

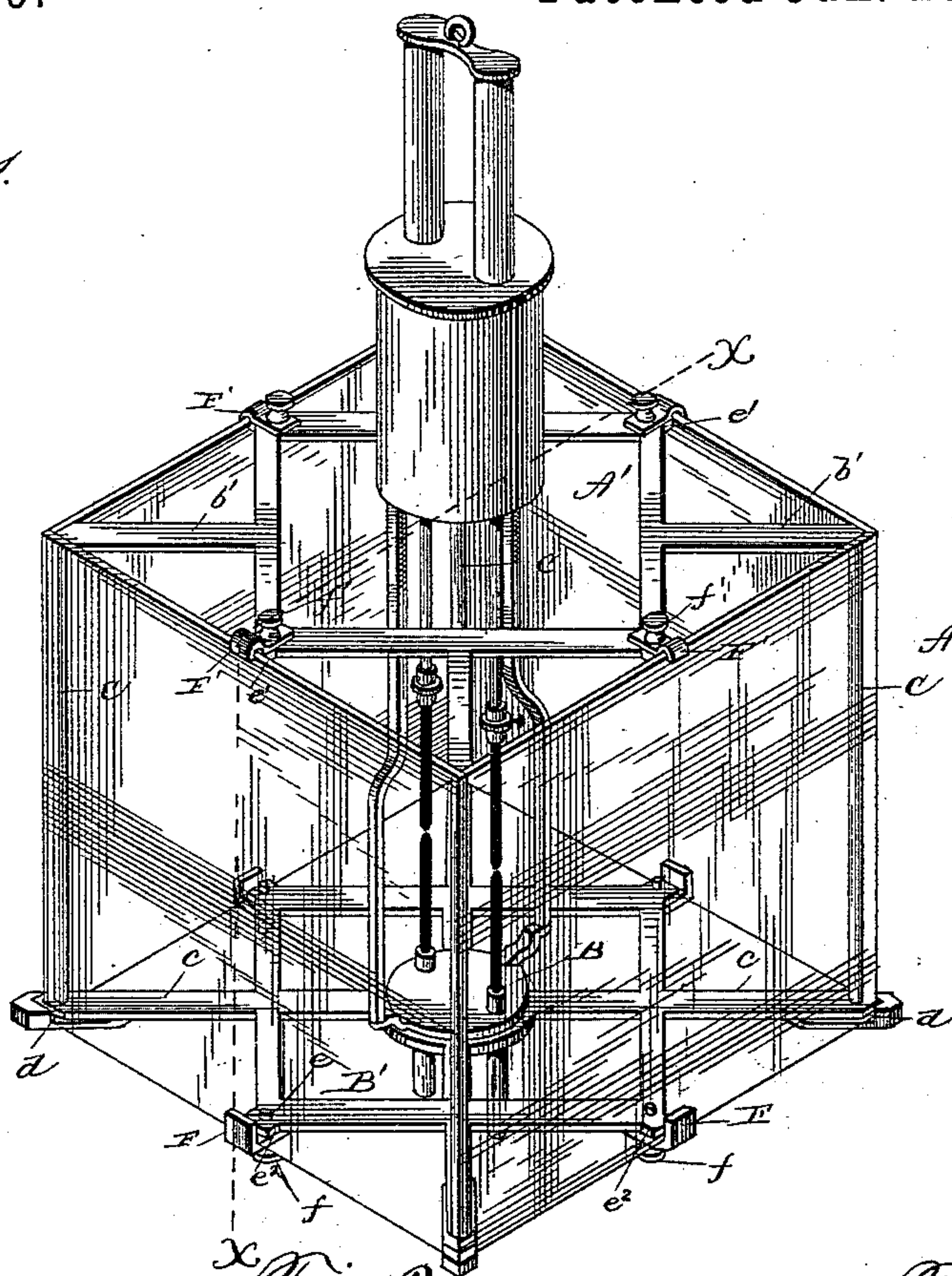
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2 Sheets—Sheet 1.

J. P. BARRINGER & T. H. JOHNSTON.
CONSTRUCTION OF LAMPS.

No. 420,139.

Patented Jan. 28, 1890.



x Fig. 2.

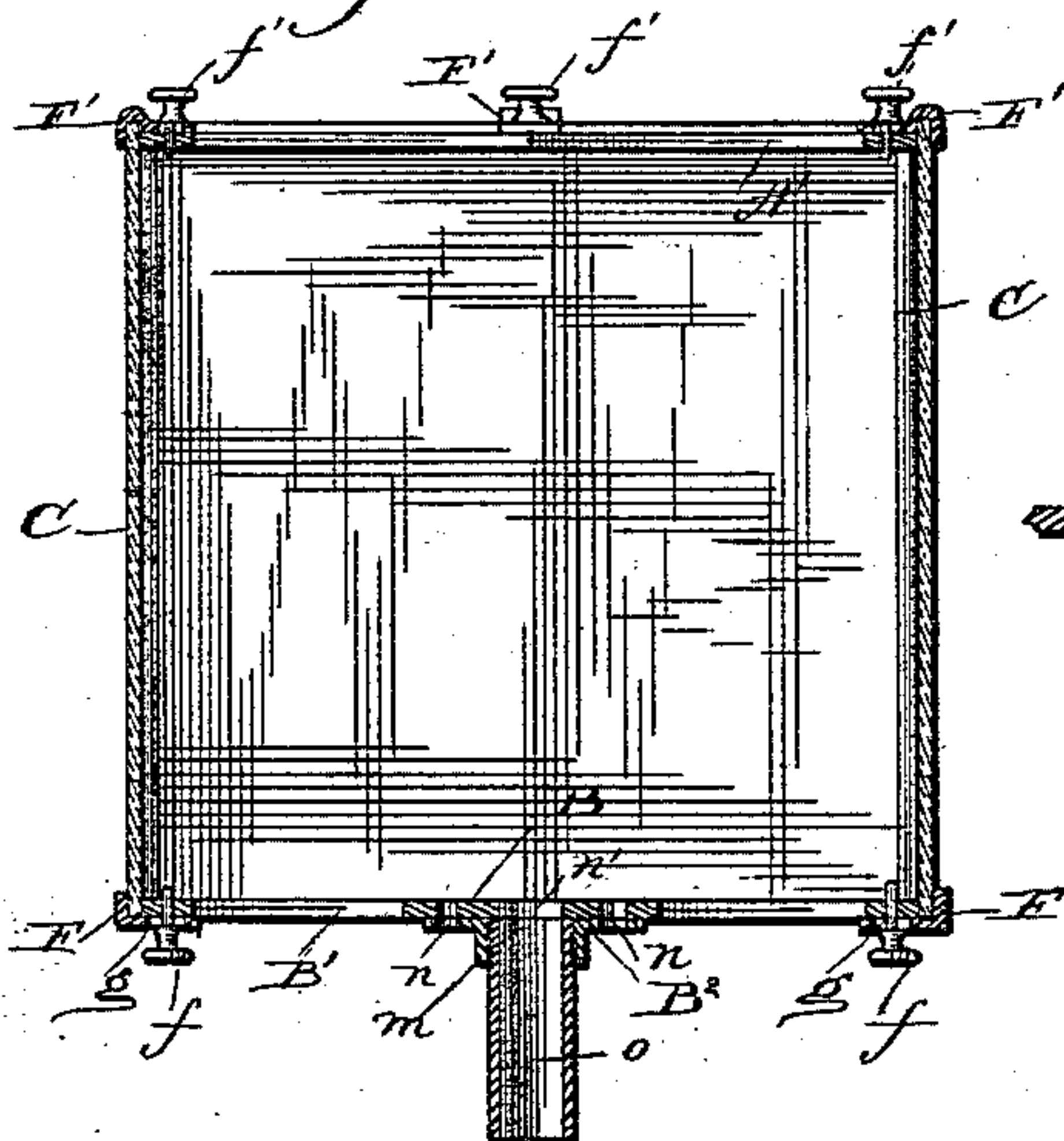
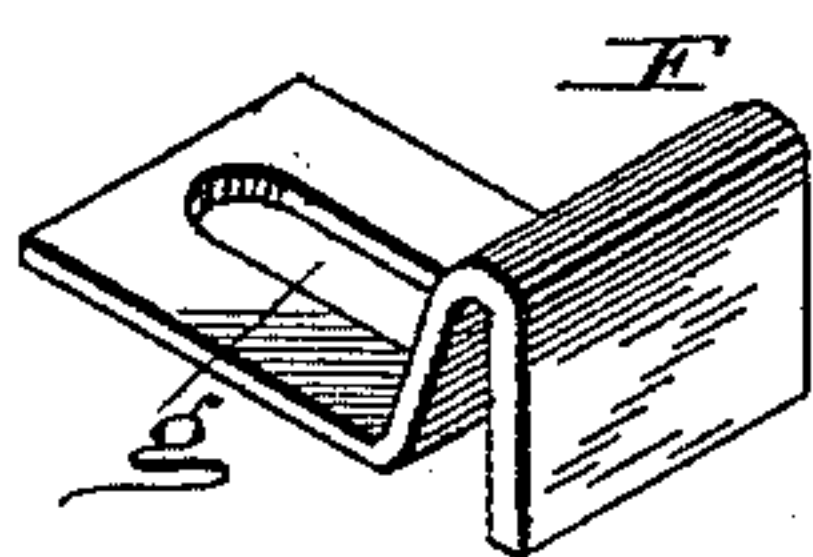
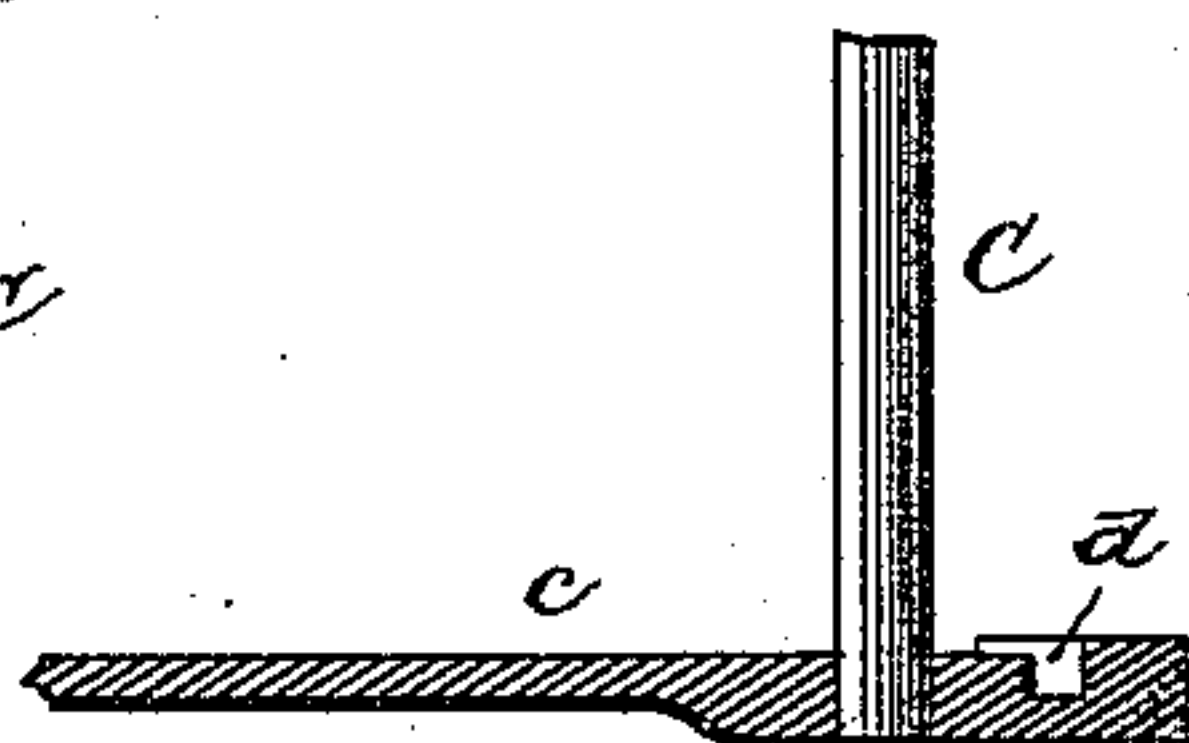


Fig. 7.



WITNESSES

J. Coleman
Marcus L. Byng.

INVENTOR

INVENTOR
Jacob P. Barringer and
Thomas N. Johnston.
By
Osker and Monell Attorneys

(No Model.)

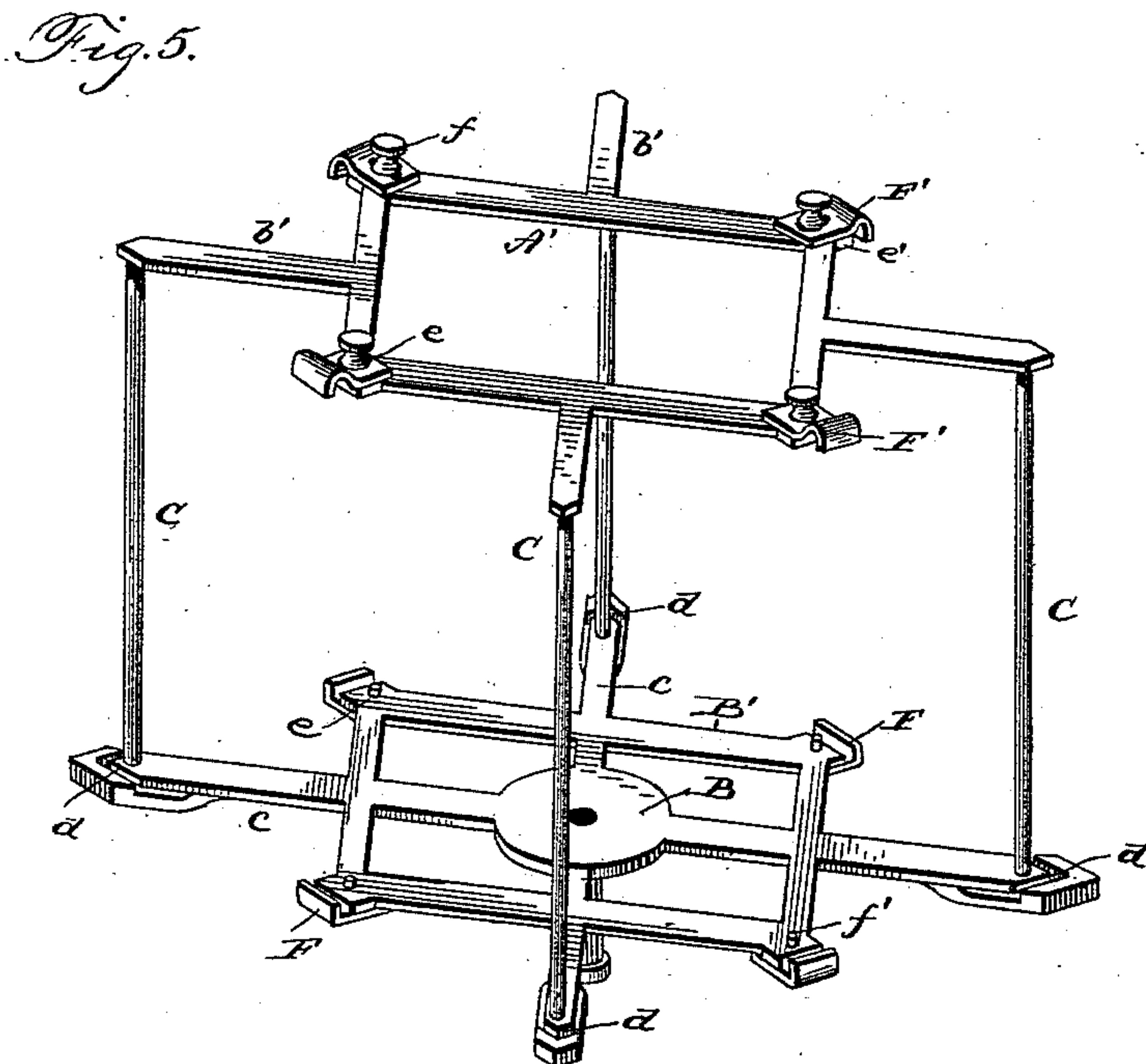
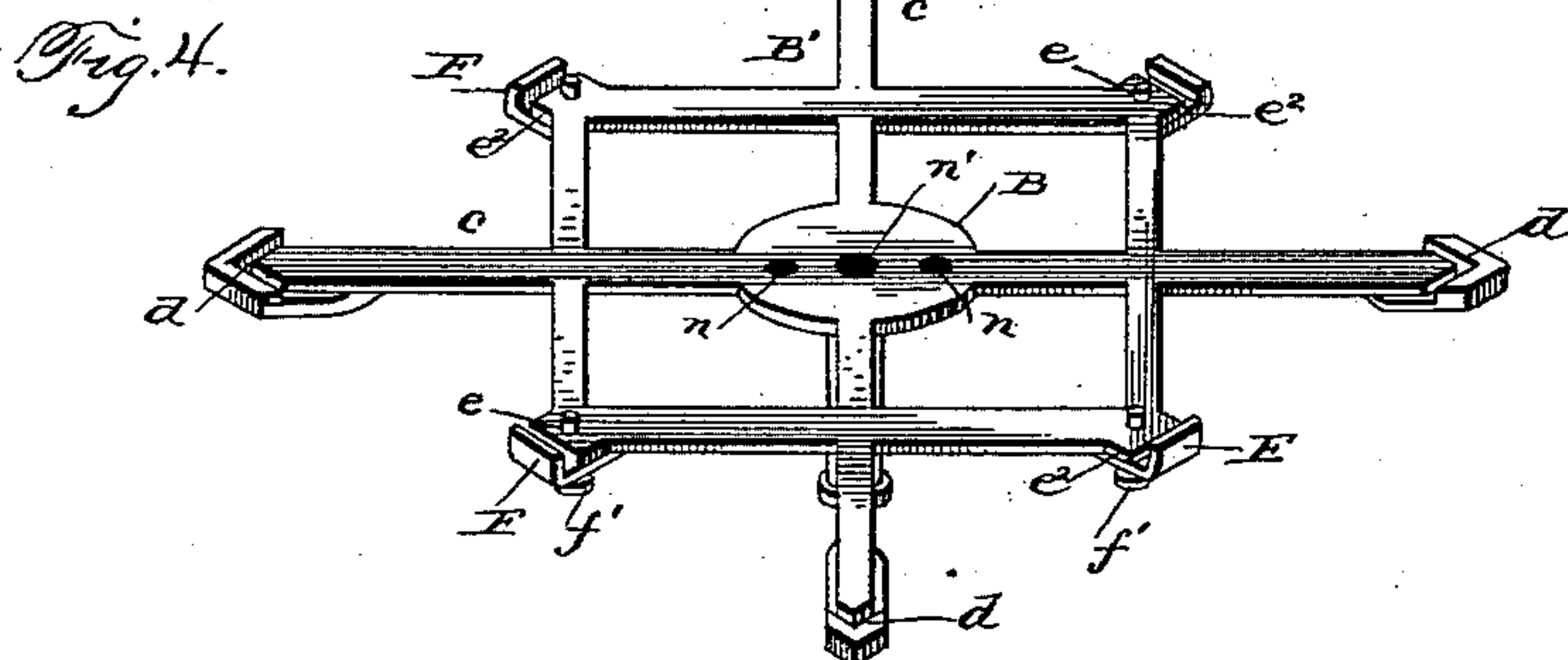
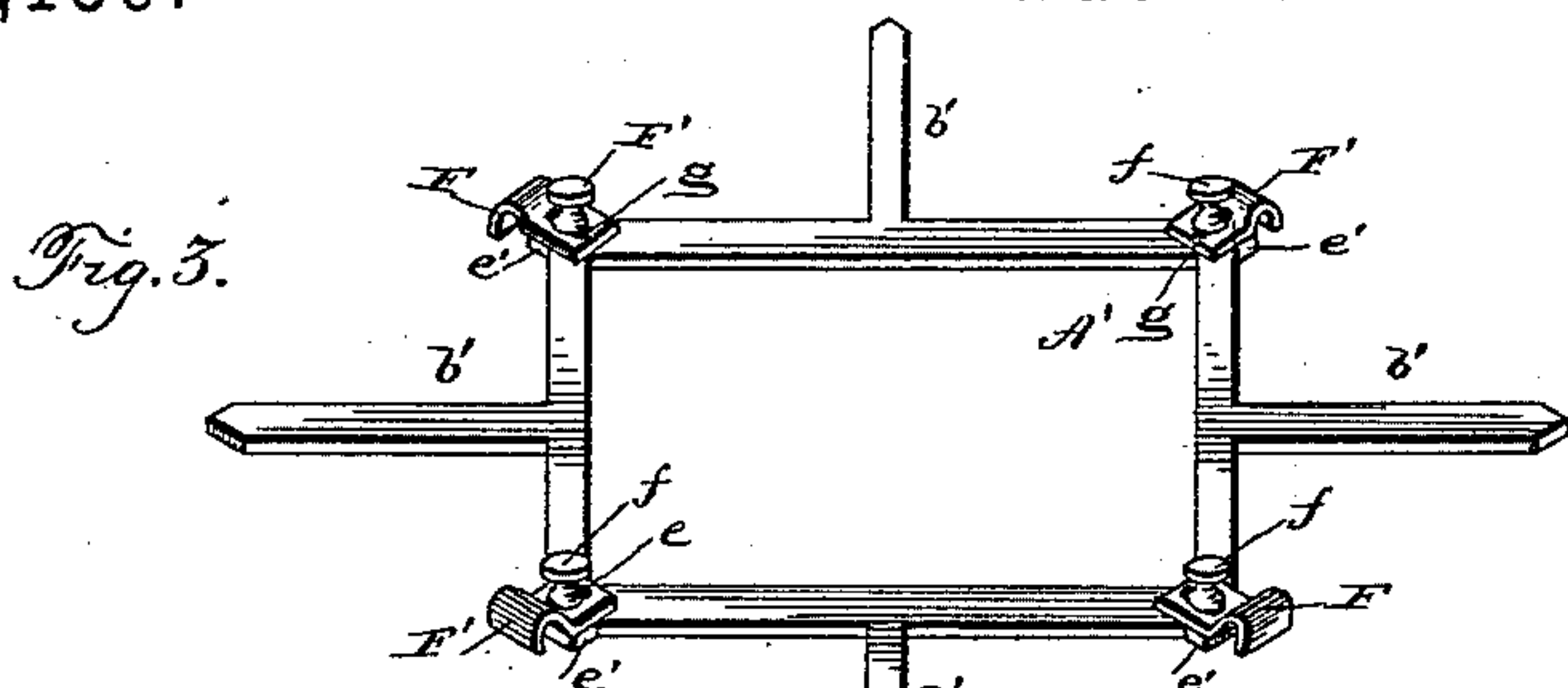
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J. Coleman

Marcus A. Byng.

INVENTORS

Jacob P. Barringer and
Thomas H. Johnston,
By
Acker and Morell Attorneys.

UNITED STATES PATENT OFFICE.

JACOB P. BARRINGER AND THOMAS H. JOHNSTON, OF HARRISBURG,
PENNSYLVANIA.

CONSTRUCTION OF LAMPS.

SPECIFICATION forming part of Letters Patent No. 420,139, dated January 28, 1890.

Application filed February 18, 1889. Serial No. 300,259. (No model.)

To all whom it may concern:

Be it known that we, JACOB P. BARRINGER and THOMAS H. JOHNSTON, citizens of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Construction of Lamps; and we do 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 the letters of reference marked thereon, which form a part of this specification.

Our invention has relation to certain new and useful improvements in lamps adapted for the purpose of street-illumination; and it consists of the parts and details of construction, as hereinafter more fully pointed out in the drawings, described and claimed in the specification.

The general object of the invention consists in providing a street-illuminating lamp with means for the purpose of permitting of the ready insertion or removal of the glass from within the lamp-frame, and at the same time to provide for the ready access thereto for cleaning purposes; and the invention further consists in providing means whereby adjustability may be given to the glass, and which at the same time will allow for the insertion of glass-varying in thickness without causing disarrangement of the various parts of the lamp-frame.

Referring to the drawings forming a part of this application, Figure 1 is a perspective view of a street-lamp embodying our improvements; Fig. 2, a longitudinal cross-section taken through line *x x*, Fig. 1. Fig. 3 is a detail view showing the top plate of our improved lamp. Fig. 4 is a similar view showing the base-plate; Fig. 5, a perspective view showing our improved lamp with the glass removed therefrom. Fig. 6 is a detail view showing the glass-retaining clamp, and Fig. 7 a sectional view showing one of the lower extending arms with the angular grooves formed therein.

Similar letters of reference are used to designate corresponding parts throughout the entire specification and drawings.

The letter A indicates the lamp proper, the top thereof consisting of the rectangular open frame A', and from said rectangular frame, at right angles thereto, project the arms *b' b'*. These arms terminate in angular ends, and have secured thereto, by being welded or otherwise, the enlarged end pieces, which pieces are cut away, so as to form angular slots or grooves *d*, within which the ends of the glass are retained.

The base of our improved lamp consists of the circular apertured plate B, from which laterally project the arms *c c* to a distance slightly beyond the extension of the upper arms *b' b'*. Surrounding the circular apertured plate B is the rectangular frame B', said frame corresponding with the upper rectangular open frame A'. If desired, the circular plate, projecting arms, and rectangular frame may be composed of several pieces riveted together; but by preference we stamp the same from one piece of metal. We also prefer to construct the upper open rectangular frame and projecting arms from the same piece of metal; but these may be constructed, if so desired, of two or more parts united together.

The circular plate B is provided with the apertures *n n' n*, and to the under side thereof is secured the metallic disk B², said disk being provided with apertures to correspond with those formed in the circular base-plate B'. The disk B² is provided with the centrally-downward female threaded extension *m*. To this extension is secured the screw-threaded end of the pipe *o*. By this construction we are enabled, if so desired, to adapt the frame so as to be readily connected to the ordinary street-lamp; but we prefer to employ our improved lamp in connection with electric lights, as shown in Fig. 1 of the drawings.

The top and base plates of the frame are held together by means of the upright metallic rods C, which pass through holes formed in the projecting arms *b'* and *c* of said plates,

and have heads riveted thereon. Of course, instead of having the rods held in position by means of heads riveted thereon, the projecting ends of said rods may be made screw-threaded, so as to receive nuts, thereby making the same removable at will. The arms *c* of the lower plate project somewhat beyond the arms *b' b'* of the upper plate and have formed therein, near the outer ends thereof, the angular groove *d*, for the purpose herein-after more fully shown.

We have shown the four angles of the rectangular frame of the top and bottom as being provided with lateral projections *e' e'*, and said projections as being provided with screw-threaded holes *e e e e*, within which work the thumb-screws *f' f*.

F represents the glass-retaining clamps secured to the angles of the rectangular frames. Said clamps are provided with the elongated opening *g*, which allows of adjustability being given to the same. As will be readily understood, the thumb-screws *f' f* pass through the elongated slots of the clamps *F*, and thence into the screw-threaded holes formed in the angles of the rectangular frames, and the consequent tightening or loosening of the same will necessarily lower or raise the clamping-plates, and at the same time when loosened will permit of the forward or backward movement of said plates, owing to the longitudinal play given thereto by reason of the elongated opening *g*. When it is desired to insert glass within the lamp-frame, the thumb-screws *f* are loosened, so as to raise the clamping-plates *F'*. The lower edge of the glass is then placed within the angular grooves *d*, formed in the projecting arms of the base-plate, and the same is held in position therein by means of the lower clamping-plates *F*, which are tightened sufficiently for this purpose by means of the thumb-screws *f'*. The clamp *F'* is then tightened by the thumb-screw *f* until the same has been brought to bear closely against the upper edge of the glass, thereby securely holding the same in an adjusted position within the frame. The removal of the glass is accomplished by simply releasing the upper clamp and then lifting the same from within the angular grooves and lower retaining-clamp. By making the upper retaining-clamp of lighter material than the lower ones, the glass may be removed or inserted without the necessity of unloosening the same, but by merely turning upward the overlapping-flange *f'*. By forming the clamping or retaining plates with elongated openings we are enabled to provide for the insertion of glass varying in thickness.

It is obvious that by constructing lamps in accordance with the above description one is obtained which will be more simple in its construction and more durable than any device of a similar kind heretofore known

to us and which at the same time will possess all the advantages of such as are now in common use, and which will permit of the ready insertion or removal of the glass when the same has become broken, or it is desired to clean the same from within the frame without the necessity of removing the lamp, and which will consume the least amount of time and with less trouble than can be accomplished by the ordinary lamp.

We are aware that many minor changes may be made in the details of construction herein shown without departing from the nature and scope of our invention.

Having thus fully described our invention, what we claim as new, and desire to secure protection in by Letters Patent of the United States, is—

1. The combination, with the frame of a lamp, of the laterally-projecting base-arms formed or provided with angular grooves, the glass, the glass-retaining clamps provided with elongated openings, and the thumb-screws for giving adjustability to the retaining-clamps, substantially as herein shown, and for the purpose set forth.

2. The combination, in a lamp, of the rectangular top and bottom plates, said plates being provided at the angles thereof with screw-threaded holes, the thumb-screws working in said holes, the slotted retaining-clamps, the projecting-arms, and the rods for securing and holding the top and bottom plates in position, substantially as herein shown and described.

3. In a lamp, the combination of the open rectangular base-piece formed with central perforated disk, said disk provided with radiating arms, the latter being provided or formed with angular grooves for the insertion of the glass, slotted retaining-clamps, thumb-screws passing through screw-threaded holes formed in the angles of the rectangular base-piece and affording means for adjusting the clamps, the rectangular top piece formed or provided with laterally-extending arms, and also provided at its angles with screw-threaded holes, the slotted retaining-clamps, thumb-screws, the upright supporting-rods, and the glass, substantially as set forth.

4. The combination, with the herein-described lamp-frame, of the rectangular top or base plate, arms projecting at right angles therefrom, said arms terminating in angular ends, and the end pieces welded or otherwise secured to the under side of said arms and terminating in V-shaped enlargements, thereby forming angular grooves between the ends of the arms and said enlarged portion of the end pieces wherein the ends of the glass may be retained.

5. The combination, with the frame of a lamp, of the upper open rectangular plate or frame, arms projecting at right angles from said plate, lower metallic rectangular base-

plate, arms projecting at right angles there-
from and terminating in V-shaped enlarge-
ments, said enlarged portion being cut away
so as to form right-angular grooves for the
5 retention of the glass, and the metallic rods
for connecting said top and bottom plates,
substantially as herein shown and described.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

JACOB P. BARRINGER.

THOMAS H. JOHNSTON.

Witnesses:

S. W. FLEMING,

A. J. YOUTEN.