J. H. SEAMAN.

Extension, or Drop-Light Gasalier.

No. 167,697. Patented Sept. 14, 1875.

Fig. 1.

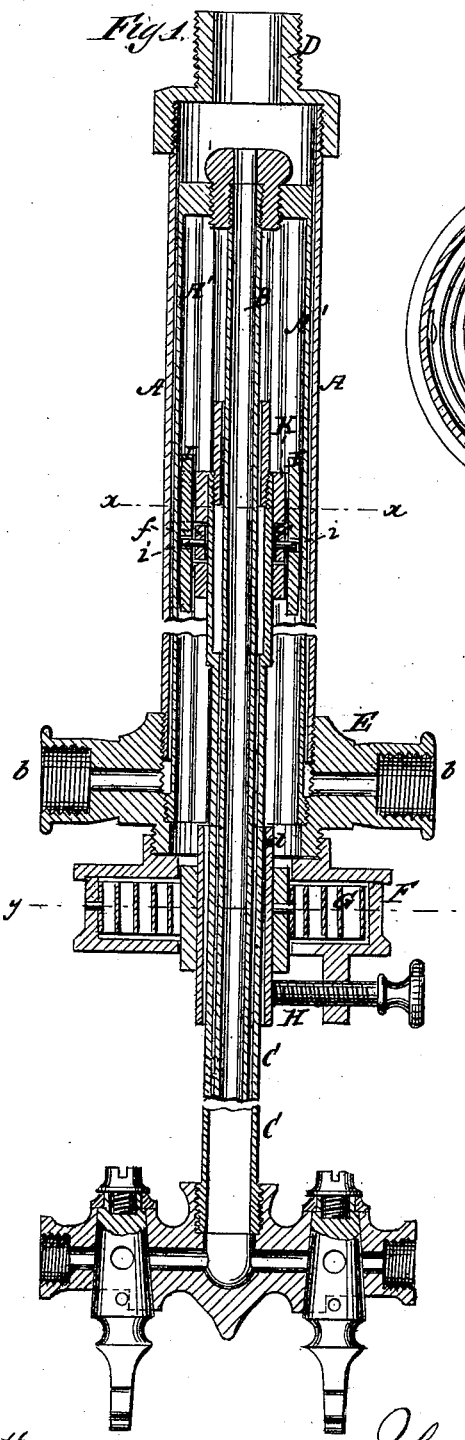


Fig. 2.

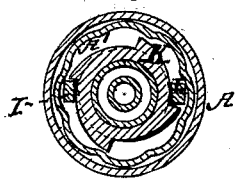
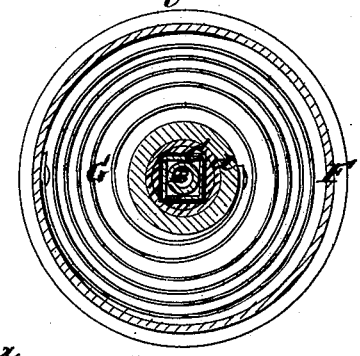


Fig. 3.



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IMPROVEMENT IN EXTENSION OR DROP-LIGHT GASALIERS.

Specification forming part of Letters Patent No. **167,697**, dated September 14, 1875; application filed August 13, 1875.

To all whom it may concern:

Be it known that I, JOHN H. SEAMAN, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Extension or 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, which forms a part of this specification.

This invention relates to a new and improved sustaining mechanism for extension or drop-light gasaliers.

The invention consists in the combination of a convolute or other suitable spring and friction-brake mechanism with the sliding drop-tube and main stem of a gasalier, whereby a torsional movement of the drop-light tube against the resistance of the spring will free the brakes and allow the drop-tube to be freely slid down and up, and a releasement of the drop-tube from the hand will permit the spring to immediately turn the tube back again and apply the brakes, and thereby hold the drop-lights securely in the desired position.

In the accompanying drawing, Figure 1 is a longitudinal central section through the main stem of a gasalier containing my present improvements. Fig. 2 is a transverse section taken on the plane of the line *x x*, Fig. 1; and Fig. 3 is a similar section on the plane of the line *y y*, Fig. 1.

A designates an outer, and A′ an inner, tube, forming, in the present instance, the man stem of the gasalier, a space being provided between the two tubes to serve as an independent gasway to convey gas to the main distributer in the usual way. B is a stationary tube, pendent from the ceiling stiff-joint or distributer D, and C the sliding drop-light or extension tube. The tube C slides upon the tube B, and is packed in the usual manner. E is the main distributer, from which radiate the gas-ducts *b* of branch or stationary lights. F designate a box containing a convolute spring, G, one end of which spring is attached to the box and the other to a short tube, *d*, arranged centrally within the box F, and provided with suitable bearings which will permit it to be revolved. The tube *d* in the present instance is provided with a square opening through it to receive a four-sided drop-light tube, C; but I will here remark that any style of opening or any style of drop-tube which will engage with such opening so that when the tube C is turned the tube *d* will turn with it will answer; or, indeed, a pin projecting within the tube *d* so as to engage with a groove in the tube C will answer, or various other well-known means may be employed for causing the two tubes to revolve together, and at the same time permit the drop-light tube C to be slid freely up and down through the tube *d*. Attached to the spring-box F I have shown a regulating-screw, H, whose end bears against the tube *d*, and prevents the drop-tube from being turned in the wrong direction or too far in either direction. Of course a lug or other device may be used in lieu of the regulating-screw H. I I are two friction-brakes, which are pivoted to a loose collar, *f*, mounted upon the drop-light tube C, preferably at the upper end thereof. These brakes I I in the present instance are straight bars pivoted at or near their centers to said collar *f*, so that they can move outward on their pivots *i*. K is a double cam-ring, which is securely fixed upon the drop-light tube C, so that it will, when turned in one direction by the action of the spring C, press outward the brakes I I and cause them to bear against the inner surface of the tube A′. In the drawing I have shown this cam as arranged immediately above the loose collar *f*; but it may be arranged below or otherwise, so long as the desired end is accomplished. I have also shown the tube A′ as provided with longitudinal grooves, along which the brakes I I may slide as the drop-tube is moved down or up; but any other suitable means may be employed for preventing the brakes I I moving round with the cam. I will here remark that if desired the regulating-screw or its equivalent may be omitted, as the brakes I I in the grooves will prevent the drop-tube being turned too far in either direction.

The operation of my improvement is very simple, as it will be understood that a turn to the right of the drop-tube illustrated in the drawing—say, the distance of about an eighth of a revolution—will serve to bring the de-

pressed portion of the cam opposite the brakes, and thereby free them, and will also more tightly wind the spring G, at the same time permitting the drop-tube to be moved down or up by the use of one hand, and upon releasing the hold the spring throws the drop-tube and cam back again, the effect of which is to apply the friction-brakes and cause the drop-tube to remain stationary.

I will here remark that I have shown my present improvement as applied to what is technically called "a center-slide drop-light gasalier;" but it is equally well adapted for extension or drop-light gasaliers not provided with stationary arms or branch lights.

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

1. The combination, with the drop-tube and the main stem of the gasalier, of a spring to turn the drop-tube and the friction-brake, and the cam which operates the same, said friction-brakes being connected with a loose collar, substantially as and for the purpose specified.

2. The combination, with the drop-tube C and tube A′, of the friction-brakes I I and cam K, substantially as herein specified.

3. The combination, in a gasalier, of friction-brakes and a cam for operating the same, and a spring for turning the drop-tube, said spring operating independently of the friction-brakes and the cam, substantially as described.

4. The combination of a double cam and the friction-brakes with the drop-light tube C and its spring, substantially as described, whereby, when the drop-light tube C is turned in one direction by the spring, the brakes will bear upon the inner surface of the tube A, as set forth.

JOHN H. SEAMAN.

Witnesses:
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