2 Sheets—Sheet 1.

C. Y. TAYLOR.

GAS-FIXTURES.

No. 181,496. Patented Aug. 22, 1876.

Fig. 1.

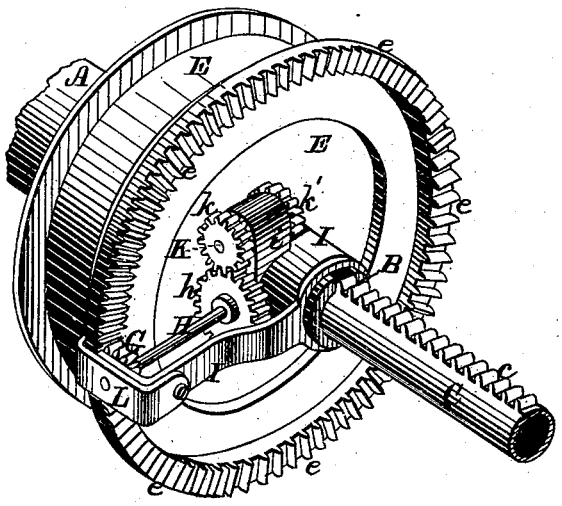
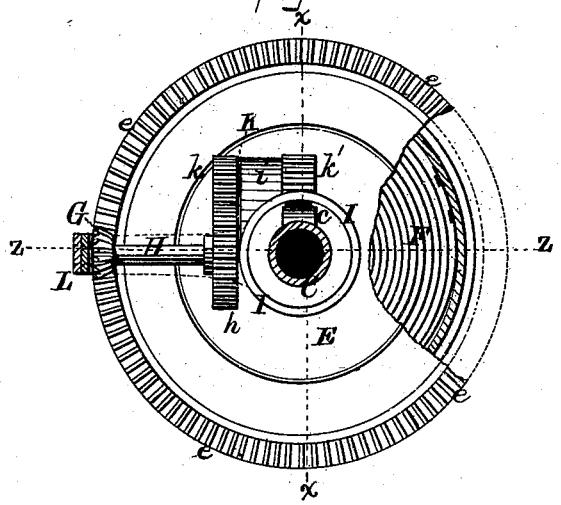


Fig. 2.



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2 Sheets—Sheet 2.

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Fig. 3.

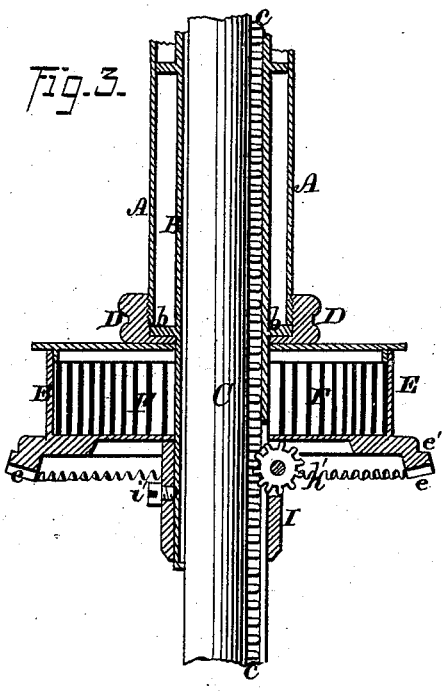
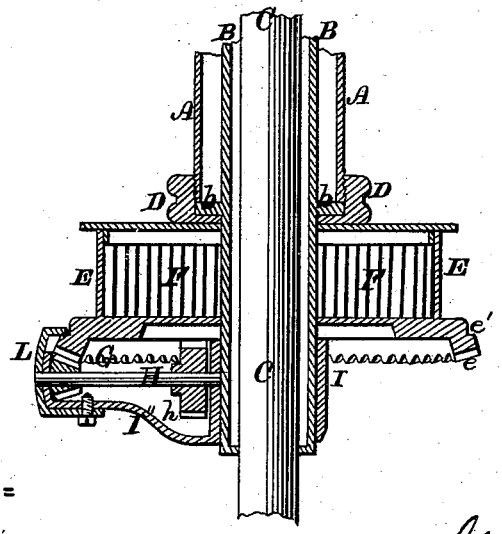


Fig. 4.



WITNESSES:

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Pindle and Lachie attys

UNITED STATES PATENT OFFICE.

CHARLES Y. TAYLOR, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN GAS-FIXTURES.

Specification forming part of Letters Patent No. **181,496**, dated August 22, 1876; application filed July 31, 1876.

To all whom it may concern:

Be it known that I, CHARLES Y. TAYLOR, of Brooklyn, in the county of Kings and in the State of New York, have invented certain new and useful Improvements in Gas-Fixtures; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my improved apparatus detached from a chandelier. Fig. 2 is a plan view of the lower side of the same; and Figs. 3 and 4 are vertical central sections upon lines *x x* and *z z*, respectively, of Fig. 2.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to insure the vertical position of the sliding tube of the drop-light of a chandelier, and to render the brake-friction upon the same steady and uniform; to which end it consists in the peculiar construction and combination of parts, substantially as and for the purpose hereinafter set forth.

In the annexed drawings, A represents the main or supply pipe of a chandelier, within which is placed a second pipe, B, that is somewhat smaller than the first, and receives and contains the tube C of the drop-light, said tube being arranged to slide longitudinally within said pipe B, and the usual provisions being made for forming a gas-tight joint at its upper end. Near the lower end of the pipe B is rigidly attached a collar, *b*, that corresponds in size with the transverse area of the pipe A, and below said collar is fitted loosely a coupling, D, which encircles said pipe B and collar *b*, and, extending upward, is threaded interiorly, so as to engage with and embrace the lower threaded end of said pipe A, and draw the same closely down upon the upper side of said collar. A flexible gasket, placed between the end of the pipe A and the upper side of the collar *b*, will enable a gas-tight joint to be formed at such point. Fitted loosely upon the pipe B, below the collar *b*, is a spring-barrel, E, of the form usually employed in watches, within which is placed a coiled spring, F, that at its inner end is attached to or upon the periphery of said pipe, while at its outer end said spring is connected with the inner periphery of said barrel, all in the usual manner. Upon the lower side, at the outer edge of the barrel E, are provided gear-teeth *e*, which mesh with and impart motion to a pinion, G, that is secured upon one end of a shaft, H, and to said shaft that is journaled at one end within a sleeve, I, which is secured upon and surrounds the lower end of the pipe B, and at its opposite outer end within a bearing, I′, that extends radially outward, and then vertically upward from said sleeve. Within a bearing, *i*, attached to the side of the sleeve I, is journaled a shaft, K, which, at one end, is provided with a pinion, *k*, that meshes with and receives motion from a pinion, *h*, which is attached to the inner end of the shaft H, while upon the opposite end of said shaft K is a second pinion, *k′*, that meshes with a correspondingly-toothed rack, *c*, which is formed upon the side, and extends lengthwise of the tube C.

As thus arranged it will be seen that by drawing downward the tube C the barrel E will be rotated by the intervening mechanism, so as to coil up said spring, while by moving said tube upward said barrel will be rotated in an opposite direction, and said spring uncoiled, so that by adapting the strength of said spring to the weight of said tube and its attachments the latter will be held at any point between its upper and lower limits of motion.

To increase or diminish the resistance offered by the spring it is only necessary to loosen the set screw *i′* that confines the sleeve I in position, lower said sleeve until the pinion G is released from engagement with the teeth *e* of the barrel, after which said barrel can be rotated until the desired tension of spring is secured, and said parts then restored to their former position.

In order that the pinion G may be prevented from disengagement with the barrel-teeth *e* a clutch, L, having the shape shown in Figs. 1 and 4, is secured upon the outer end of the bearing I′, and extends upward and around a horizontal shoulder, *e′*, that is formed near the

lower end at the periphery of the barrel E. The shaft H is extended sufficiently to enable its ends to pass through said clutch.

The device thus constructed is simple in construction, easy of operation, and can be readily applied to any chandelier without alteration of parts.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

The barrel E, provided with the gear-teeth *e*, the spring F, the pinions G, *h*, *k*, and *k'*, sleeve I I', provided with the bearing *i*, and the shafts H and K, constructed as shown, and combined with each other, the pipe B, and the tube C, having the longitudinal toothed rack *c*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of July, 1876.

CHARLES Y. TAYLOR.

Witnesses:

GEO. S. PRINDLE,

J. W. HAMILTON JOHNSON.