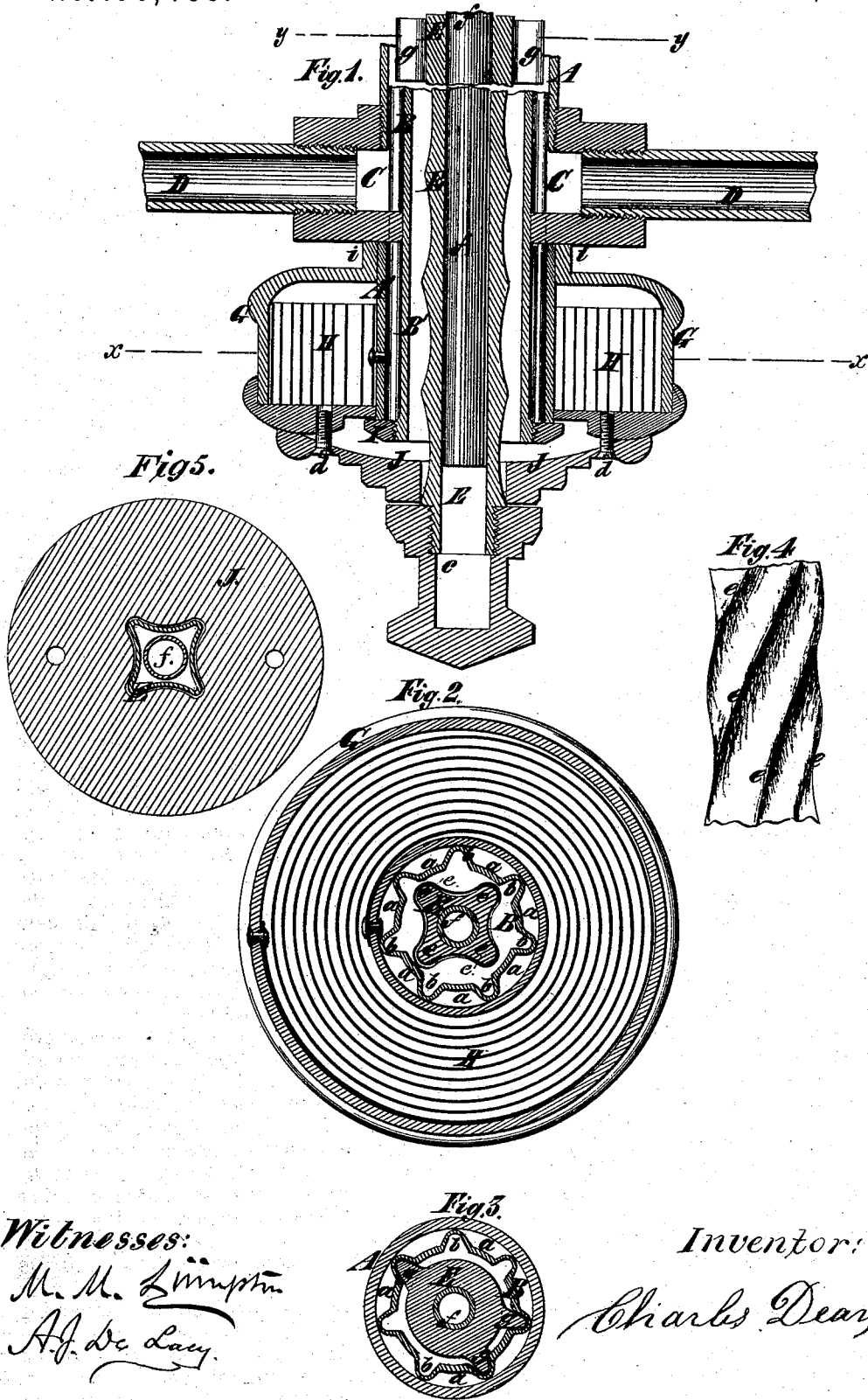


C. DEAVS.
Drop-Light Gasaliers.

No. 156,453.

Patented Nov. 3, 1874.



Witnesses:
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN DROP-LIGHT GASALIERS.

Specification forming part of Letters Patent No. **156,453**, dated November 3, 1874; application filed September 3, 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 Drop-Light Gasaliers; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms a part of this specification.

My present invention relates to an improvement in sustaining mechanism for the drop-tube of extension-gasaliers; and it more especially relates to an improvement in the particular mechanism which forms the subject-matter of United States Letters Patent No. 150,837, granted to me under date of May 12, 1874. In the patent referred to the exterior of the drop-tube was provided with spiral ribs or grooves, and said tube passed through and revolved a hollow winding-post, to which was attached one end of a convolute spring arranged in a stationary drum or box.

In my present invention I dispense with the hollow revolving winding-post, and pass the spirally grooved or ribbed drop-tube through a nut or opening in a plate affixed to the spring-drum, and hence effect the rotation of the spring-drum around a stationary axis, whereby, in many cases, I obtain better results.

In the accompanying drawing, Figure 1 is a central vertical section of the lower portion of a center-slide drop-light gasalier embodying my present improvement. Fig. 2 is a transverse section of the same, taken on the plane of the dotted line *x x*, Fig. 1. Fig. 3 is also a transverse section taken on the plane of the dotted line *y y*, Fig. 1, and illustrating the internal construction of an upper portion of the main stem of a gasalier. Fig. 4 is a side view of a portion of the drop-tube; and Fig. 5 is a horizontal section of the stationary supply-tube, the drop-tube, and the plate of the spring-drum which engages with the drop-tube.

A B designate the main stem of a gasalier, A being the outer tube, and B an inner tube, which latter tube is, in the present instance, fluted longitudinally in order to form recesses *b* for receiving lugs *g*, affixed to some suitable portion, say the upper end, of the drop-tube E, by which means the latter is prevented from

rotating when it is pushed or drawn up or down. C is the main distributor, receiving gas through the spaces *a* between the tubes A B, and D D are stationary gas-duets for supplying gas to stationary branch lights. The drop-light tube E is provided on its periphery with spiral ribs *e e*.

I have shown the said drop-light tube as receiving gas through a smaller tube, *f*, attached to the ceiling-joint in the usual manner. G is a spring-drum containing a convolute spring, H, the inner end of which spring is secured to an extension, A' B', of the main stem, and its outer end to the spring-drum G. The said extension-tube A' B' constitutes the axis around which the horizontal spring-drum revolves in alternately reverse directions. A nut, I, screwed upon the lower end of the extension-tube A' B', and a hub, *i*, formed on the upper side of the said spring-drum, and bearing against a suitable support, say the distributor C, will serve to confine the said spring-drum in its proper position. J is a plate or disk, secured to the under side of the spring-drum G in any suitable manner, say by screws *d*. The said plate J is provided with a central opening, through which passes the drop-light tube E. The opening in this plate must, of course, be so constructed relatively to the external construction of the drop-light tube E that the longitudinal movement of the latter will revolve the former.

I have shown the drop-light tube E as provided with four ribs, *e*, and the said plate J as provided with a practically square opening, into the corners of which the said ribs project, and hence a longitudinal movement of the drop-light tube must necessarily revolve the spring-drum for winding the spring, when the said tube is drawn down, so that said spring shall become a sustaining or balancing power. It of course follows that the said spring will be permitted to unwind when the said tube is pushed up.

I will here remark that, instead of attaching a separate plate, J, to the spring-drum G, the said spring-drum may be cast or otherwise formed with an opening of the required construction to engage with the drop-light tube. I will also remark that, instead of providing the drop-light tube with spiral ribs to enter

recesses in the plate J, projections, pins, or lugs may be cast with or secured to the drum G, in such manner as to enter spiral grooves formed upon the periphery of the drop-light tube, which modification would accomplish the desired result, as is obvious.

Although I have described my improved sustaining mechanism as applied to a center-slide drop-light gasalier, so called, yet it is equally well adapted to a simple extension drop-light gasalier, or one where there are no stationary branch lights.

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

1. In a drop or extension light gasalier, the combination, with the spirally ribbed or grooved

drop-light tube E, of the spring-drum G H, provided with the engaging-plate J, substantially as and for the purposes herein specified.

2. The combination of the following elements: The main stem A B, supply-tube f, distributor C, branch-light ducts D, spirally ribbed or grooved drop-light tube E, and revolving spring-drum G H J, arranged and having a mode of operation substantially as herein specified.

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Witnesses:

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