A. C. GOULD.

Drop-Light for Gas-Fixtures.

No. 211,468. Patented Jan. 21, 1879.

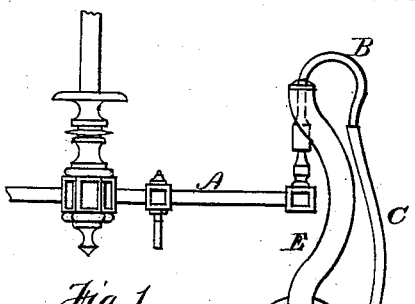


Fig. 1.

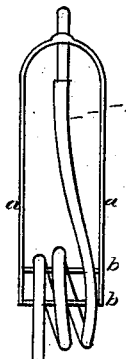


Fig. 2.

Fig. 3.

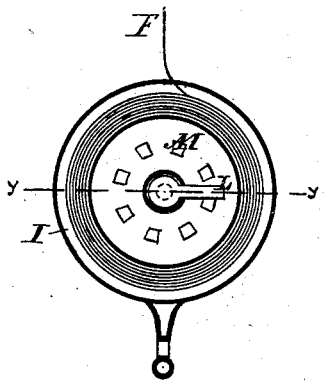
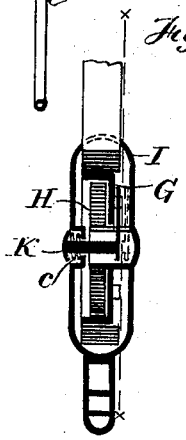
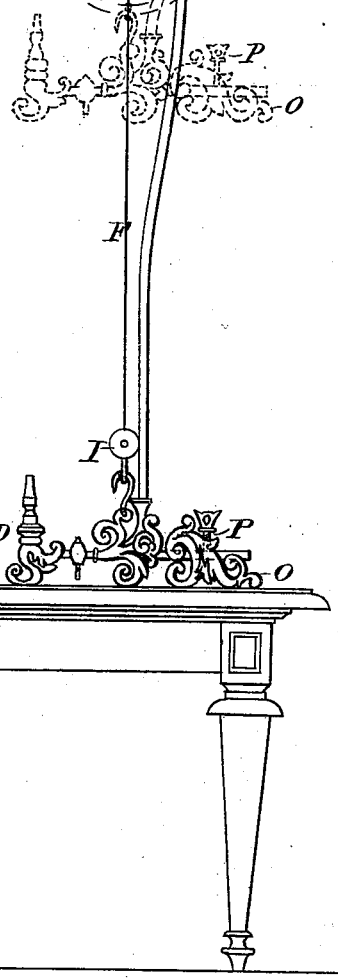


Fig. 4.





Witnesses.

Alex. H. Hayes

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UNITED STATES PATENT OFFICE.

ARTHUR C. GOULD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN DROP-LIGHTS FOR GAS-FIXTURES.

Specification forming part of Letters Patent No. **211,468**, dated January 21, 1879; application filed December 6, 1878.

To all whom it may concern:

Be it known that I, ARTHUR C. GOULD, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Drop-Lights for Gas-Fixtures, of which the following is a full, clear, and exact description, reference being had to the drawing accompanying and forming part of this specification.

The object of this invention is the production of a cheap and simple drop-light capable of being used either as a hanging light or a table-light, which, when not in use, can be easily raised out of the way without being detached from the gas-fixture, and can be raised or lowered at will to any desired height.

To this end the invention consists of the combination, with a rubber or other flexible tubing used for conveying the gas from the fixture to the drop-light, of a frame or support, which is attached to the metal pipe by which the tubing is connected to the fixture, and supports the tubing in the form of a coil around it, and is of such a form that it so controls or governs the coil of tubing as to cause the said tubing to coil up compactly and evenly when the light is raised up, and to draw into a close and compact coil when the light is lowered.

The invention also consists of the combination, with the drop-light and the gas-fixture, of an extensible and self-retracting connection, provided with a catch easily operated by the hand in pulling down or raising up the drop-light, by means of which the drop-light can be held fixed at any desired height, and which, when the catch is released, will automatically raise up the drop-light; and the invention further consists of the combination, with the drop-light, of an adjustable foot or support.

In the accompanying drawing, Figure 1 is a view, in elevation, of the drop-light and its attachments, showing the drop-light lowered down and resting upon a table, and also when raised up out of the way. Fig. 2 is an end view of the support for the coil of tubing. Fig. 3 is a sectional view of the catch for the extensible connection through the line *x x*, Fig. 4. Fig. 4 is a sectional view of the same through the line *y y*, Fig. 3.

In these several figures the same letters refer to the same parts.

A is the gas-fixture. B is the metal pipe by means of which the tubing is connected to the fixture. C is the flexible tubing, and D is the drop-light, which may be of any suitable form. E is a frame, composed of two parallel plates, *a a*, attached to each side of the tube B, extending below the fixture, separated from each other by a suitable distance, which may be about one-third of their length, and connected together at the bottom by wires *b b b*, which are so arranged as to form a semi-cylindrical frame, of a diameter sufficient to afford a firm support for the tubing, which is coiled around this frame, and which, when the drop-light is raised up, causes the coil to expand in the form of a cylinder, so that it occupies but little space. This semi-cylindrical support may be produced by a surface of metal or wood instead of by wires, and the surface may be square or triangular in section, or of any form that will cause the tubing to form itself into a circular coil around it.

F is the extensible connection between the frame and the drop-light. This may consist of a strip of metal, or of any other suitable material, which at one end is attached by a hook to the frame E, and at the other end is wound around a cylinder, G, in a case, I, attached to the drop-light by a hook and inclosing a coiled spring, H, which has a tendency to wind up the metal strip attached to the cylinder. This cylinder is inclosed in a case and turns on an axis, K, which has a longitudinal movement, and is provided with an arm, L, at right angles thereto, which arm bears against a series of projections, M, on the face of the case. The end of the axis is surrounded by a spring, *c*, which acts to cause the arm L of the axis to bear against the projections M on the face of the cylinder, and thereby hold the cylinder and prevent it from turning.

In Fig. 1 the drop-light is represented in dotted lines as raised up to its full extent and the tubing in a coil around the frame, and thereby conveniently raised out of the way.

If it is desired to let down the drop-light, this is easily effected by a slight pressure of the finger upon the end of the axis K, when the arm L will be disengaged from one of the projections M, and on pulling down the drop-light the strip of metal will be unwound from the

cylinder. On removing the pressure on the end of the axis the arm L will catch in one of the projections, and the drop-light will be held fixed at the desired height. When it is desired to elevate the drop-light, this can be effected by releasing the arm L from the projection by pressure upon the end of the axis, and the tension of the spring will then cause the winding up of the metal strip or tape F, thereby drawing up the drop-light.

I have described this device as a suitable form of an extensible and self-retracting connection; but any other device which will accomplish the same result may be used. I may sometimes dispense with this extensible connection, as the drop-light, when not too heavy, can be supported at any desired height by increasing or diminishing the diameter of the coil; and when it is desired to remove the drop-light out of the way it can be hooked to the frame or support E.

In order to accommodate the drop-light to the size of the shelves or tables upon which it may be desired to place it, I provide it with an adjustable foot or support, O, which, by means of a set-screw, P, or other suitable device, may be adjusted to any desired point.

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

1. The combination, with the flexible tube of a drop-light, of a detachable non-rotating frame, constructed substantially as set forth, so that it will support the coils of the tube arranged around it, as and for the purpose set forth.

2. The combination, with the frame which supports the coil of tubing and with the drop-light, of an extensible and self-retracting connection, substantially as and for the purpose set forth.

3. The combination, with the gas-fixture, of the frame E, composed of the parallel sides *a a*, connected by the wires *b b b*, arranged substantially as and for the purpose set forth.

4. The combination, with the frame E and drop-light, of the tape F, cylinder G, having projections M thereon, arm L, axis K, spring C, and spiral spring H, substantially as and for the purpose set forth.

5. The combination, with the drop-light, of the adjustable foot or support, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand.

ARTHUR C. GOULD.

In presence of—
ALEX. L. HAYES,
C. E. CRAM.