B. THACKARA & G. F. BLAISSE.

DROP-LIGHT CHANDELIER.

No. 180,961. Patented Aug. 8, 1876.

Fig. 1

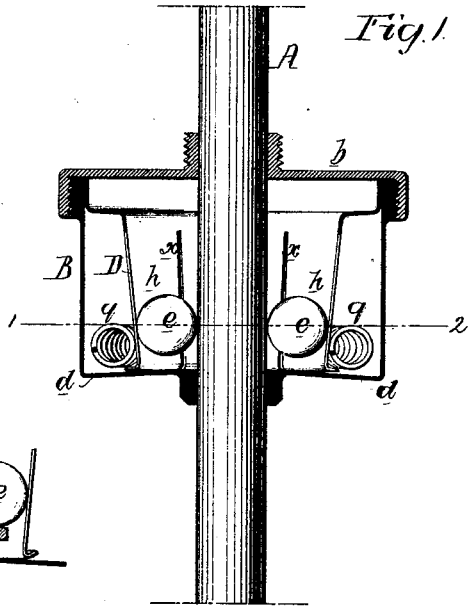


Fig. 4

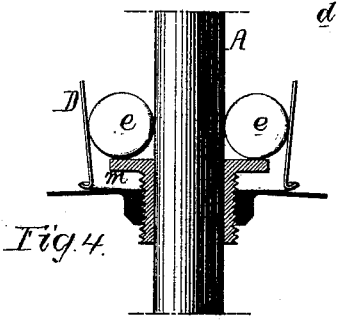


Fig. 2

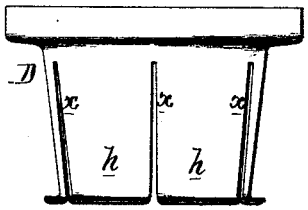
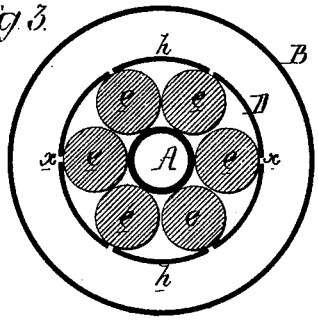


Fig. 3



Witnesses
John K. Lupez Jr.
Harry Smith

Benjamin Thackara
and
George F. Blaisse.
by their Attorneys
Howson & Sudduth

UNITED STATES PATENT OFFICE.

BENJAMIN THACKARA AND GEORGE F. BLAISSE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO SAID THACKARA, WILLIAM J. BUCK, JOHN H. SOUTHWORTH, CHARLES THACKARA, AND BYRON H. BUCK, OF SAME PLACE.

IMPROVEMENT IN DROP-LIGHT CHANDELIERS.

Specification forming part of Letters Patent No. **180,961**, dated August 8, 1876; application filed July 28, 1876.

To all whom it may concern:

Be it known that we, BENJAMIN THACKARA and GEORGE F. BLAISSE, of Philadelphia, Pennsylvania, have invented an Improvement in Drop-Light Chandeliers, of which the following is a specification:

Our invention consists of an improvement, fully described hereafter, in the drop-light chandelier for which Letters Patent No. 162,889 were granted to the assignees of George F. Blaisse, May 4, 1875.

In the accompanying drawing, Figure 1 is a vertical section of our improved drop-light retainer for chandeliers; Fig. 2, a detached portion of Fig. 1; Fig. 3, a sectional plan on the line 1 2, and Fig. 4 a modification of part of this invention.

A is the sliding drop-light tube of a chandelier, and B a casing attached to the fixed portion of the chandelier, the casing consisting in the present instance of a flanged disk, *b*, and a box, *d*, the upper edge of which is screwed to the said disk, the tube A being arranged to pass through and slide in the said casing, within which is an inner tapering casing, D, the space between the latter and the sliding tube A forming an annular receptacle for the reception of a number of balls, *e*.

A tapering casing or cup containing balls is described in the above-mentioned Patent No. 162,889; but it has been found in practice that the spheres operate with better effect as a means of imparting friction to the sliding tube when the casing D is made to yield laterally to a limited extent; hence, we sever or slot the casing, as shown at *x*, so that the portions *h* between the slots are converted into a number of inclined springs—six in the present instance.

When the sliding tube with its drop-light attachment is raised, the balls will also rise to a limited extent, and will present no obstacle to the continued free upward movement of the tube; but on releasing the latter, its weight, added to that of the burners and other attachments which it carries, will cause the balls to be jammed between the springs or yielding portions *h* of the casing D and the tube A, and this causes sufficient friction on the tube to sustain it in any position to which it may be adjusted. This friction, however, is not sufficient to prevent the tube from being easily pulled down, on doing which the balls will be arrested in their descent by the bottom of the casing B, and will cease to distend the inner casing, the power of which to impart friction will consequently cease.

Instead of the balls bearing on the bottom of the casing B when the sliding tube A is pulled down, they may bear upon an adjustable base, consisting of a flange, *m*, forming part of a tubular screw, the thread of which is adapted to a threaded opening in the base B. By raising this adjustable base the descent of the balls on pulling down the tube A will be so restricted that the friction on the tube will be diminished, the friction being increased when the adjustable base is lowered. (See Fig. 4.)

In order to increase the rigidity of the springs *h* of the inner casing D, I surround the same with a spiral spring, *q*, which rests on a flange or lips at the lower end of said casing.

We claim as our invention—

1. The combination, in a drop-light chandelier, of a sliding tube, A, and balls *e e*, with inclined springs *h*, and a base on which the balls can bear, all substantially as set forth.

2. The combination of the tapering slotted casing D and spring *q*, surrounding the same, with the balls *e e* and sliding tube A.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

BENJAMIN THACKARA.
GEORGE F. BLAISSE.

Witnesses:
JOHN K. RUPERTUS,
HARRY SMITH.