C. DEAVS.

Center Drop-Lights.

No. 145,632. Patented Dec. 16, 1873.

Fig: 1.

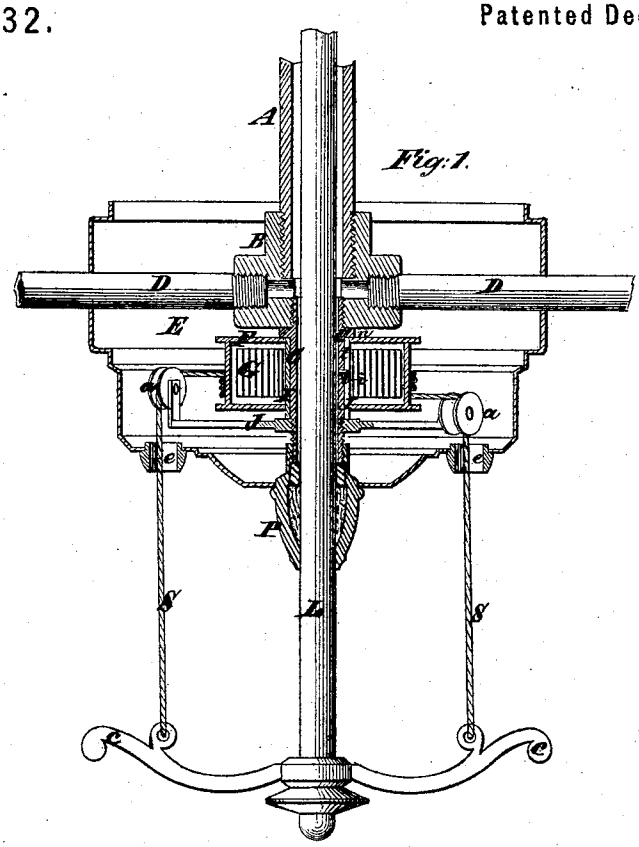
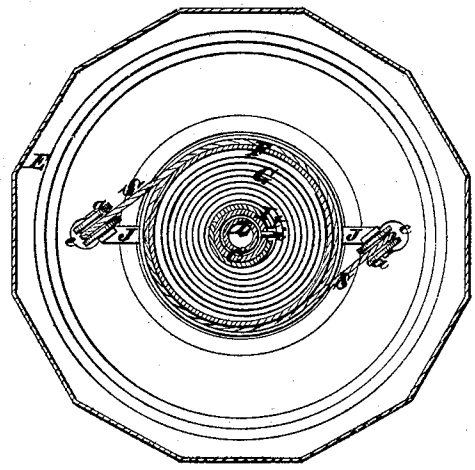


Fig: 2.



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UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN CENTER DROP-LIGHTS.

Specification forming part of Letters Patent No. **145,632**, dated December 16, 1873; application filed February 6, 1872.

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 of the same, reference being had to the accompanying drawing.

Before proceeding to state the nature of the invention which forms the subject of this application for patent, I will remark that in another application, filed simultaneously with the filing of this application, I have shown a gasalier in which there are stationary ducts for supplying gas to stationary branch lights, and a drop-tube for supplying gas to a drop-light, and the combination therewith of two spring-drums, revolving on horizontal axles or arbors projecting out at right angles to the main stem of the gasalier, on opposite sides of the same, the said drums being inclosed in a case, and each drum being provided with a cord, which is attached at one end to the harp or drop-light and at the other to its drum, whereby a concealed drop-light-sustaining power is provided, so constructed and arranged that, when the drop-light is not drawn down for use, the cords are almost entirely concealed within the said case, which concealment of the cords is a most desirable and important feature in constructing an attractive and comely-appearing gasalier.

After completing the invention above described, I found that it is very frequently desirable to use an inclosing-case of a lesser depth in a vertical direction than that required for inclosing the two vertically-arranged drums above described; and also that by arranging a single spring-drum concentrically with, and so as to rotate horizontally upon, the main stem of the gasalier, or on a sleeve surrounding it, and using guide-pulleys for changing the direction of the cords, I could obtain, in a gasalier having stationary branch lights as well as a drop-light, all of the advantages above stated, and, at the same time, lessen the cost of manufacture, and produce a still more comely-appearing and symmetrical gasalier, and one where the counterbalancing of the spring-power could be more easily and reliably regulated.

My present invention, therefore, consists in the combination of the following elements to produce a gasalier of a new construction: A main stem, provided with a distributer; one or more stationary ducts for conveying gas to stationary branch lights; a drop-tube sliding within the main stem, and receiving gas from or through the same, for supplying a drop-light attached to such tube; a spring-drum, arranged concentrically with, and so as to rotate horizontally around, the said main stem, as its primary axis; two cords or wires attached to said spring-drum and to the harp, or some suitable portion of the drop-light; and two guiding-pulleys, or equivalent devices, for diverting the said cords from a vertical to a horizontal direction; and an inclosing-case, all of which will be hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a central vertical section of a gasalier, showing my invention; and Fig. 2 is a horizontal section through the same, taken on the plane of a line drawn through the upper portion of the spring-drum.

A is the stem of the gasalier, and consists of a hollow pipe, to the lower end of which is screwed the distributer B, to which are attached the branch pipes D D. Into the bottom of this distributer a pipe, C, which forms a continuation of the stem, is secured. F is the spring-barrel, whose periphery constitutes a pulley, and is provided at the upper and lower edges with flanges. It has the convolute spring G coiled within it, one end being secured to its inner periphery, and the other to a tube, I, which passes through the center of the spring-barrel, and fits to the exterior of the pipe C. This tube is prevented from moving longitudinally on the pipe C or stem by being confined between a collar, *n*, provided on the said pipe, and the guide-pulley-supporting piece J, which is screwed onto the same; and the said tube is prevented from turning on the pipe C or stem by being provided with a longitudinal slot, *t*, in one side

for the reception of a fixed pin, *i*, secured in the said pipe C. The tube I serves as a convenient means of attaching the spring and the barrel or pulley to the stem of the gasalier; the said tube I not being connected, except by the spring G, with the spring-barrel F, and permits the latter to turn freely around it. The guide-pulley supporter J consists of a collar with two arms, the collar being screwed on the lower part of the pipe C, and up against the end of the shell I, and the two arms having the guide-pulleys *a a* pivoted to their ends. Under these wheels there are provided, in the bottom of the body or center-piece E of the gasalier, holes *e e* for the passage of cords S S. L is the extension tube or slide. It fits loosely within the pipe C, distributer B, and the stem A, and at the bottom of the pipe C is fitted with a stuffing-box, P, to prevent any escape of gas. The lower end of this extension-pipe is provided with two arms, *c c*, to which the lower ends of the cords S S are fastened. Below these arms the "harp" of the drop-light which carries the burner is attached. The cords S S are secured at their upper ends to the spring-barrel, and are wound round it in the same direction, and they pass over the guide-wheels *a a*, and through the holes *e e*, and, as has been previously mentioned, their lower ends are attached to the arms *c c* on the extension-pipe L.

As the drop-light is pulled down, the cords S S, by unwinding from the spring-barrel, revolve it, and cause the unwinding or winding up of the spring therein, by reason of its inner end being fastened to the stationary shell I, and the force of the spring, acting on the cords, very nearly balances the drop-light in any position. When the drop-light is pushed up, by the winding or unwinding of the spring it revolves the barrel, and the cords are wound upon the latter. In order that the spring may be made to exert as nearly as possible a uniform force, it is made of considerable length.

From the foregoing description, it will be seen that, in a gasalier having stationary ducts for supplying gas to stationary branch lights, one or more, and a drop-light duct for supplying gas to one or more drop-light burners, I so combine and arrange a horizontal spring-drum within an inclosing-case that the cords which sustain the drop-light are almost wholly concealed within the inclosing-case; and it will also be seen that the spring-drum is located below the distributer, and that it is stationary and concealed, whatever may be the position of the drop-light tube. This combination and arrangement of parts I believe to be entirely new, though some of the members of the combination may be found in other gasaliers.

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

The combination in a gasalier of the following elements: A horizontal spring-drum, G, guide-rollers *a a*, inclosing-case E, cords S S, main stem A, distributer B, stationary branch-light ducts D D, and drop-light duct L, substantially as herein specified.

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