C. DEAVS.

Center Drop-Light Gasaliers.

No. 150,837. Patented May 12, 1874.

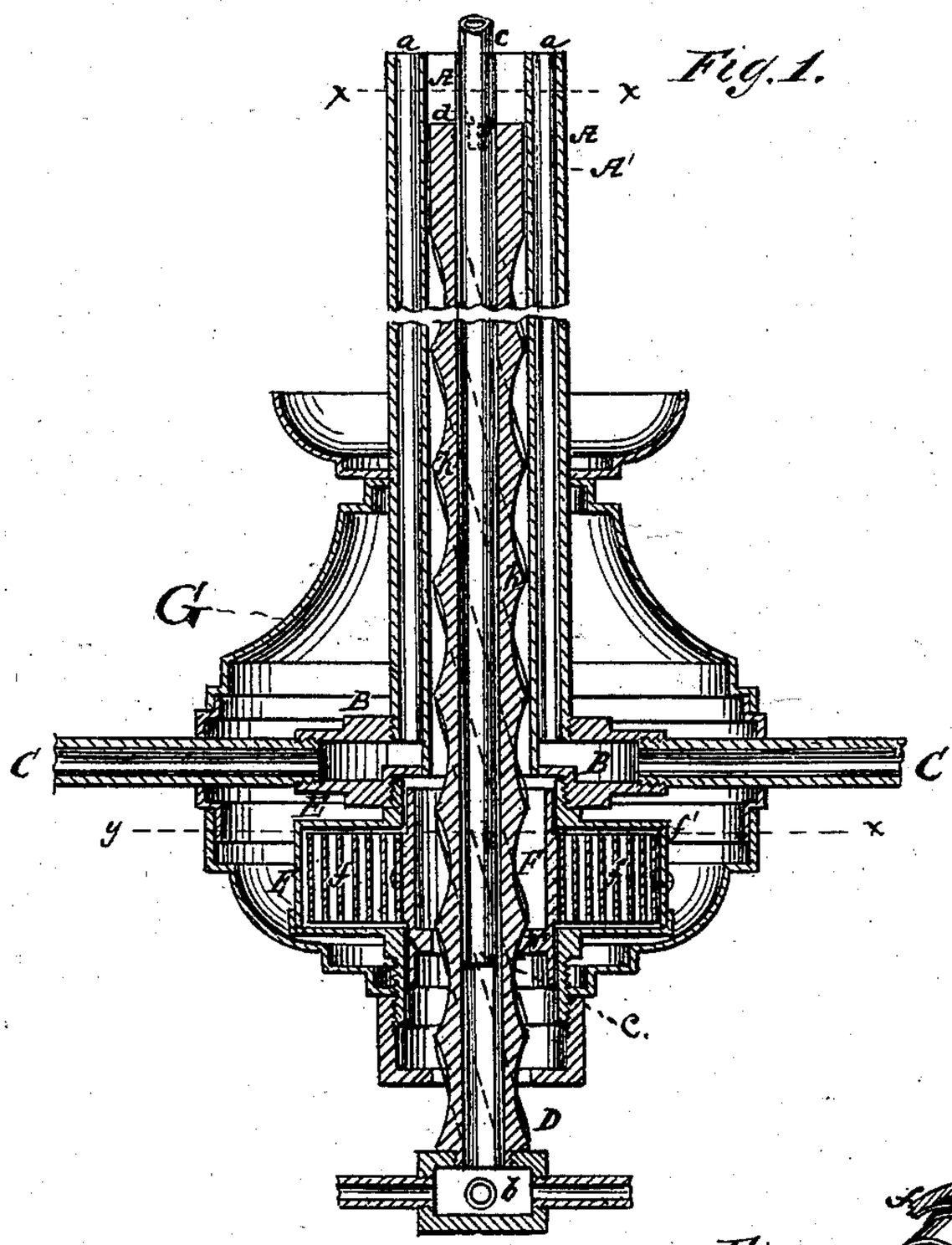


Fig. 1.

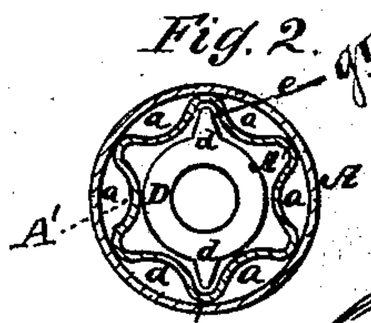


Fig. 2.

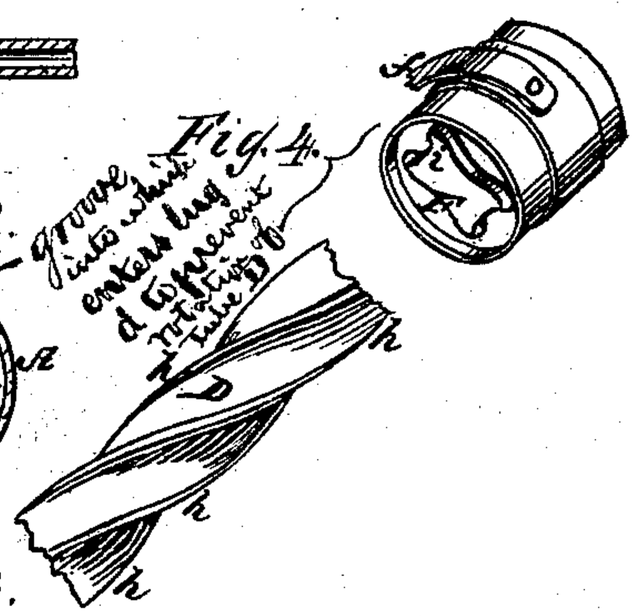
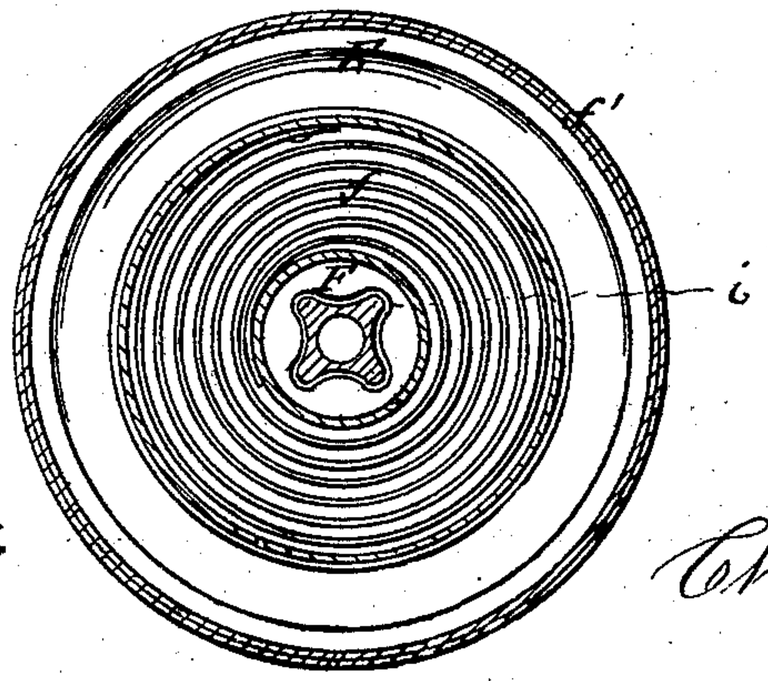


Fig. 3.

Fig. 4.



Witnesses.
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CHARLES DEAVS, OF NEW YORK, N. Y.

IMPROVEMENT IN CENTER DROP-L'GHT GASALIERS.

Specification forming part of Letters Patent No. **150,837**, dated May 12, 1874; application filed May 1, 1874.

To all whom it may concern:

Be it known that I, CHARLES DEAVS, of the city of New York, in the county and State of New York, have invented a new and useful Improvement in Center Drop-Light Gasaliers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification.

This invention relates more particularly to an improvement in that class of gas-chandeliers which are termed center-slide gasaliers; and it consists in the combination, with the main stem and a spring-drum, the latter provided with a hollow or tubular post, for winding up its spring, of a vertically-sliding drop-tube arranged to pass through the said hollow winding-post, and provided with one or more ribs, or one or more grooves, to engage with one or more recesses in the said post, or with one or more pins or projections on the said post, as the case may be, whereby the said sliding tube, which is a drop-light duct, operates like a worm when drawn down or pushed up, and effects the winding up and permits the unwinding of the spring in a stationary spring-drum, thereby producing a compact, durable, and efficient sustaining mechanism for a center-slide drop-light gasalier.

In the accompanying drawing, Figure 1 is a longitudinal central section of a center-slide gasalier embodying my present improvement. Fig. 2 is a transverse section of the same, taken on the plane of the line *x x*, Fig. 1. Fig. 3 is a transverse section, taken on the plane of the line *y y*, Fig. 1; and Fig. 4 is an external view of a portion of the drop-light tube and hollow winding-post.

A A′ designates the main stem of the gasalier, consisting of an outer tube, A, and an inner tube, A′. B is the main distributer, secured to the lower end of the tube A in the usual manner, and receiving gas through a gasway, (one or more,) *a a*, between the tubes A A′. (See Fig. 2.) C C are the stationary branch-light ducts radiating from the said distributer. D is the drop-light tube or duct, to the lower end of which a "harp" or other-shaped drop-light is attached. It is customary to provide the lower end of this drop-light tube with a small distributer, *b*, which receives gas through the tubes A′ and a stationary supply-tube, *c*, the latter being secured to the ceiling-joint, and extending down within the drop-light tube sufficiently far to open into it when the latter is drawn out or down to its greatest extent, thereby furnishing a gasway for the drop-light (through *c* and D) entirely distinct from that (*a a*) which supplies the stationary branch lights. The tube A′ is, in the present instance, grooved or fluted longitudinally, (see Fig. 2,) and the upper end of the drop-light tube D is provided with wings or projections *d d*, which extend into corresponding grooves *e e*, the object being to prevent the tube D from turning or twisting or revolving when being slid up or down.

It is, of course, evident that a pin or projection (one or more) on the inside of the tube A, arranged to extend into a longitudinal groove (one or more) made in the tube D, would answer the same purpose, and be equivalents for the projections *d d* and grooves *e e*.

E is a spring-drum, composed of a convolute spring, *f*, and a case, *f′*. (See Figs. 1 and 3.) This spring-drum is placed horizontally, and is secured directly or indirectly to the main stem A A′. In the present instance it is secured to the bottom of the distributer B, as will be readily understood by reference to Fig. 1. This spring-drum is provided with a tubular or hollow winding-post, F, to which the inner end of the convolute spring *f* is attached, and around which it is wound. And through this hollow post the drop-light tube D passes; and it is necessary that these two parts—the hollow winding-post F and the sliding tube D—should be so arranged and adapted to each other that the moving of the tube D shall rotate the post F, and hence wind up, and permit the unwinding of, the spring *f*. This may be accomplished by providing the tube D with one or more spiral ribs, to engage with recesses or grooves in the post F; or by providing the tube D with one or more spiral grooves, to engage with pins or projections on the said post F.

In the drawing I have shown the tube D as provided with four ribs, *h h h h;* and I have shown the hollow winding-post F as provided with a square aperture or hole, *i*, through it. (See Figs. 3 and 4.) Hence, when the tube D, which is prevented from turning, as before stated, is

inserted through such hole, the ribs *h* will rest in the corners of the square aperture *i;* and, therefore, when the said tube D is drawn down or moved up, the post F will be revolved in the stationary drum E, and the spring F will be wound up or unwound, as the case may be.

It will thus be seen that by providing the ordinary drop-light tube of a gasalier with spiral ribs or spiral grooves, and passing it through a hollow winding-post in a spring-drum which is provided with recesses or pins, as the case may be, and so arranging the said tube as to prevent it from rotating, it will act as a worm or screw to operate the sustaining mechanism in a gasalier.

I have shown an inclosing-case, G, for containing the sustaining mechanism, as well as the distributer; and I will here remark that, when the main distributer B is arranged farther up on the main stem, the spring-drum may be attached to the end of the said main stem, as is obvious.

From the foregoing description it will be seen that I produce a compact, durable, and efficient spring-sustaining mechanism for counterbalancing the drop-light and tube in a center-slide gasalier.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a gasalier, the combination, with the spring-drum E and hollow winding-post F, the latter provided with recesses or projections, of the drop-light tube D, having spiral ribs or grooves, arranged and operating substantially as herein specified.

2. The combination of the following elements to produce an improved gasalier: A main stem, A A′, distributer B, stationary branch-light ducts C C, supply-tube *c*, spring-drum E, drop-light tube D, passing through the said spring drum, and engaging with its winding-post F, all arranged and having a mode of operation substantially as herein specified.

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