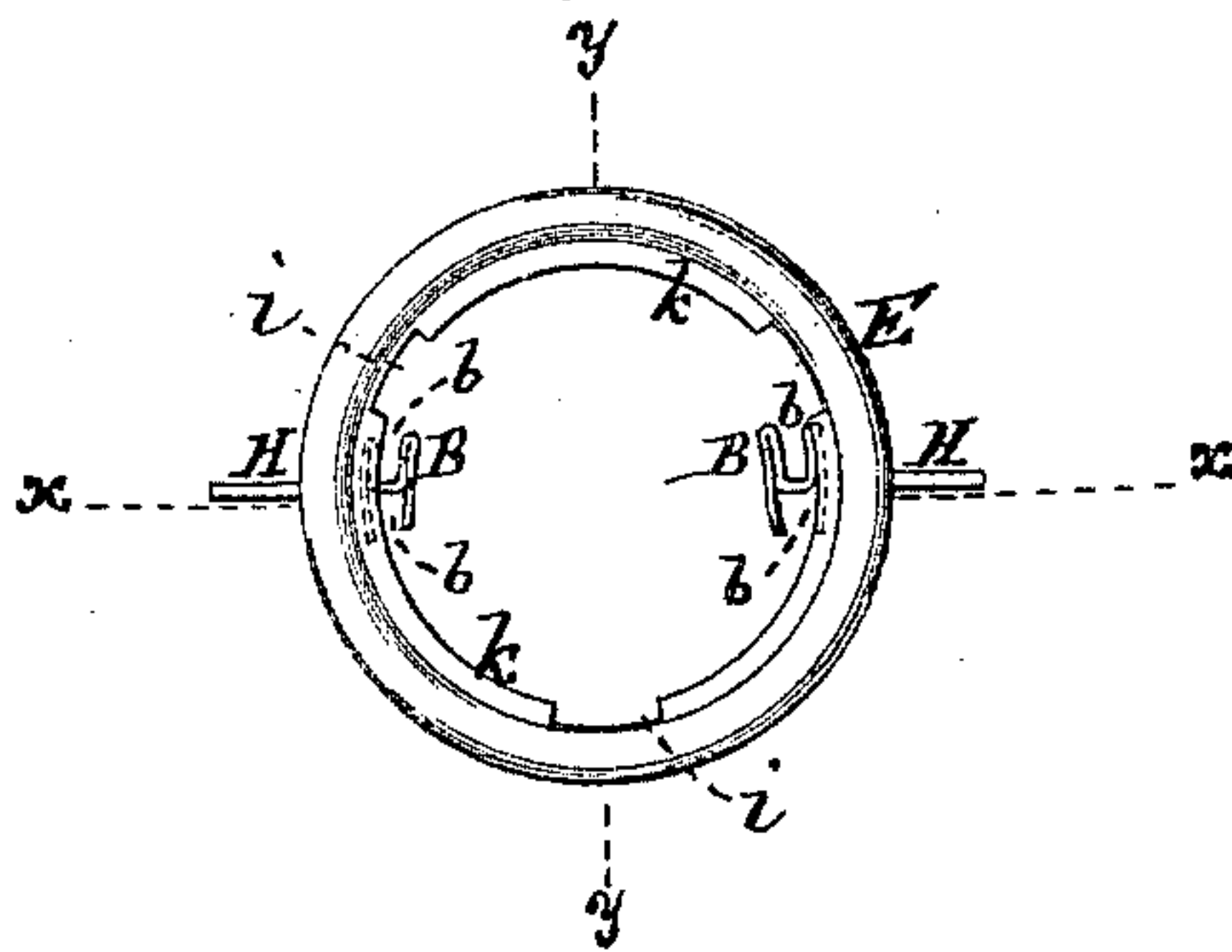
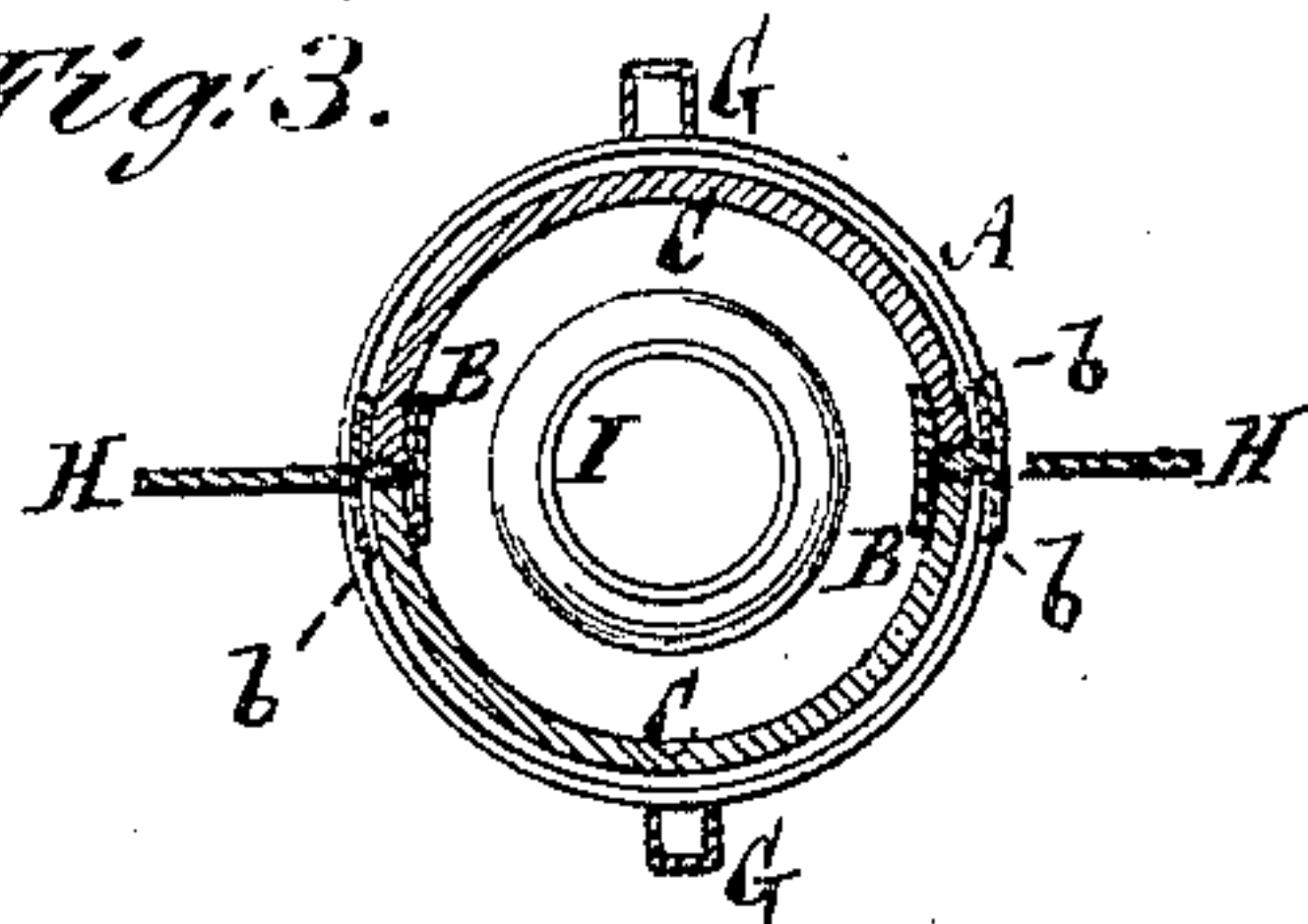


Fig. 3.



Witnesses.
Michael Ryan
Jas. Haynes

Sam. H. Miller
by his Attorneys
Brown & Allen

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Fig. 4.

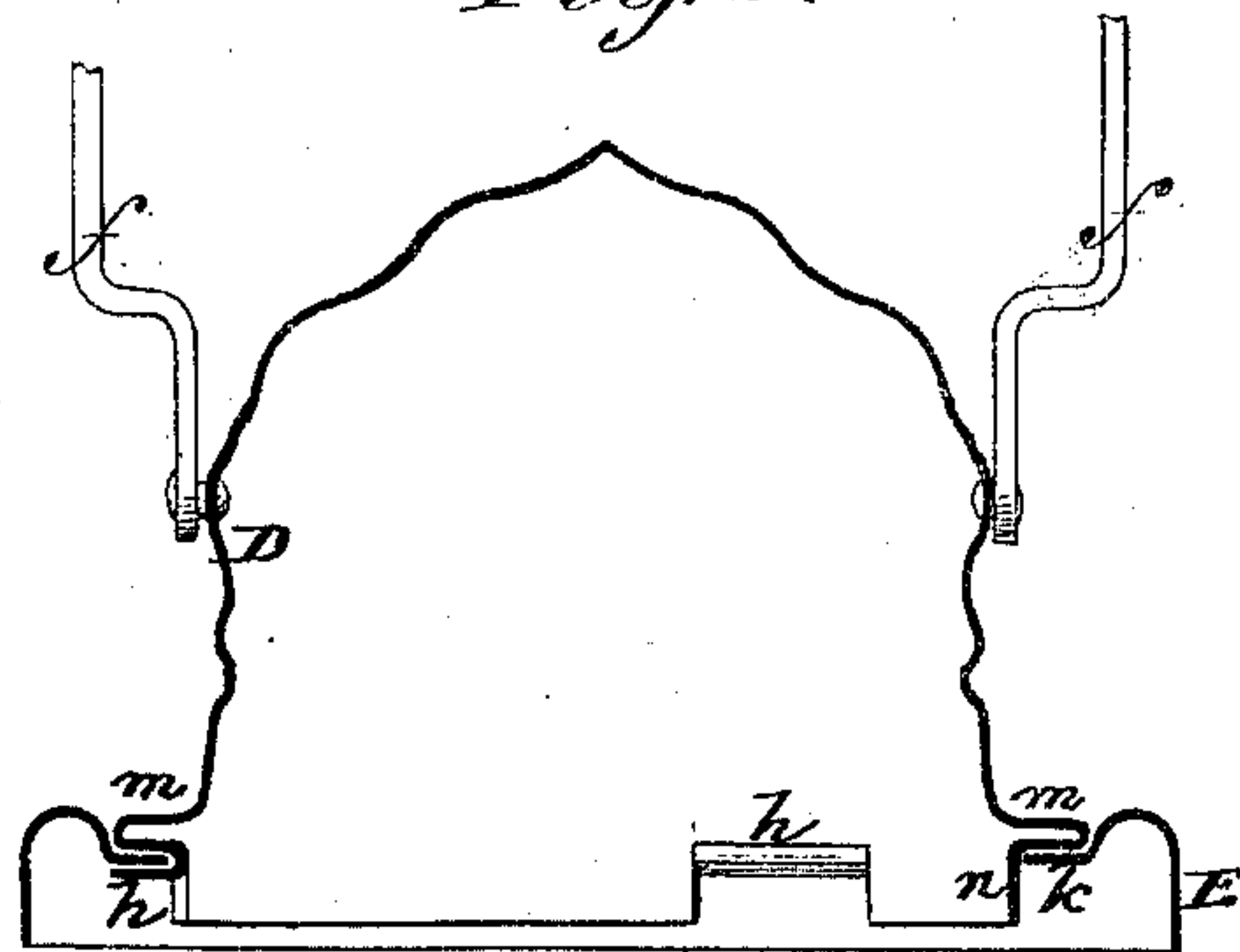
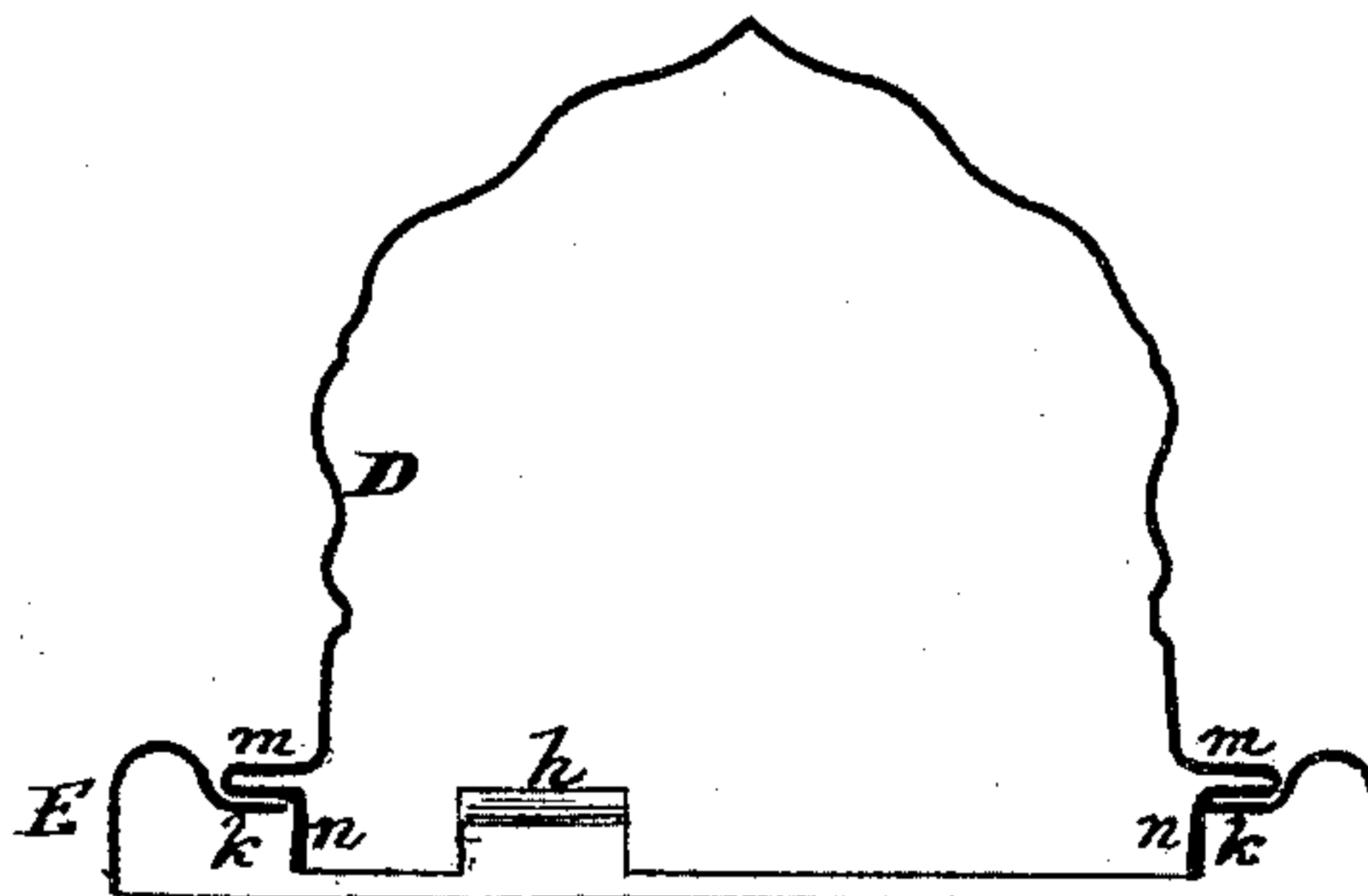


Fig. 5.



Witnesses:

Michael Ryan
Edw. Haynes

Sam. H. Miller
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

SAM. H. MILLER, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND
JESSE E. FOLK, OF SAME PLACE.

IMPROVEMENT IN SIGNAL-LANTERNS.

Specification forming part of Letters Patent No. 144,554, dated November 11, 1873; application filed
May 6, 1873.

To all whom it may concern:

Be it known that I, SAM. H. MILLER, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Signal and other Lanterns, of which the following is a specification:

This invention, while applicable in part to different kinds and shapes of lanterns, is more particularly designed to be used in connection with signal-lanterns of a circular construction, capable of displaying different colors. The one part of the invention consists in a novel construction of the guides or ways for directing and holding the glasses, by making each guide or way of a single metal strip, bent in a peculiar manner, which not only conduces to its strength, but serves to form grooves or ways for the adjacent marginal portions of separate and adjacent glasses, and reduces labor and expense of soldering, as compared with independent single ways. The invention also consists in a novel, cheap, and strong, yet light, construction of a removable top or portion of the lantern, with means for locking or detaching the same.

Figure 1 is a vertical section; Fig. 2, a plan, with the detachable top removed; Fig. 3, a transverse section on the line *c c*. Figs. 4 and 5 are vertical sections or diagrams, on a larger scale, of the removable top or end piece, together with the flanged portion, into which the said piece fits; Figure 4 being a section through one of the locking-lips with which the top is provided, and Fig. 5 a section out of line with said lips.

Similar letters of reference indicate corresponding parts.

A is the main frame or body of the lantern, here shown as constructed for the reception of two segmental glasses of different colors, but which may be constructed to accommodate three or more of such glasses. The guides or ways B, that serve to receive the edges of the segmental glasses C by sliding said glasses down within them on removing the detachable top D, and which glasses are as readily removed to facilitate cleaning or other purposes by sliding them upward, are each composed of a single metal strip bent to form inner and outer separated sides or faces of a double thickness

for a portion of their width, and so that they leave two opposite longitudinal grooves, *b b*, for reception of the adjacent edges or marginal portions of adjacent glasses, and, by their construction generally, combine lightness with strength, stiffening the frame or body, to the upper and lower portions E F of which they are soldered at their ends. G G are the guards, also connecting the portions E and F, and which may vary in number and arrangement outside of the glasses. These guards are constructed hollow, and are formed of sheet-metal strips of a shape, in their transverse section, corresponding, more or less, to the letter U, with their open face innermost, thus also combining lightness with strength; likewise, by being hollow, affording great facility for soldering them inside and out, at their ends, to the parts to which they are attached. I is the lamp or detachable base of the lantern, provided with one or more teats, *c*, struck up from the inside, from the sheet metal of which said lamp or base is composed, and arranged so that when the lamp, or upper part thereof, is entered up within the lower portion F of the body, said teats *c* pass up through notches *d* in an internally-projecting base-flange, *e*, of the portion F, and, by afterward slightly turning the lamp, are made to lap over the flange *e*, and thus lock or hold the lamp to its place, with like facility for its removal when required. D is the detachable top, cap, or one end piece of the lamp, having pivoted to it a bail, *f*. This cap, or the outer shell of it, is composed of a piece of light or thin sheet metal, struck up or bent to form a flange, *m*, of double thickness, and a lower projecting rim, *n*, which latter is cut at one or more places, and the cut portions bent outward to form lips *h*, that are entered down within and through openings *i* in a recessed internally-projecting flange, *k*, of the ring or portion E, and the top afterward slightly turned to bring the lip *h* under the flange *k*, within or on which latter the doubled flange *m* sits, while the rim *n* serves to guide the top to its place.

By this construction, which applies equally to the bottom or other end piece F, it will be seen that very light or thin metal, of which to form the top or detachable piece D, may be

used, and yet great strength be secured, both for the lips *h* and the flange *m*, by reason of said flange being constructed of a double thickness of metal, although of one and the same piece, in common with the rest of the top or cap D.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The guides or ways B, each constructed of a strip of metal bent and folded to form separate longitudinal grooves *b b* for reception of the edges of adjacent glasses, substantially as shown and described, and whereby the frame of the lantern is materially stiffened.

2. The cap, top, or detachable piece D, struck up or bent to form a flange, *m*, of double thickness of metal, and projecting rim or border *n*, having lips *h* cut and bent from the latter, in combination with the openings *i* in the recessed internally-projecting flange *k* of the ring or portion which the piece D is arranged to fit in and lock with, substantially as shown and described.

S. H. MILLER.

Witnesses:

FRED. HAYNES,
MICHAEL RYAN.