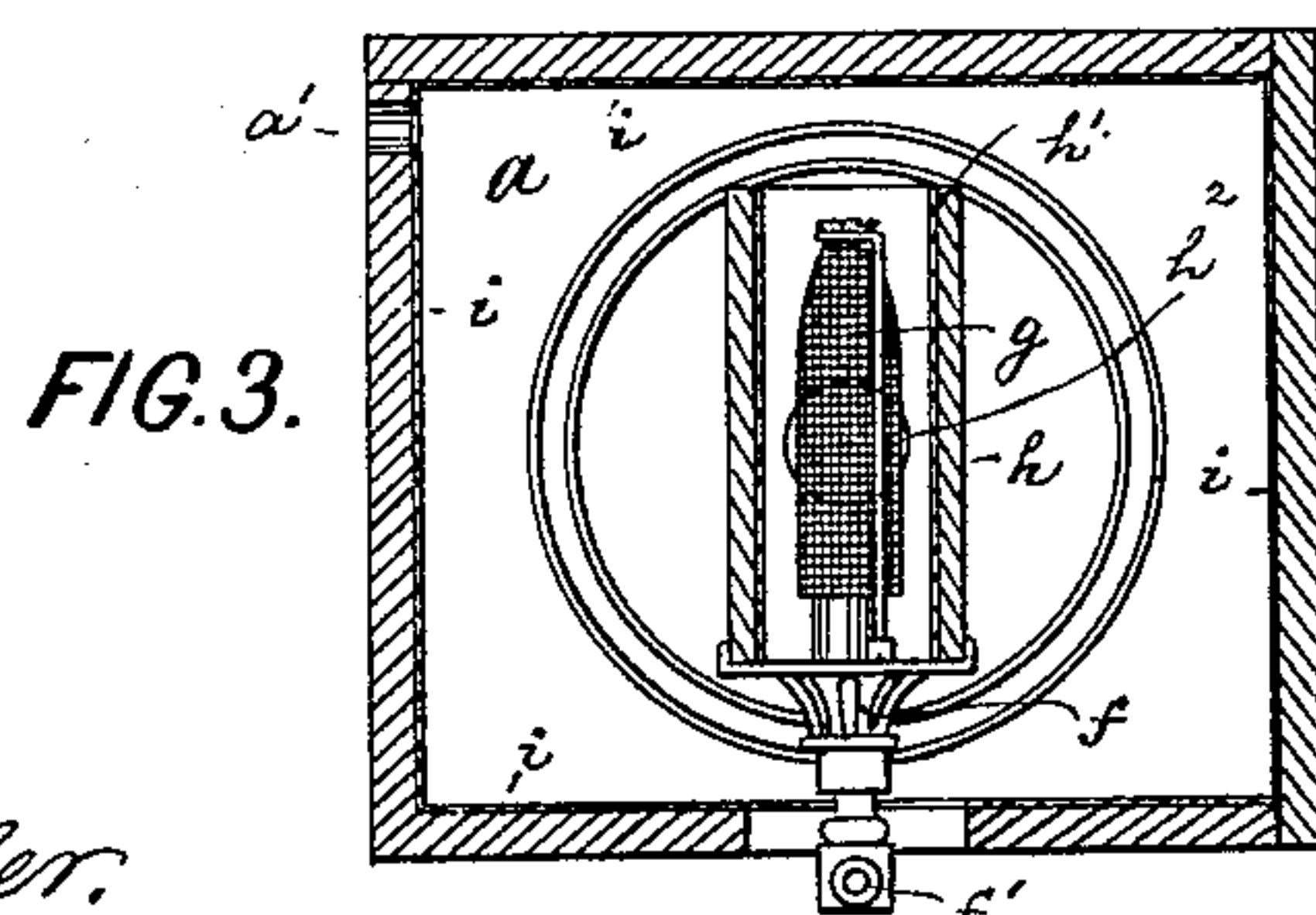
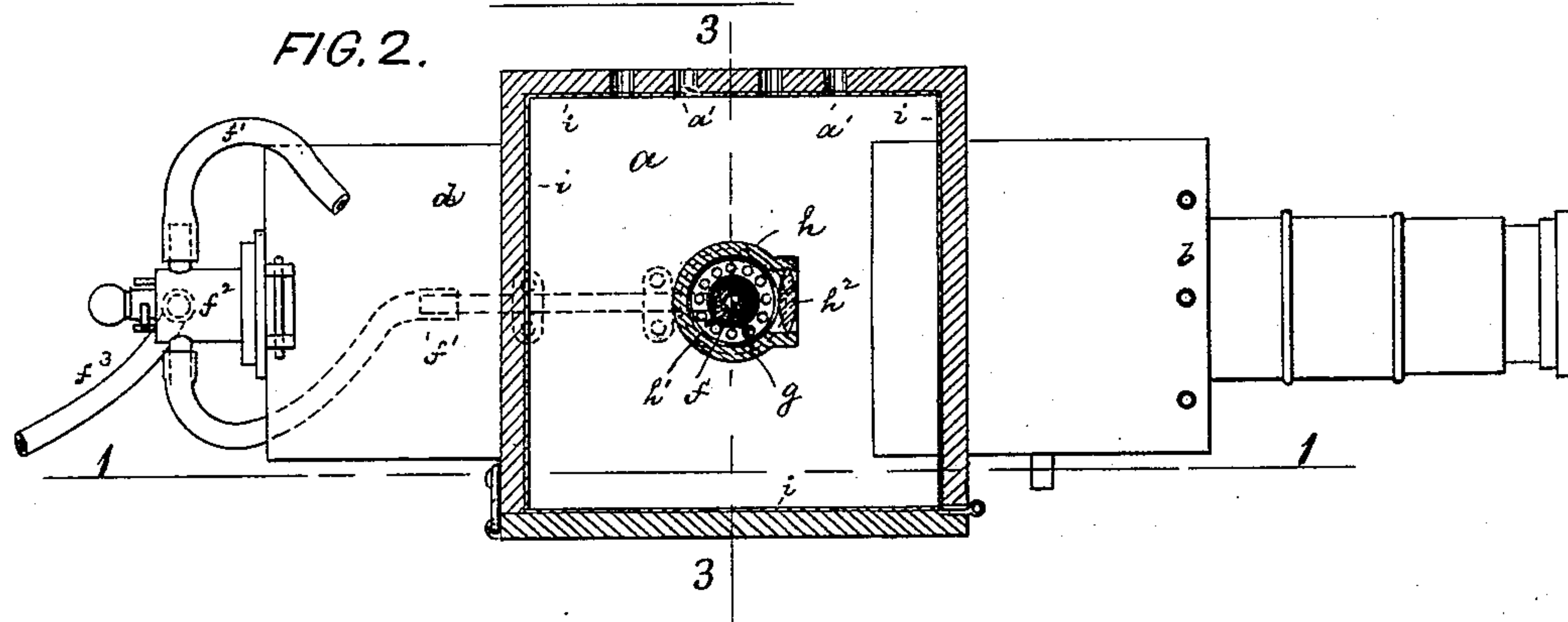
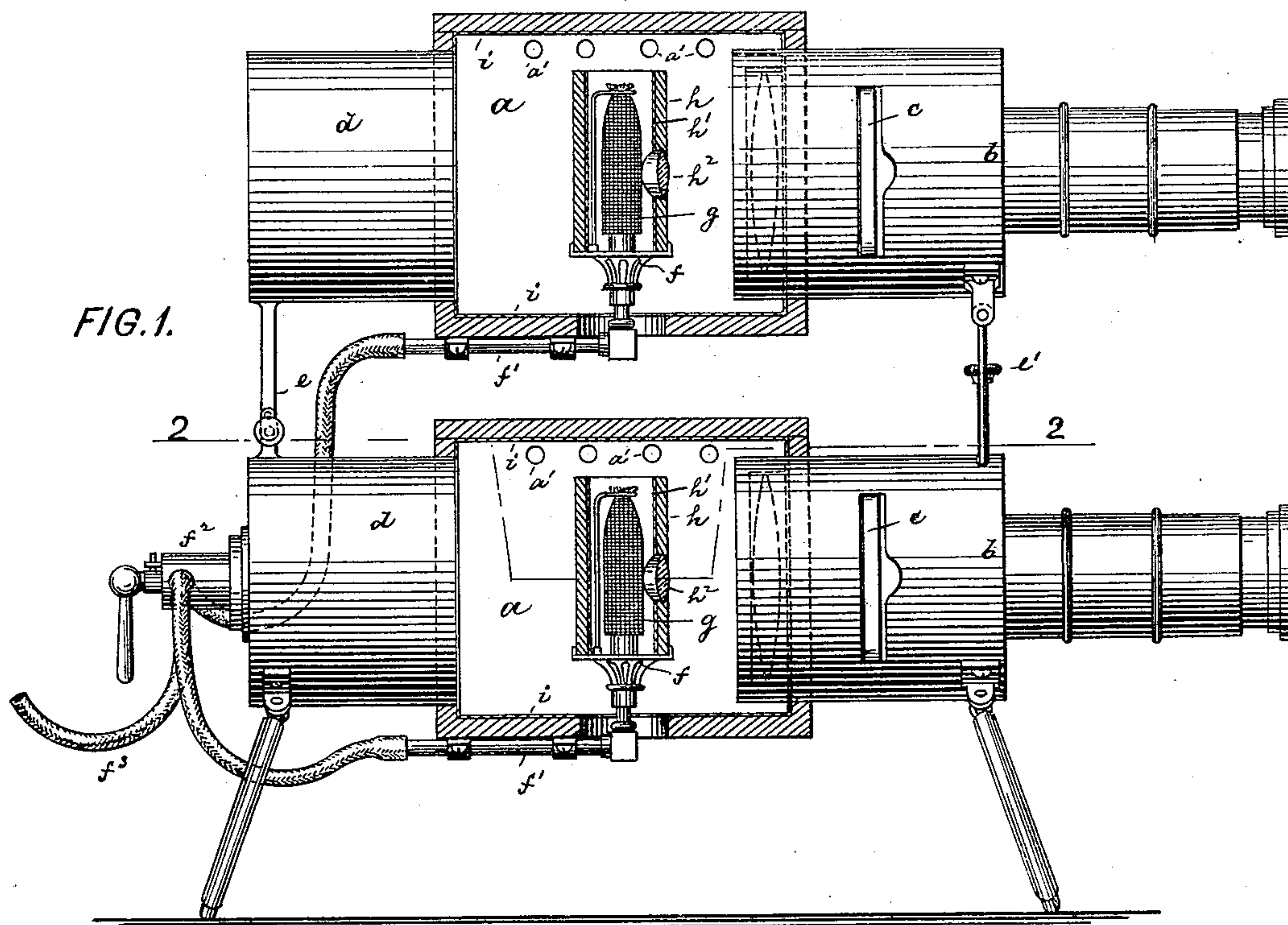


(No Model.)

J. KEEN.  
MAGIC LANTERN.

No. 583,624.

Patented June 1, 1897.



Witnesses:

John Becker.

William Schulz.

Inventor:

Jule Keen  
by his attorneys  
Roeder & Briesen



# UNITED STATES PATENT OFFICE.

JULE KEEN, OF NEW YORK, N. Y.

## MAGIC LANTERN.

SPECIFICATION forming part of Letters Patent No. 583,624, dated June 1, 1897.

Application filed February 23, 1897. Serial No. 624,560. (No model.)

*To all whom it may concern:*

Be it known that I, JULE KEEN, of New York city, county and State of New York, have invented an Improved Magic Lantern, of which the following is a specification.

This invention relates to a magic lantern or stereopticon adapted to be supplied with light by the ordinary illuminating-gas in lieu of by the oxyhydrogen light now usually employed. In this way the manipulation of the lantern is simplified and the cost accompanying lantern exhibitions is considerably lessened.

In the accompanying drawings, Figure 1 is a sectional side elevation on line 1 1, Fig. 2, of a double magic lantern embodying my invention. Fig. 2 is a horizontal section on line 2 2, Fig. 1; and Fig. 3, a vertical transverse section on line 3 3, Fig. 2.

The letters *a* represent the light-holding boxes of the lanterns. These boxes are connected in front to the lens-tubes *b*, adapted to receive the slides *c*, and at the rear to the tubular extensions *d*, which, however, may be dispensed with. The upper lantern may be tilted and focused by means of the hinged support *e* and set-screw *e'* in the well-known manner. Within each of the boxes *a* there is placed a gas-burner *f*, which receives its supply of gas through tube *f'*, two-way cock *f''*, and connection *f'''* from the gas-main of a building. Each of the burners *f* is provided with an incandescent mantle *g*, placed in alinement with the lens-tube *b* and radiating a light which will brilliantly illuminate the image on the screen.

The heat of the incandescent mantle and of the products of combustion escaping from the burner would, however, be apt to injuriously effect the lantern if the latter were exposed to the action of the same. In order, therefore, to adapt the lantern for the reception of this light, I surround the mantle *g* by an opaque non-conducting chimney *h*, composed, preferably, of a wooden shell having an asbestos lining or jacket *h'*. This chimney is provided with a lens *h''* opposite the

lens-tube *b*, through which the light is emitted without, however, permitting the escape of heat. The heat of the mantle is in this way confined within the chimney, while the products of combustion rise through the same and escape out of lateral openings *a'* of box *a*. In order to protect the boxes from the effects of these escaping products of combustion, the walls of the boxes are lined with an asbestos layer or jacket *i*, which in this way coöperates with the non-conducting chimney to thoroughly protect the lantern from the effects of the heat.

It will be seen that by my invention I am enabled to obtain a brilliant illuminating effect for magic lanterns by means of an ordinary gas-jet, and that in this way the manipulation of the lantern is greatly simplified and the expense connected with displays is reduced. Furthermore, the field of utility of the lantern is considerably enlarged, as it no longer requires skilled exhibitors and complicated light-generators to produce the brilliant illumination which is necessary to throw perfect images upon the screen.

Of course the invention may be applied to single lanterns as well as to the double lantern illustrated in the drawings.

What I claim is—

1. In a magic lantern the combination of a lens-tube with a box, a gas-burner within the box, a surrounding incandescent mantle, an opaque non-conducting chimney surrounding the mantle, and a lens within said chimney which is in alinement with the lens-tube, substantially as specified.

2. In a magic lantern the combination of a lens-tube with an asbestos-lined box, a gas-burner within the box, a surrounding incandescent mantle, an opaque asbestos-lined chimney surrounding the mantle, and a lens within said chimney which is in alinement with the lens-tube, substantially as specified.

JULE KEEN.

Witnesses:

F. V. BRIESEN,  
WILLIAM SCHULZ.