

(No Model.)

4 Sheets—Sheet 1.

L. VON DER HOYA.  
FOLDING LANTERN.

No. 464,486.

Patented Dec. 1, 1891.

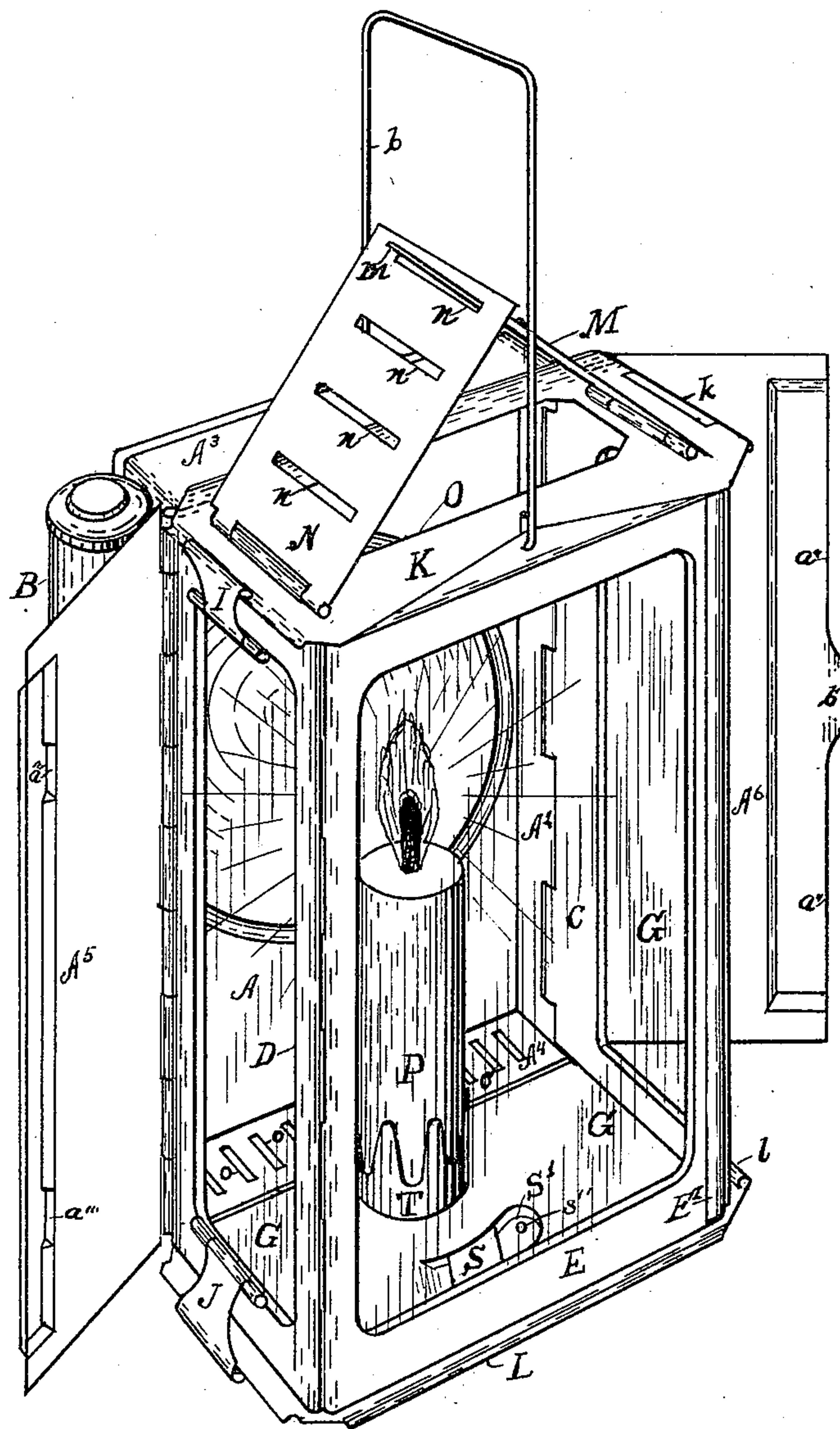


Fig. 1

Witnesses

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By his Attorneys.

*A. Woodman*

(No Model.)

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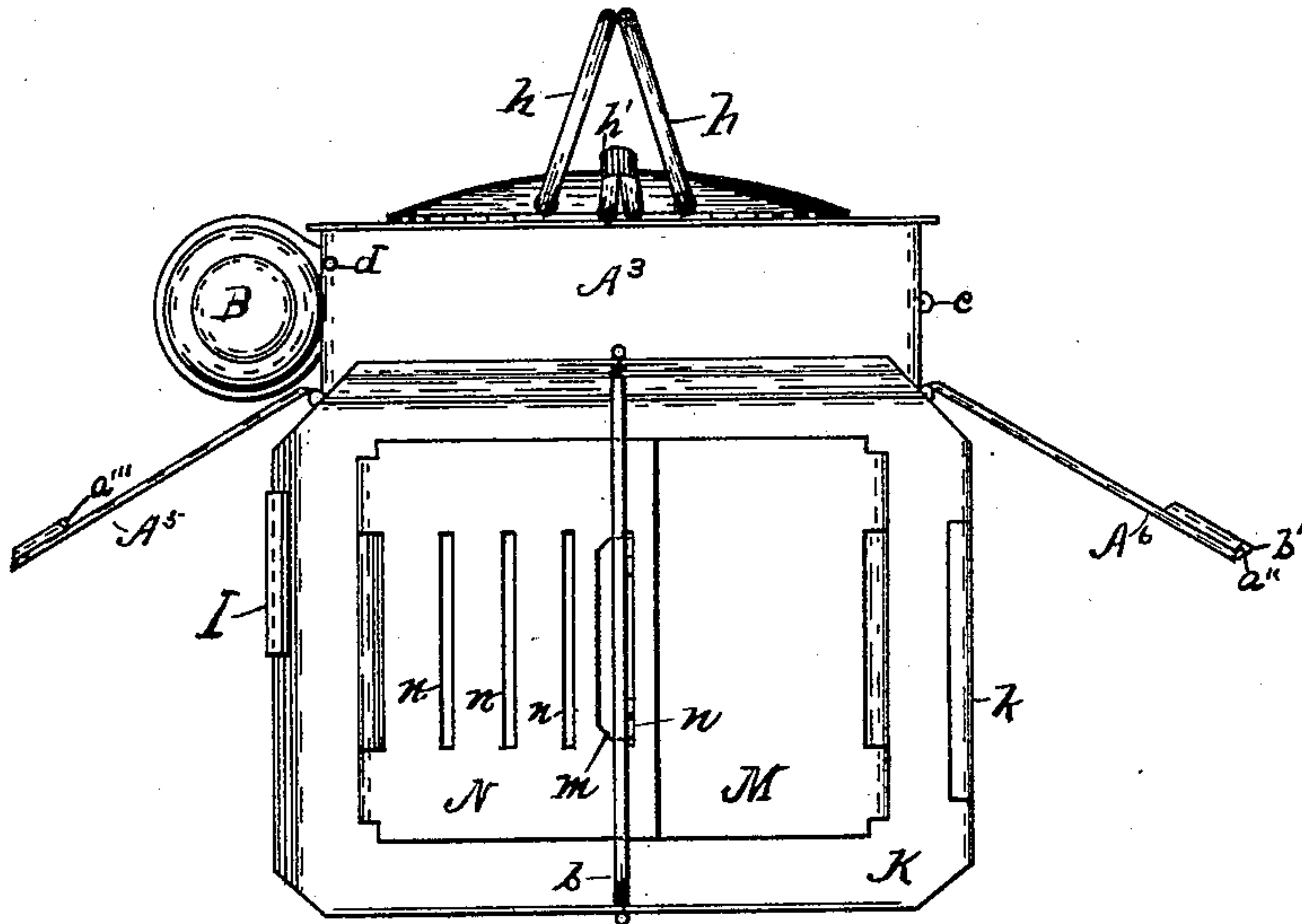


Fig. 2.

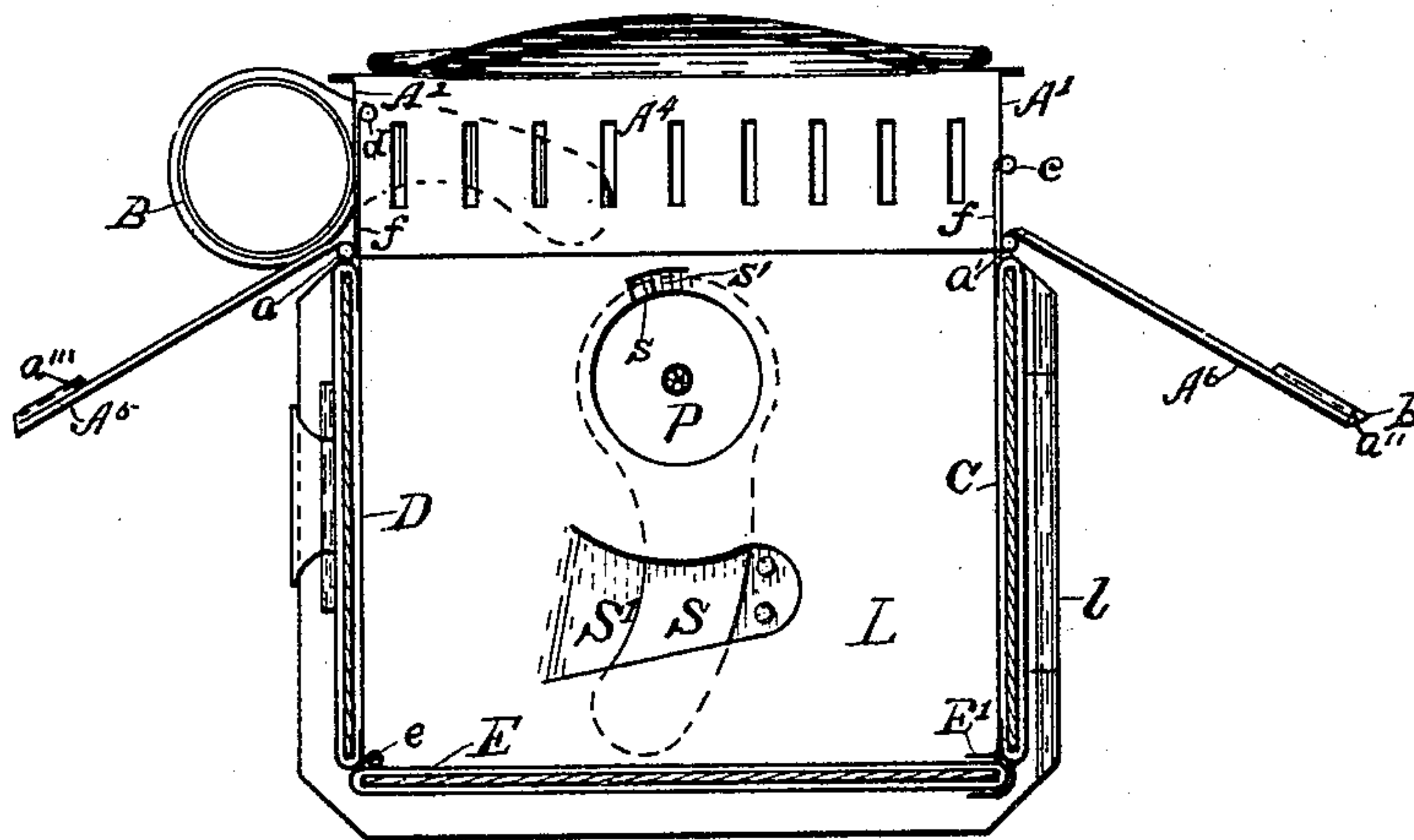
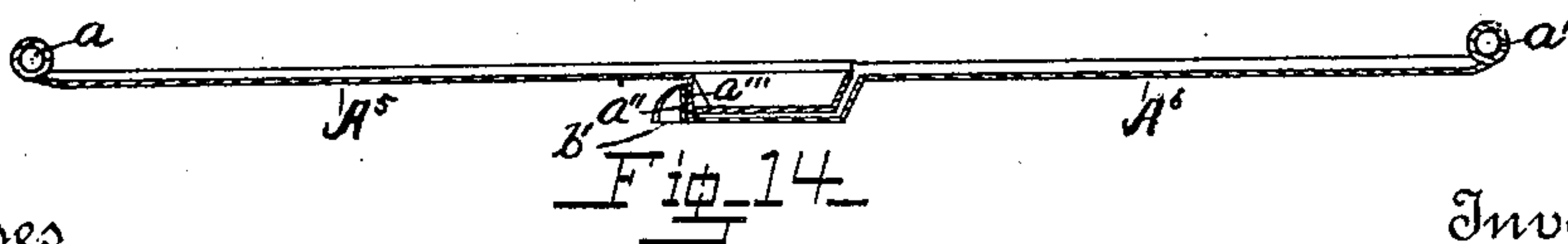


Fig. 3.



Witnesses

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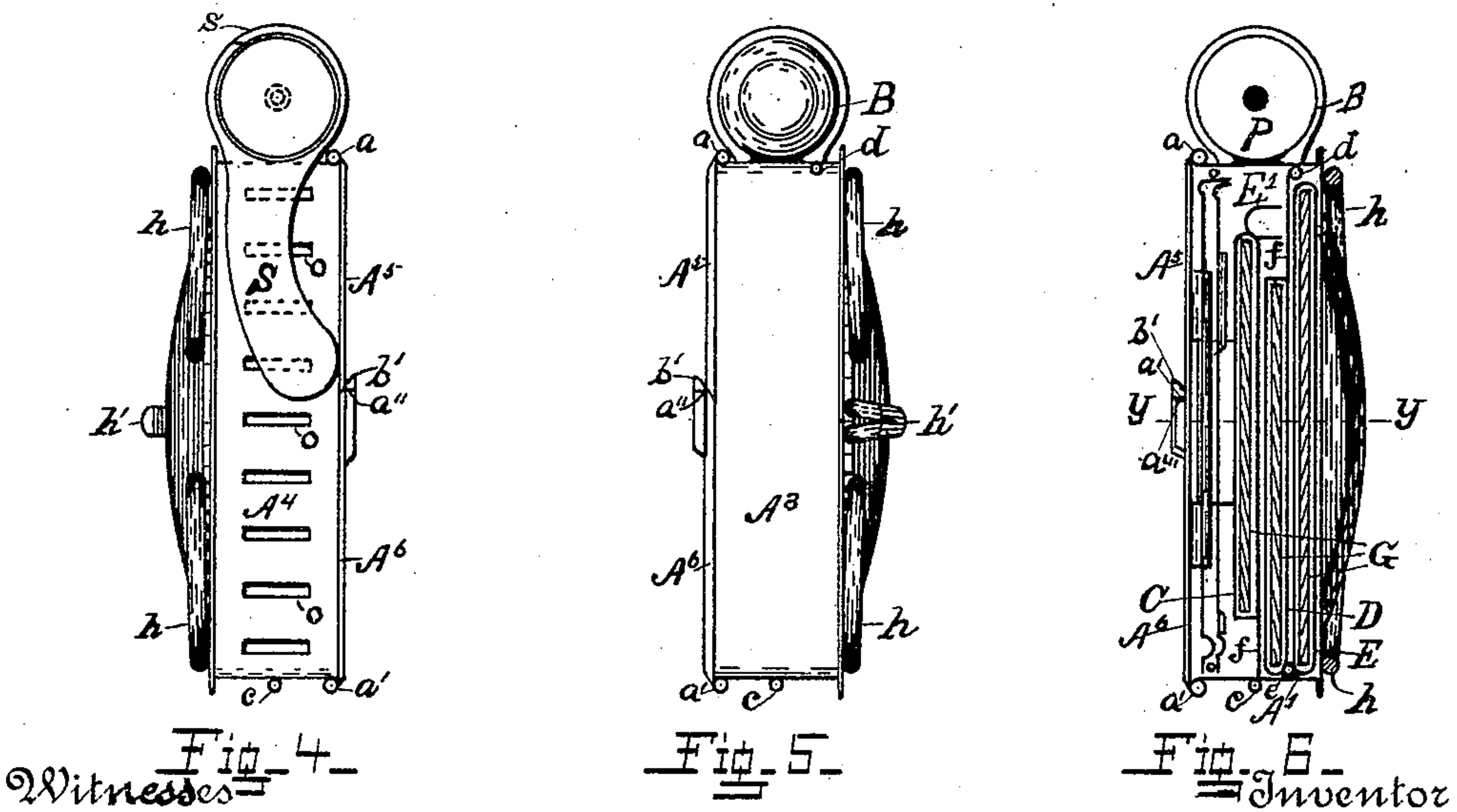
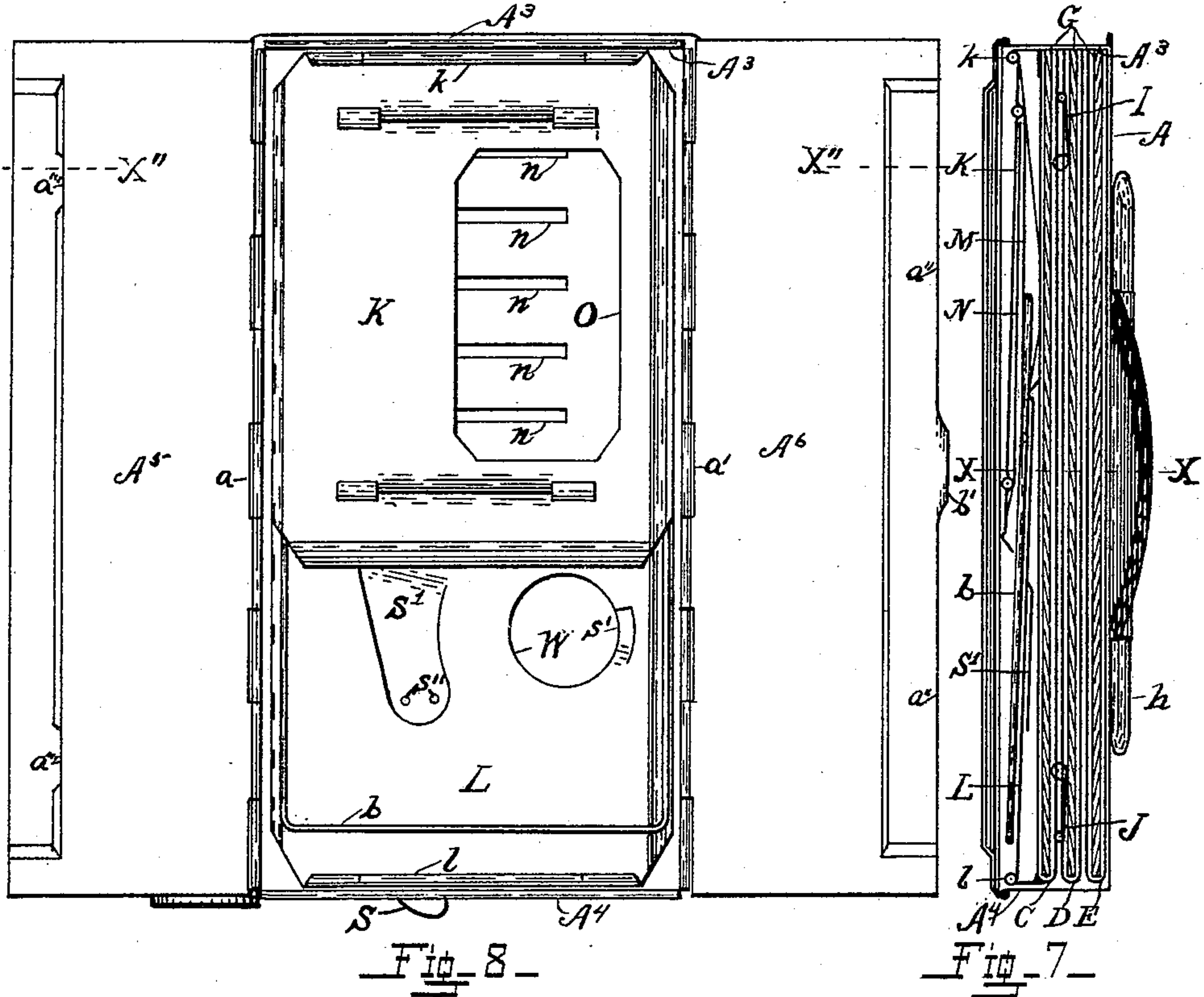
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4 Sheets—Sheet 3.

L. VON DER HOYA.  
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(No Model.)

4 Sheets—Sheet 4.

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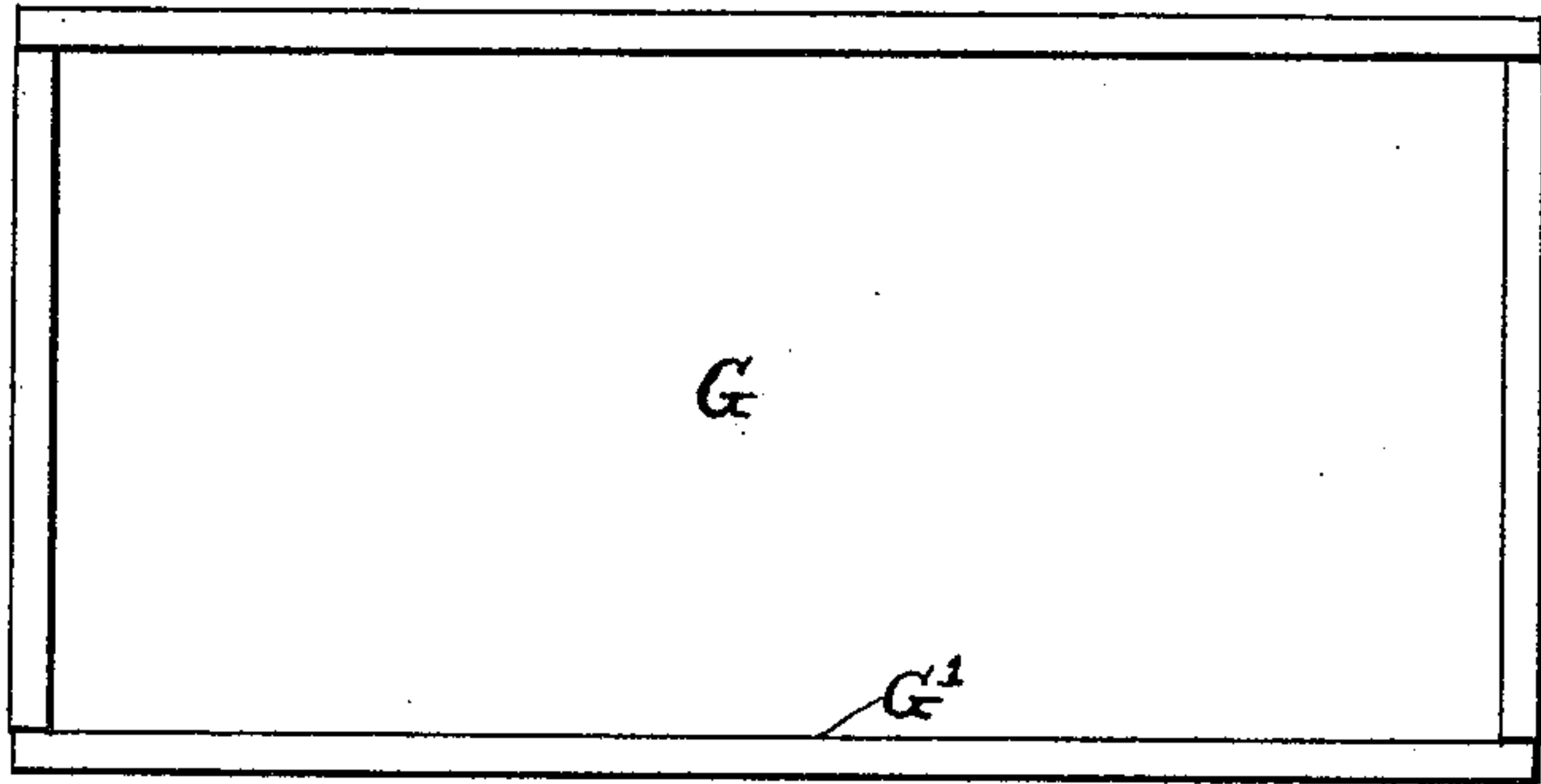


Fig. 10

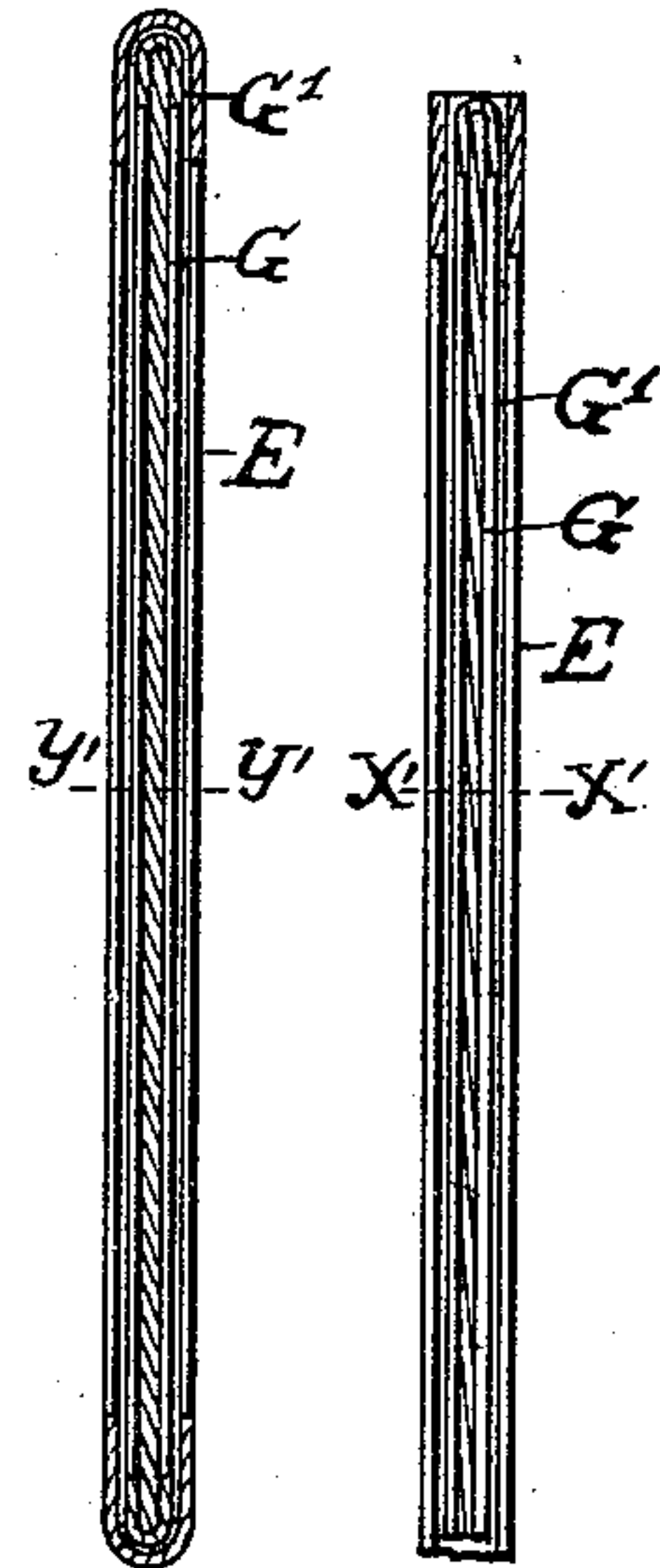


Fig. 11. Fig. 12.

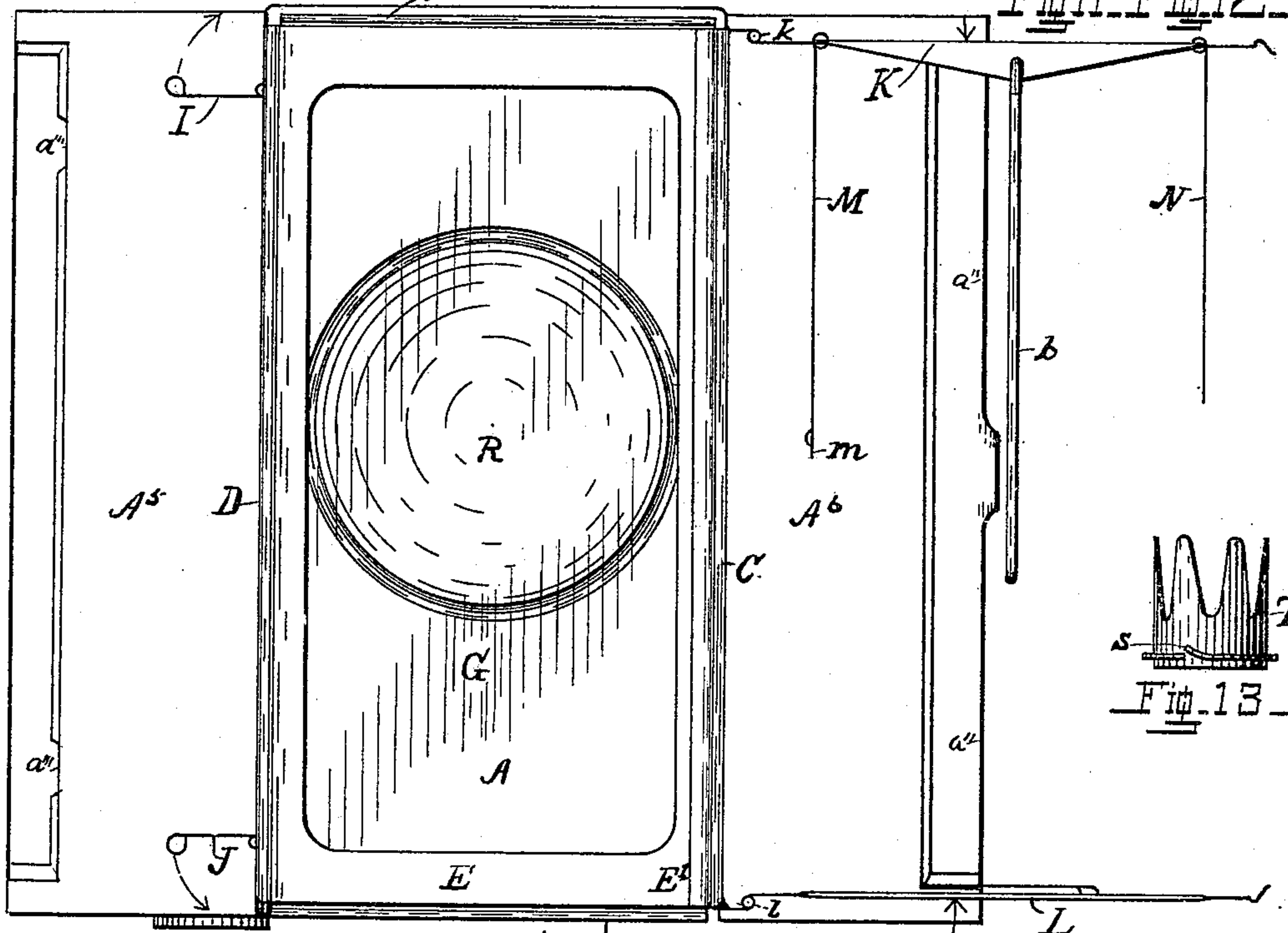


Fig. 9

Witnesses  
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A. Woodson



# UNITED STATES PATENT OFFICE.

LOUIS VON DER HOYA, OF ATLANTA, GEORGIA.

## FOLDING LANTERN.

SPECIFICATION forming part of Letters Patent No. 464,486, dated December 1, 1891.

Application filed December 29, 1890. Serial No. 376,118. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS VON DER HOYA, a citizen of the United States, and a resident of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Folding Lanterns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form part of this specification.

The invention consists of a box-shaped structure provided with hinges and catches by which it can be opened or closed and be secured in either form, and of a receptacle for the candle or lamp when not in use and other details, the particulars of which are shown in the accompanying drawings and will be fully described in this specification.

In the accompanying drawings, Figure 1 is a perspective of the lantern opened out for use and showing most of its details. Fig. 2 is a view showing the top of the lantern opened out as in Fig. 1. Fig. 3 is a central horizontal section through the lantern, as shown in Fig. 1. Figs. 4, 5, 6, and 7 show the lantern in closed form, Fig. 4 being the bottom, Fig. 5 the top, and Fig. 6 a horizontal section, on the line  $x x$  in Fig. 7, and Fig. 7 a vertical section on the line  $y y$  in Fig. 6. Fig. 8 is a front view of the lantern in folded form, except that the covers are open to show the interior. Fig. 9 shows the vertical sides of the lantern opened out into rectangular form with the bottom and top turned to a horizontal position. The arrows in this figure show the direction in which the bottom and top are turned to bring them to the positions shown in Fig. 6, as well as the directions in which the clasps are turned to hold them in position. Fig. 10 shows a metal border around a transparent pane. Fig. 11 is an enlarged cross-section through one of the windows of the lantern and the frame in which it slides on the line  $x' x'$ , Fig. 12. Fig. 12 is a vertical cross-section of a portion of one of the windows and its frame on the line  $y' y'$ , Fig. 11. Fig. 13 is a side elevation of the thimble-holder for a candle or the base of a

lamp. Fig. 14 is an enlarged view in horizontal section on line  $x''$ , Fig. 8, of the doors, showing more clearly the interlocking projected portions thereof.

In Figs. 1 to 9, inclusive, a box-shaped structure consists of the back A, the sides A' and A<sup>2</sup>, the top A<sup>3</sup>, the bottom A<sup>4</sup>, and the covers A<sup>5</sup> and A<sup>6</sup>, hinged by hinges  $a$  and  $a'$ . The box so formed, and provided with a bail  $b$ , handles  $h$ , and hook  $h'$ , contains all the additional parts necessary to make a lantern, except the tube B, attached to the side of the box, in which the candle or lamp is placed when not in use.

In Figs. 2 to 6, inclusive, are shown hinges  $c$  and  $d$ , by which are pivoted to the sides of the box (see Figs. 3 and 6) the parts C and D, and to the part D is hinged the part E by the hinge  $e$ . These parts C D E carry transparent panes G, preferably of mica, surrounded by a metal border G', as shown in Figs. 10, 11, and 12. Figs. 11 and 12, being somewhat enlarged, show the construction of the border or frame around the transparent pane and the manner of holding it in either of the parts C D or E, the part E being selected for illustration. To avoid obscurity, the panes, wherever shown, except in Figs. 10, 11, and 12, are in rudimental form or consisting each of a single piece without a border; but it is preferred, as it is thought to be better, to use a frame or metal border G', as shown in Figs. 10 and 11. The parts C, D, and E are open at the top to insert and remove the panes, as shown in Figs. 7 and 12.

In Figs. 1, 3, 6, and 9 is shown a U-shaped piece E', attached to the free edge of the part C, that forms a seat for the free edge of the part E, the conjunction of the parts being best seen in Fig. 3. Fig. 3 also shows that it is necessary to spring the flanges  $f$ , that connect the parts C and D with the hinges  $c$  and  $d$ , to cause the free edge of the part D to enter the U-shaped piece E', and that the resilience caused by the elasticity of the said flanges will cause the U-shaped piece to press against and hold the part E firmly in position.

A supplemental top and bottom K and L are hinged by the hinges  $k$  and  $l$  to the part C, which turn over, as indicated by the arrows, Fig. 9, and cover the ends of the por-



tion of the lantern formed by the parts C, D, and E after they shall have been opened out, as just above described. The top and bottom are held in position by turning the catches I and J, as shown by arrows in Fig. 9, to the position shown in Fig. 1.

The parts M and N (best shown in Figs. 1 and 2) form a regulator for the top ventilating-hole O. In Fig. 1 these parts are shown as being adjusted to give the largest possible opening under them, the tongue *m* being inserted in the highest one of the holes *n*. It is obvious that its insertion in a lower hole *n* will cause the parts to assume a less inclined position and consequently give less room for ventilation and be a better protection against wind entering the hole O. Air in a sufficient quantity to support the combustion of the light is allowed to enter at the bottom through the holes *o*. The quantity that will enter, however, is governed by the adjustment of the parts M and N.

The candle or lamp P when not in use is put in the tube B and is held in by the friction of the thimble T against the inner surface of the tube. On the bottom end of the thimble T is an arm S, of sheet metal, which is continued, forming a flange around the thimble. This flange is cut, as shown in Figs. 4 and 13, a lip *s* being turned up, as shown in the latter figure. The candle when in use is inserted in a hole W (shown in Fig. 8) in the bottom L, the said lip *s* engaging with the lip *s'*, as shown in Fig. 3, and the arm S also passes under the lip *s'*, which holds the candle or lamp in the position shown. Points *s*<sup>2</sup>, preferably stamped up from the metal in the arm S, prevent the accidental disengagement of said arm S and lip *s'*. Handles *h* are hinged to the back, as shown in several figures, that may be turned out, as shown in Fig. 2, for the purpose of carrying the lamp, and a hook *h'* is also provided by which it may be hung up. A concave reflector R is placed in the back of the lantern and may be of any convenient or desired form.

The doors or covers A<sup>5</sup> and A<sup>6</sup> are channeled longitudinally and near the free end of each, as shown in nearly all of the figures, the metal so struck up forming outward correlative projections on the covers, that on the cover A<sup>6</sup> being enough larger than the one on the other cover to pass over it exteriorly. A side of the channel formed by the flange *a''* should be approximately at a right angle to the side of the cover A<sup>6</sup>, and parts of the inner side of the channel in the cover A<sup>5</sup> should be pressed to a right angle, as shown at *a'''* in Figs. 8 and 14. Lips or projections *a'''* on one door engage with the side *a''* of the other door when the same are closed. It will be observed by reference to enlarged Fig. 14, showing a section at *x''*, Fig. 8, that the engagement of the portions *a''* and *a'''* of the side walls of these channels is somewhat in front of a right line between the

hinges *a* and *a'*, and that the engaging sides of these channels are at acute angles to lines drawn from the engaging point to the hinges *a* and *a'*, and that these doors cannot be opened without springing inwardly sides A' and A<sup>2</sup>, and that force will be required to open the cover A<sup>6</sup> by means of the lip *b'*. The inner side of each of these covers or doors may be plated with a reflectory substance of sufficient non-liability to tarnish, and so form reflectors, which from their angle will obviously throw the light forward which escapes from the side transparent portion of the lantern-body.

In the drawings a candle is shown; but it is obvious that a lamp might be used instead and that the device might be otherwise somewhat changed in form and details without departing from the spirit of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a device of the class specified, the shallow box-shaped structure having rigid protecting sides, and lantern sides hinged to said sides so that they may be folded within said box, for the purpose specified.

2. In a device of the class specified, the box having lantern sides hinged thereto and adapted to be folded therein, and the doors additional to the lantern side, hinged and adapted to close the open side of said box, for the purpose specified.

3. In a device of the class specified, the box having lantern sides hinged thereto and adapted to be stored therein, and doors additional to the lantern side, hinged to said box and adapted to close the open side thereof when folded, said doors being reflectory on their inner sides and adapted to reflect the light forward when opened, substantially as specified.

4. In a device of the class specified, the box adapted to contain the necessary elements, of a lantern and doors hinged thereto, and a locking device comprising the described interlocking upset portions of said doors, for the purpose specified.

5. In a device of the class specified, the box adapted to contain the necessary elements, of a lantern and doors hinged thereto, and a locking device comprising the described interlocking upset portions of said doors, situated ahead of a right line drawn between the pivots of said hinges, for the purposes set forth.

6. In a device of the class specified, the box having rigid protecting sides and lantern sides hinged to said sides, and a top and bottom hinged to one of said lantern sides, all arranged and combined as to be folded and stored in said box.

7. In a device of the class specified, the box and lantern sides hinged thereto, one of said sides having hinged to it the lantern-top perforated for exit of smoke, and an adjustable cover for said perforation, all adapted to be



folded and stored within said box, for the purpose specified.

5 8. In a device of the class specified, the box having lantern sides hinged thereto, one of said sides having hinged to it the lantern-top perforated for the exit of smoke, and the adjustable cover therefor, consisting of the two leaves hinged to said cover on opposite sides of said aperture and having means for con-

joint engagement to adjust their relative angles, the whole adapted to be folded within said box, for the purpose specified.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

LOUIS VON DER HOYA.

Witnesses:

A. P. Wood,

A. A. Wood.