

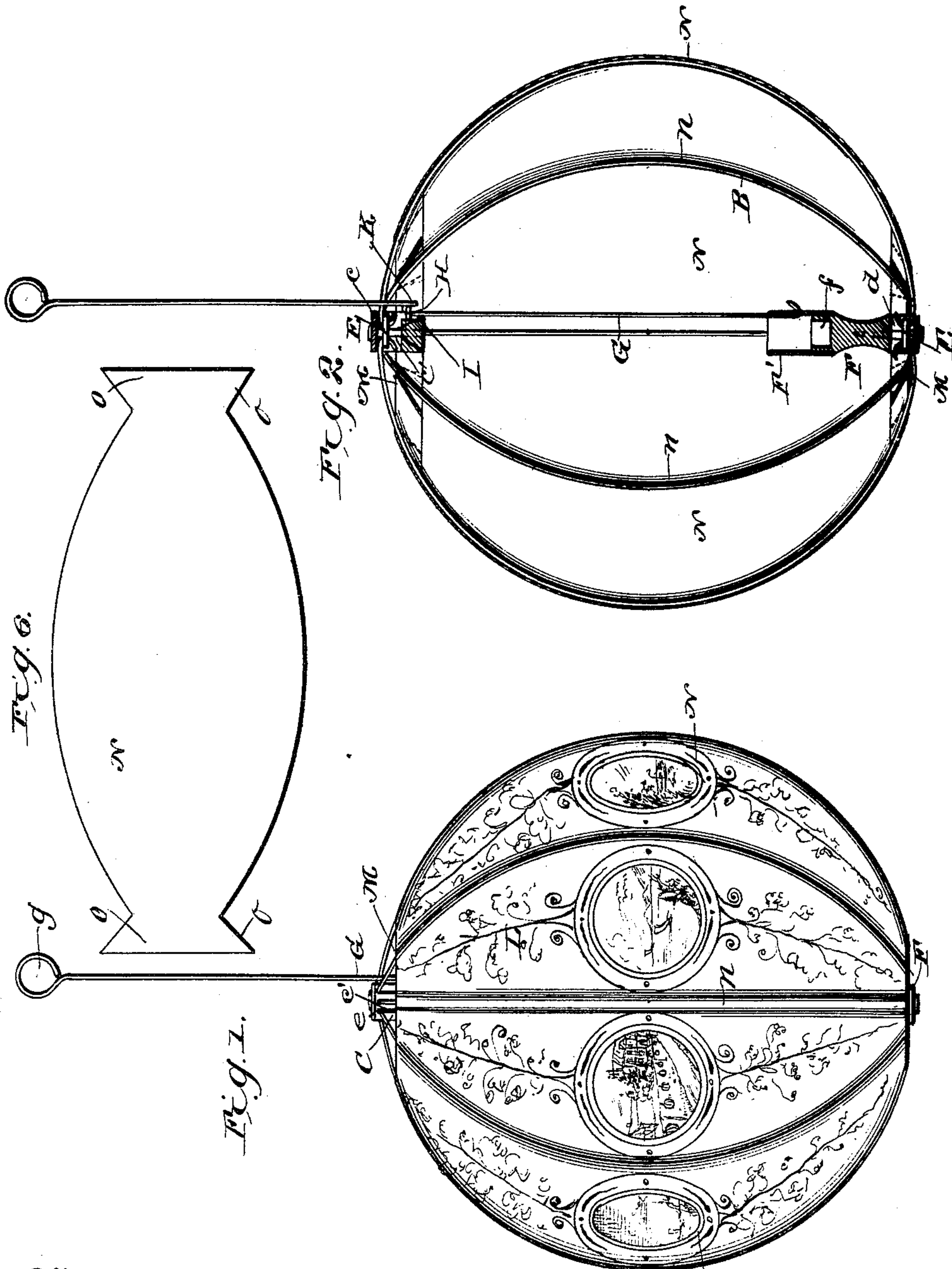
(No Model.)

2 Sheets—Sheet 1.

J. H. SPRAGUE.  
LAWN LANTERN OR ILLUMINATOR.

No. 410,613.

Patented Sept. 10, 1889.



Witnesses

*Jos. A. Ryan*  
*C. E. Doyle*

Inventor

*James H. Sprague*

By his Attorneys

*C. H. Snowdon*

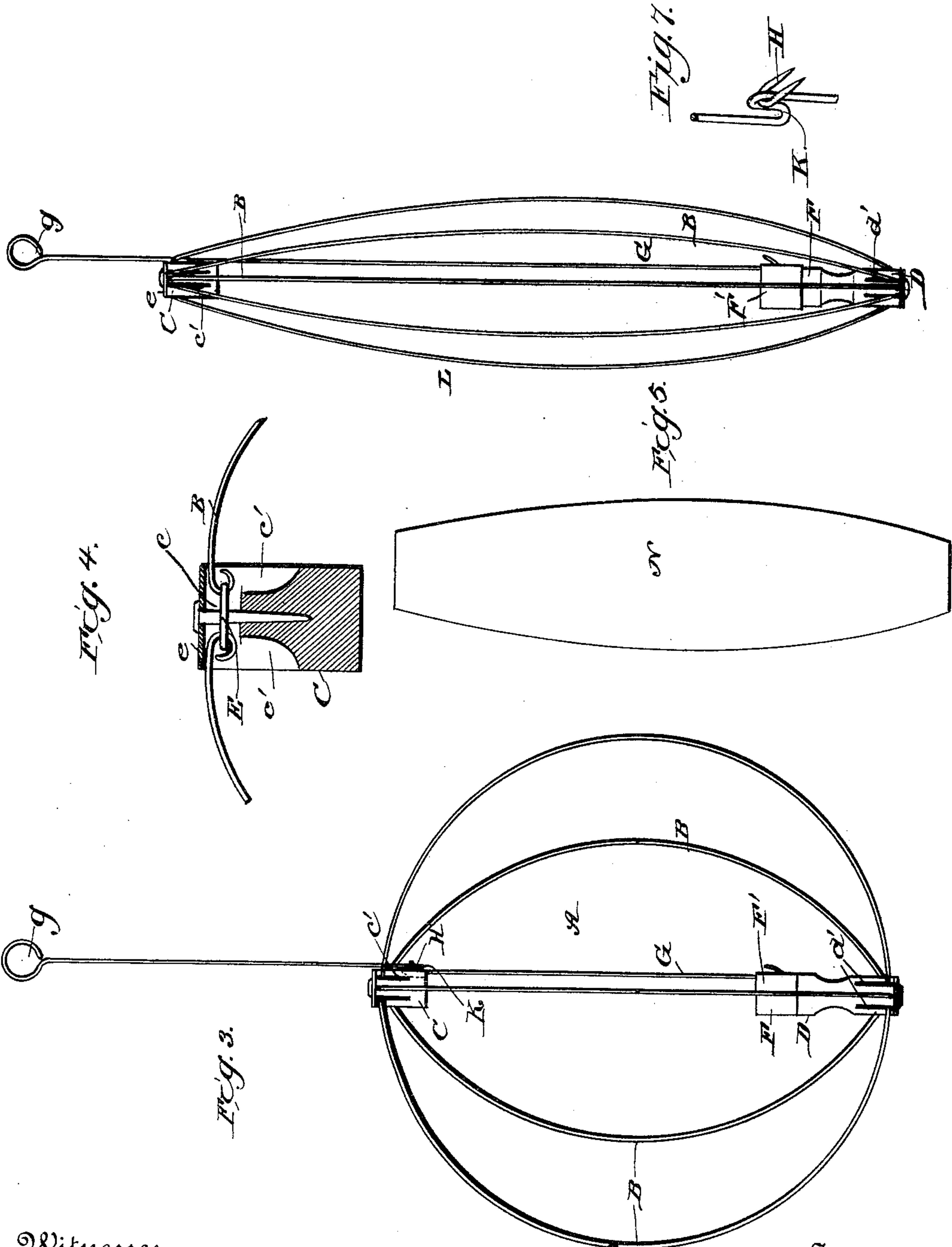
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# UNITED STATES PATENT OFFICE.

JAMES HARVEY SPRAGUE, OF NORWALK, OHIO.

## LAWN LANTERN OR ILLUMINATOR.

SPECIFICATION forming part of Letters Patent No. 410,613, dated September 10, 1889.

Application filed May 31, 1888. Serial No. 275,625. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES HARVEY SPRAGUE, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented new and useful Improvements in Lawn Lanterns or Illuminators, of which the following is a specification.

This invention relates to improvements in lawn lanterns or illuminators, having for its object to provide means whereby they may be more easily and cheaply manufactured; to provide a lantern which may be folded readily for transportation and will be perfectly firm and non-collapsible when arranged for use; to provide improved means for inserting the light into the lantern, whereby the danger of igniting the inflammable cover or envelope is avoided, and also to provide means for holding the lantern in its inflated or extended condition, so that when it is suspended all possibility of the same being pressed or blown out of shape is obviated.

The invention consists in a certain novel construction and combination of devices, fully set forth hereinafter in connection with the accompanying drawings, wherein—

Figure 1 is a side view of the improved lantern. Fig. 2 is a vertical central section of the same. Fig. 3 is a view of the extending frame in its extended condition. Fig. 4 is a detail view of the upper block or spool, showing the upper ends of the ribs connected thereto. Fig. 5 is a view of the lantern in its folded condition. Fig. 6 is a plan view of one section of the cover or envelope detached. Fig. 7 is a detail view showing the engagement of the offset or loop with the staple.

Referring to the drawings, A designates the extensible frame of the lantern, which consists in the radial ribs B B, attached at their upper and lower ends, respectively, to the spools or blocks C D. The upper end of the upper block and the lower end of the lower block are provided, respectively, with the vertical recesses *c d*, and the sides of the said blocks are provided with the vertical radial slots *c' d'*, which communicate, respectively, with the said recesses. Rings E E are arranged in horizontal positions in the recesses, and the ends of the ribs of the frame pass through the slots in the sides of the spools or blocks, and

are provided with hooks or loops engaging the rings E. Small disks *e e* are secured on the ends of the spools or blocks over the recesses to hold the rings in place therein. The lower spool or block is extended upward to form the candle-socket F, embraced by the metallic sleeve F', to the side of which is attached the lower end of the adjusting-wire G, and the wire passes near its upper end through a staple or keeper H, which is arranged in a recess I in the side of the upper spool or block. This adjusting-wire is provided with an offset or loop K at a suitable point, which engages the staple or keeper when the frame is extended, as shown in Fig. 3, and the spools or blocks are thus held in their proper relative positions. The upper end of the adjusting-wire is provided with a loop *g* to enable the lantern to be suspended from a suitable support.

The ribs B B of the extensible frame are bent outward at their centers, as shown in the drawings, to form (approximately) semicircles, and therefore the spherical cover or envelope L is held in shape by these ribs, and the candle, which is arranged in the above-mentioned socket, is held in the center of the lantern. This socket spool or block is provided at its upper end with the recess or socket *f*, and the sleeve F' projects above the upper end of the spool or block to form a flange or continuation of the socket in which the candle is placed, and the lower end of the adjusting-wire being affixed to the side of this sleeve the candle is prevented from swaying.

The cover or envelope may be made of any transparent or translucent flexible material, as paper, linen, or their equivalent; and it consists of the sections or gores N N, tapered toward both ends and affixed together at their adjacent edges to form the angles *n n*, in which engage the ribs B. The upper and lower ends of the said sections or gores are provided with the flaps O O, as shown clearly in the detail view, Fig. 6, having ears *o o* on their ends, and after the side edges of the sections or gores are connected these flaps are turned inward and pasted to the inner sides of the sections or gores, and the ears are similarly secured to the inner sides of the sections or gores adjacent thereto on both sides. Thus it will be seen that the ends of the sections or gores are provided with additional means



of attachment, and they are further strengthened or re-enforced to prevent tearing.

It will be seen that when the cover or envelope is folded the creases or folds occur in the 5 said angles, or on the lines of junction of the sections or gores.

The extensible frame is removed from the cover or envelope by disengaging the offset or loop of the adjusting-wire from the staple 10 or keeper and allowing the wire to slip through the same until the ribs B B have straightened and folded sufficiently to pass through either the upper or the lower opening M in the cover or envelope. These ribs are preferably of 15 elastic wire, but may be of any flexible light material, as bamboo, wood, &c.

To inflate the lantern or illuminator, spread or open the cover or envelope with the hands; place the candle in the socket of the frame 20 and light it; place the cover or envelope on the floor or a table and drop the frame (in its folded condition) down through the upper opening M until its lower end rests on the floor or table; separate the ribs slightly so as 25 to enable them to spread out radially, and then, holding the upper block with one hand, draw the adjusting-wire upward until the offset or loop thereon passes through the staple or keeper on the upper block, and, lastly, en- 30 gage the said offset or loop with the keeper. If any of the ribs have not taken their places in the angles of the cover or envelope, grasp them at their upper and lower ends and spring them into place, and it will also be found of 35 advantage to turn the ends of the ribs outward at right angles to the sides of the spools or blocks, so that they will bear against the inner sides of the disks on the ends of the same, thereby spreading or inflating the upper 40 and lower ends of the cover or envelope more perfectly.

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

45 1. In a lantern or illuminator, the combination, with the cover or envelope, of the frame having the upper and lower spools or blocks

C D, provided with recesses in their outer ends, and radial slots communicating with the recesses, the rings arranged horizontally in 50 the recesses of the spools or blocks, the ribs passing through the said radial slots and having hooks or loops on their ends engaging the rings, and the adjusting-wire attached to the lower spool or block and adjustably se- 55 cured at its upper end to the upper spool or block, substantially as specified:

2. In a lantern or illuminator, the combination, with the frame having the extending ribs, of the cover or envelope surrounding the 60 frame and comprising the tapered sections or gores N N, secured together at their side edges, the flaps O O on the upper and lower ends of the gores, folded inward and secured to the inner surfaces of the same, and the 65 ears o o on the side edges of the said flaps, affixed to the adjacent sections or gores to prevent the upper and lower ends of the same from separating, substantially as specified.

3. In a lantern or illuminator, the cover or 70 envelope comprising the tapered sections N, secured together at their adjacent side edges to form the angles n, and having the flaps O at their upper and lower ends, as set forth.

4. In a lantern or illuminator, the combina- 75 tion, with the cover or envelope, of the frame arranged therein and comprising the upper and lower spools or blocks C D and the radial elastic ribs pivotally connected at their ends to the said spools or blocks, the lower spool 80 or block being extended upward to form the integral candle-socket F, the sleeve F', embracing the candle-socket, and the adjusting-wire connected at its lower end to the sleeve F' and passing upward and engaging the up- 85 per sleeve or block, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES HARVEY SPRAGUE.

Witnesses:

O. W. WILLIAMS,  
HENRY S. MITCHELL.