2 Sheets--Sheet 1.

C. DEAVS.

Drop-Light Gasaliers.

No. 150,466. Patented May 5, 1874.

Fig. 1.

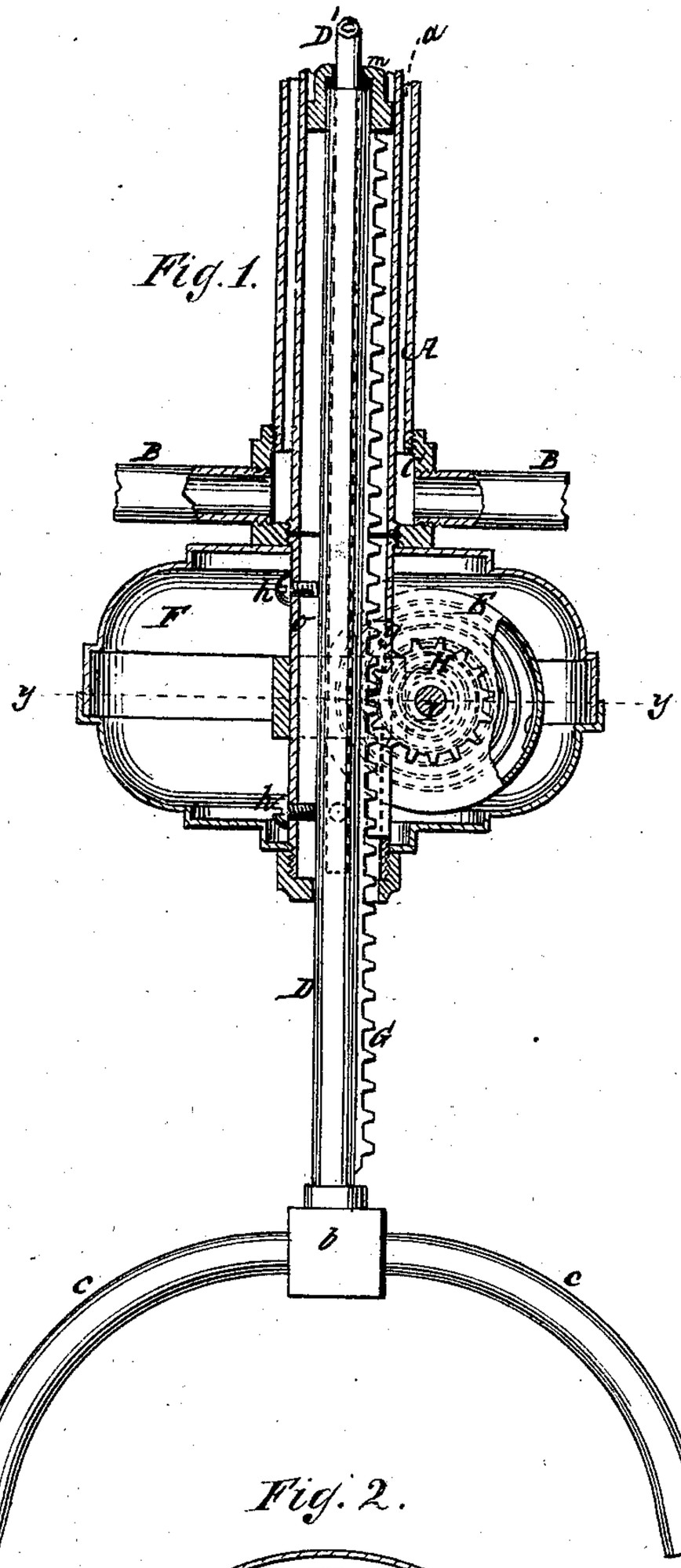
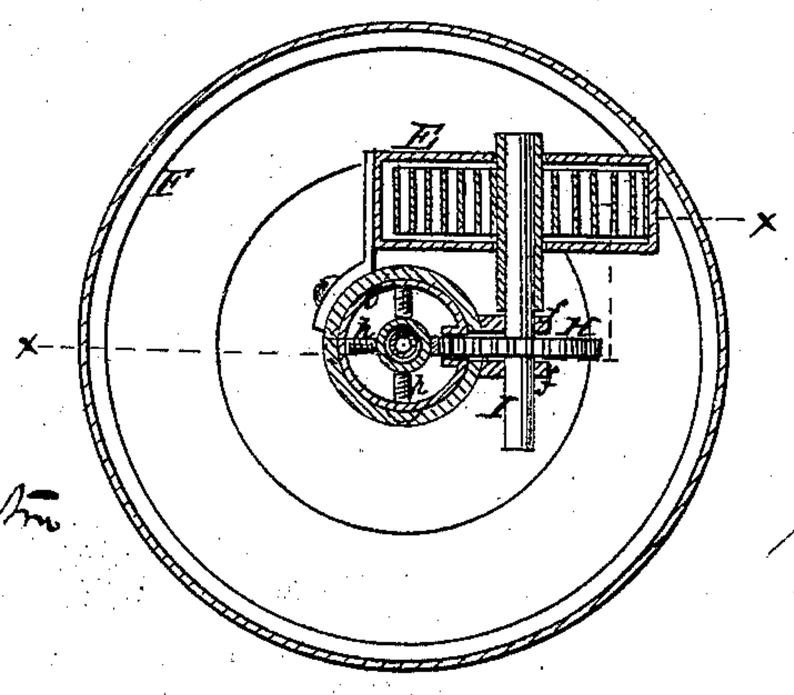


Fig. 2.



Witnesses:
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A. J. De Lacy.

Inventor:
Charles Deavs

2 Sheets--Sheet 2.

C. DEAVS.

Drop-Light Gasaliers.

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Fig. 3.

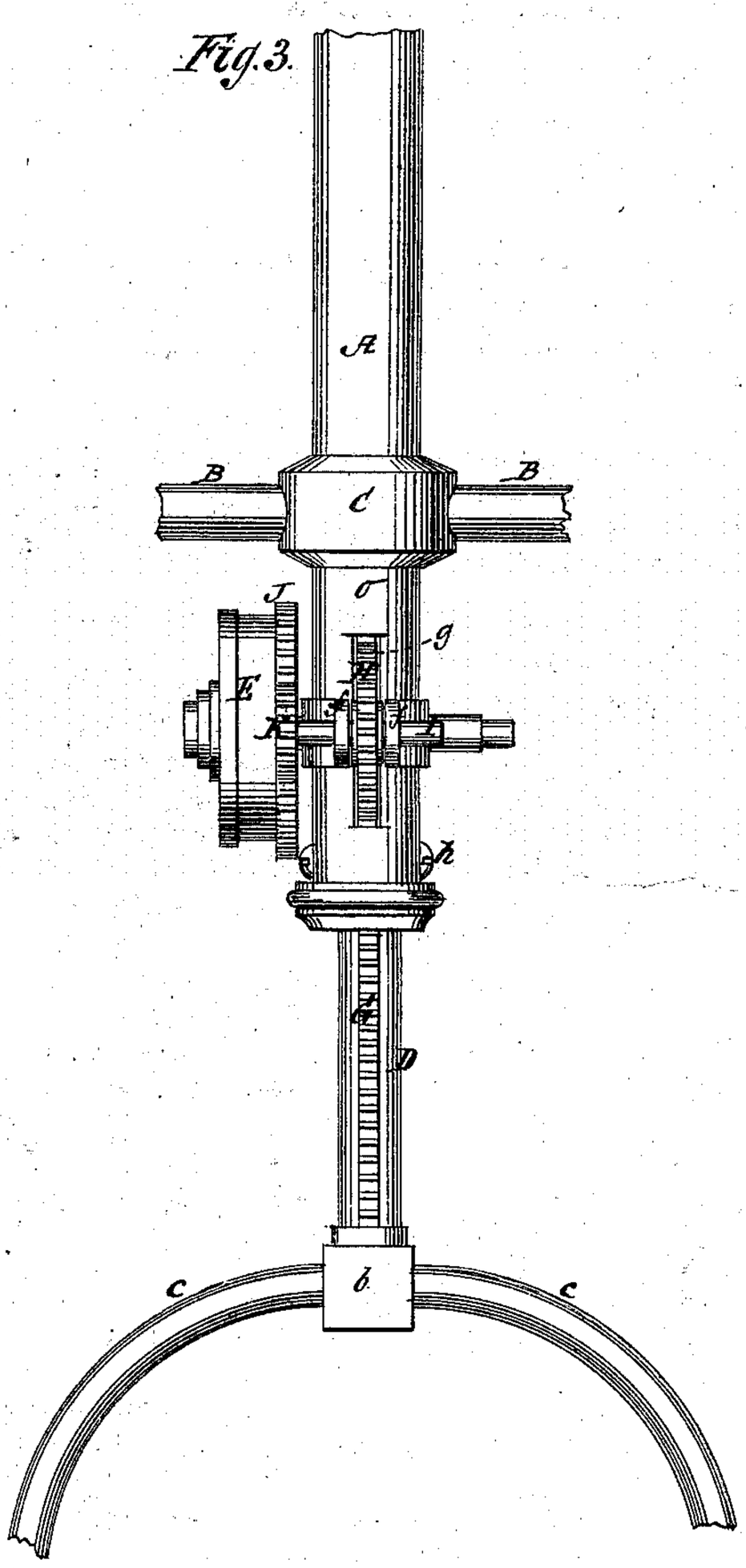
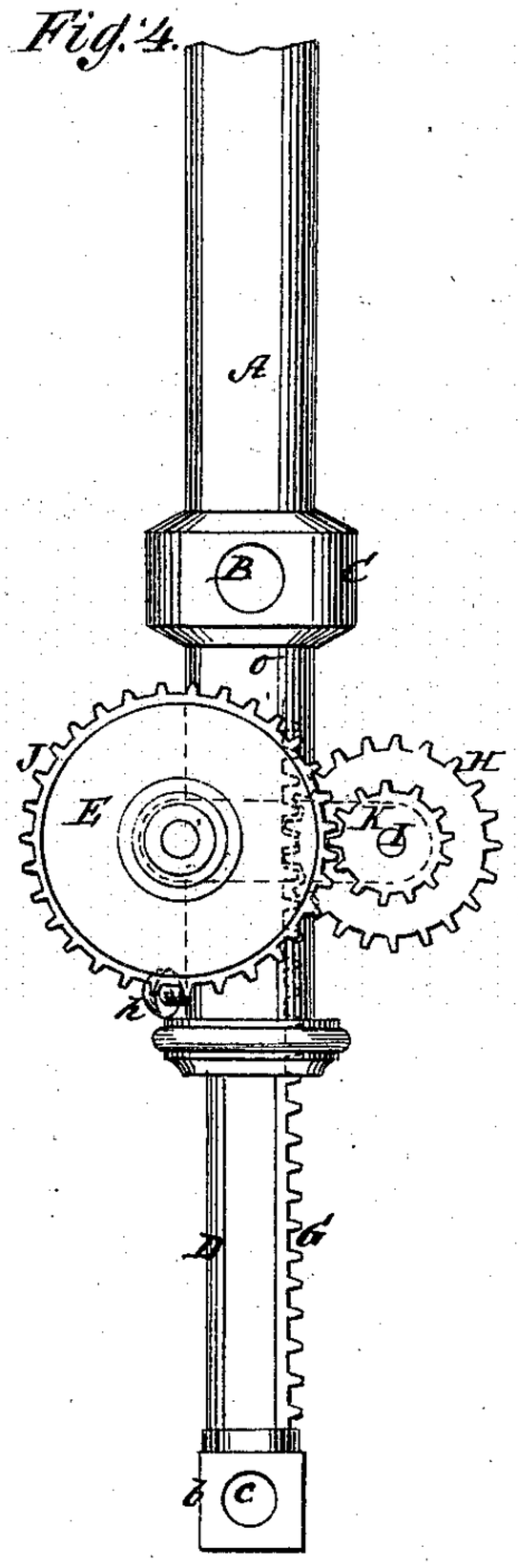


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES DEAVS, OF NEW YORK, N. Y., ASSIGNOR TO ARCHER & PANCOAST MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN DROP-LIGHT GASALIERS.

Specification forming part of Letters Patent No. **150,466**, dated May 5, 1874; application filed January 13, 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 certain new and useful Improvements in Drop-Light Gasaliers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making part of this specification.

This invention consists in the combination of the following parts to produce an improved drop-light gasalier, to wit: A main stem connected to a main distributer, the latter provided with stationary branch-light ducts; a drop-light tube arranged to slide up and down within the said main stem, and receiving gas from the ceiling-joint through a stationary supply-pipe, in such manner as to constitute a gas-way for the drop-light independent and separate from that for supplying the said main distributer; a toothed rack arranged longitudinally upon the said drop-light tube; a cog-wheel arranged to engage the teeth of the said rack; a spring-drum containing a spring, which is wound up by the act of drawing down the said drop-light tube, and an inclosing-case for covering the said spring-drum and cog-wheel, all arranged and having a mode of operation as will be hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a longitudinal vertical section of a center-slide drop-light gasalier, taken on the line *x x*, Fig. 2, and showing my improvements applied thereto. Fig. 2 is a cross-section of the same, taken on the plane of the line *y y*, Fig. 1. Fig. 3 is a front elevation of the same, showing a modification in the arrangement of the parts; and Fig. 4 is a side view of the arrangement of parts shown in Fig. 3.

A designates the main stem of the gasalier. This stem is shown as provided with an annular gas-duct, *a*, for supplying gas to the stationary lights through the branch ducts B. The said branch-light ducts are shown as connected to, and opening into, a distributer, C, which receives gas through the annular gas-way *a*. D is the drop-light gas-duct, and it is a tube arranged to slide up and down within the main stem A, receiving gas through a pipe, D′, and any suitable packing may be employed, as shown at *m*, for instance, in Fig. 1. This drop-light tube D is shown as provided, at its lower end, with a small distributer, *b*, to which is connected the drop-light. In this particular instance the arms *c c* of a "harp" drop-light are shown. E is a spring-barrel, mounted on an axis or arbor, which is attached or connected, in any desirable or convenient manner, directly or indirectly, to the main stem A. F is an inclosing-case attached to the main stem A. G designates a rack or series of cogs or teeth, attached to, or cast or formed with or upon, the drop-light tube, and extending along the said tube the required distance, corresponding to the distance the said tube is designed to be drawn down. H is a cog-wheel mounted on a shaft, I, and arranged to revolve in suitable bearings *f f*, attached to the main stem A, or to a collar thereon, or to a casting or extension-tube, *o*, connected thereto. This cog-wheel H is so arranged on the shaft I that its teeth will engage with the teeth of the rack G, and, in the example shown, this rack is exposed through a slot or opening, *g*, in the lower end of the main stem A, for a sufficient distance to permit of such engagement. The rotation of the shaft I is controlled by the spring-drum E. In Figs. 1 and 2 this spring-drum is stationary, and the shaft I is arranged to revolve, and hence the shaft rotates the cog-wheel H, which is secured to it. In Figs. 3 and 4 the spring-drum is caused to revolve upon a stationary arbor; and, in this instance, the drum is provided with a cog wheel or teeth J, which engage with an intermediate cog-wheel, K, secured to the shaft I.

The spring-drum, in all the figures, is shown as arranged on one side of the main stem. This is done to bring the mechanism within as small a compass as possible; but it is obvious that the spring-drum shown in Figs. 3 and 4 could be mounted on a shaft directly over the opening *g*, and so that its teeth should engage with the rack G.

In all the figures I have shown the shaft I as projecting across the stem A to the side opposite to that occupied by the spring-drum, in order to show how readily two spring-drums may be employed with heavy drop-lights for

operating the shaft carrying the cog-wheel H, which engages with the rack G.

The tube D may be provided with any suitable guides for causing its teeth to certainly engage with the cog-wheel, say by screws *h h*.

I am aware that the above-described parts of a gasalier are not new, when separately considered; and I do not, therefore, claim the combination of a spring-drum, rack, and cog-wheel as a sustaining mechanism for an extension-chandelier; nor do I claim a main stem for a center drop-light gasalier containing two independent gas-ways; but

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

The combination, in a gasalier, of the following elements: The main stem A, drop-light tube D, supply-pipe D′, rack G, spring-drum E, cog-wheel H, main distributer C, inclosing-case F, and the stationary branch-light ducts B B, the said parts being arranged and having a mode of operation substantially as herein specified.

Witnesses: CHARLES DEAVS.

M. M. LIVINGSTON,

A. J. DE LACY.