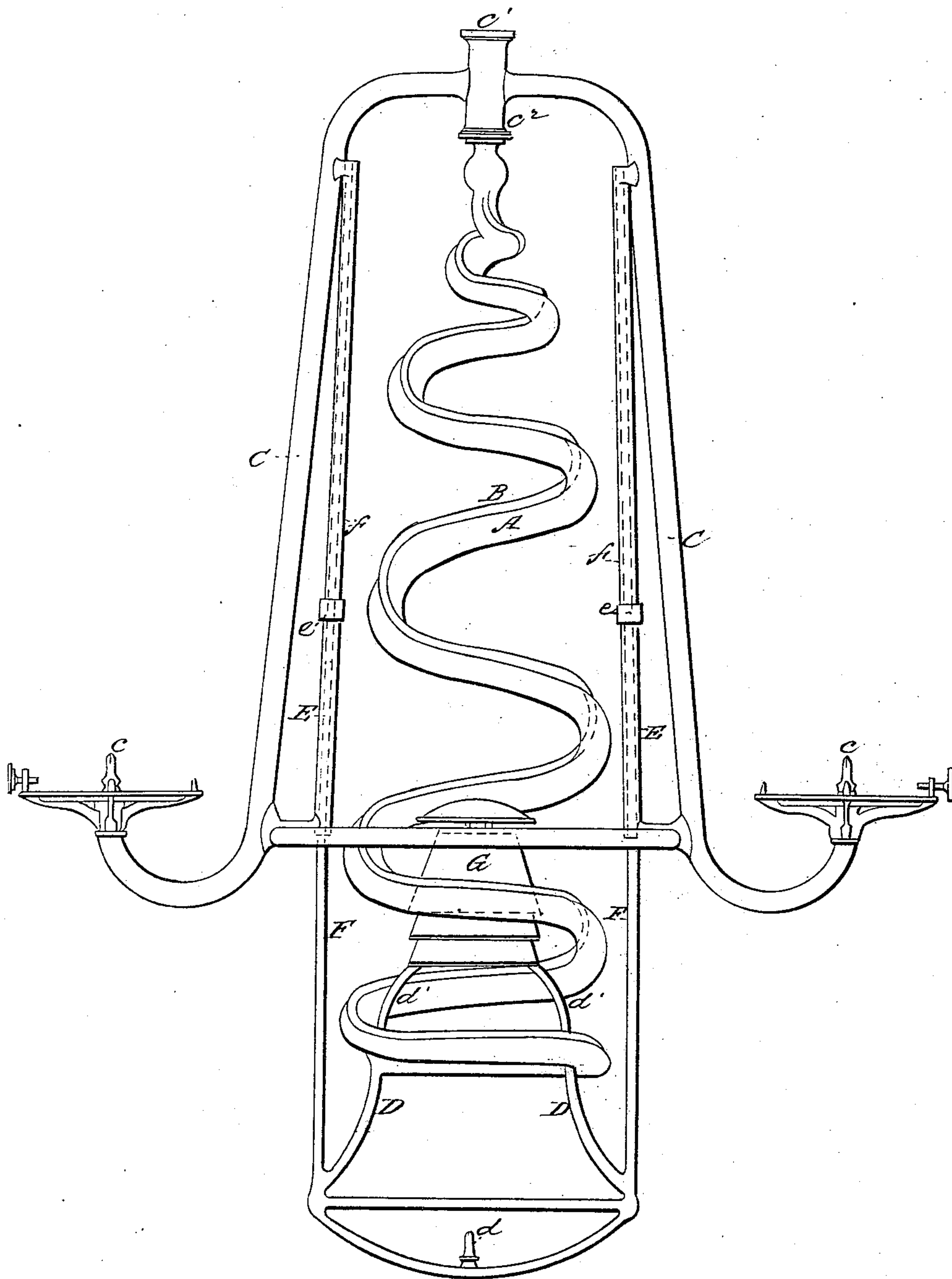


H. L. McAVOY.

Drop Light.

No. 100,171.

Patented Feb. 22, 1870.



Witnesses:

W. B. Deming
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Inventor:

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United States Patent Office.

HUGH L. McAVOY, OF BALTIMORE, MARYLAND, ASSIGNOR TO HIMSELF
AND SAMUEL AULT, JR., OF SAME PLACE.

Letters Patent No. 100,171, dated February 22, 1870; antedated February 10, 1870.

IMPROVEMENT IN EXTENSIBLE GAS-TUBES FOR CHANDELIERS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, HUGH L. McAVOY, of the city of Baltimore, in the State of Maryland, have invented a new and useful Improvement in Extensible Pipes for Gas, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which are made a part of this specification.

My invention consists, essentially, in making the pipe, or a sufficient portion of the same, of some suitable flexible material, coiling it in suitable form, and supporting this form or shape by one or more elastic wires, applied externally or internally of the pipe.

My invention further consists in the combination with said pipe of suitable guides and stops, to laterally support it and limit its extension, and to adapt it for gas chandeliers; also, in the employment of a suitable deflector, to protect it from the heat of the burner.

The drawing represents an elevation of a gas chandelier embodying my invention in a preferred form.

A represents a flexible pipe, which may be made of soft metal, rubber, or other flexible material, and which, for use, is made to assume the shape of a helix or spiral coil, as represented.

B represents a wire, of brass or other elastic substance, arranged longitudinally of the pipe A, externally on its top (as shown) or bottom, or internally in suitable manner, and suitably attached thereto. In its most contracted or normal state, the pipe, as shown, would assume the form of a flat coil, or approximate thereto, the individual coils passing one within the other, if necessary, and in this state would occupy a very small space. To extend it, it is only necessary to draw it out, as represented in the drawing, when the coils, separating and contracting in diameter, adapt a considerable elongation with but little strain, regulated necessarily by the length of the pipe and the nature of the material of which it is composed.

The elastic wire B strengthens the pipe and preserves its helical form. It may further, to any desired extent, assist or serve wholly to contract or extend the pipe, if desired. The extensible pipe A B is shown in the drawing as applied to a gas chandelier to adapt a burner to be lowered or dropped, as desired, which is the primary object or use for which the invention is intended.

C C represent stationary pipes or legs of a chandelier;

c c, the burners thereof;

c', a neck, for attachment to the main or supply-pipe; and

c'', a neck, for the attachment of the pipe A B.

d represents the "drop" burner, and D D its pipe or hollow frame.

The helical pipe A B is attached at its center and apical end to the neck c' of the pipe C C c, and by its outer coil surrounds and is united with the frame D, being connected with its interior by one or more perforations or apertures.

E E represent tubular guides, attached to the inner sides of the legs C C of the chandelier, or to other convenient part by suitable means, and serving to receive guide-rods F F, projecting upward from the frame D.

f f represent studs or pins on the guide-rods F, occupying longitudinal slots in the guide-tubes E, and serving, by coming in contact with the lower extremity of their paths, formed by rings e surrounding the guide-tube E and crossing said slots, or by other means, to limit the movement of the drop to any desired extent.

G represents a deflector, composed, preferably, of a number of inverted hollow truncated cones, supported a small distance apart, and the apex of the upper covered by a concave cap, as represented, which, being arranged within the coil of the pipe A B, over the burner d, as shown, serves to deflect the heat arising from the flame of said burner, and thus prevents injury to the material of which the pipe A is composed.

d' d' represent arms of the frame D, for the support of the deflector G.

The elastic wire B, in this and any other use of the extensible pipe, may serve to contract or extend it, or to assist in performing those operations, as before stated, or a suitably-applied weight or separate spring may be employed, to extend or contract it when released from a suitable catch, which would in that case be employed to hold it in the other position from that to which said weight or spring would have a tendency to draw or press it.

The wire is preferably, especially in the use represented, adapted to so support the pipe as that, by overcoming the friction of its guides, it may be adjusted to any desired extent, and will be held at that point by said friction.

The absence of loose joints in my improved extensible pipe, and its highly ornamental appearance, adapt it peculiarly for the primary use indicated, but it may also, obviously, be employed for other purposes, wherever a tight, neat, compact, or easily-operated extensible pipe is required.

The precise form in which the extensible pipe is coiled, may be varied, to adapt the pipe for different localities or for other purposes, if desired.

Having thus described my invention,

I claim and desire to secure by Letters Patent—

1. The flexible pipe A, coiled in suitable form, and having this form or shape supported by one or more elastic wires, B, extending longitudinally thereof, and

attached thereto, substantially as herein shown and described.

2. In combination with the extensible pipe A B, the guides E F E F, provided with the stops *e f e f*, substantially as and for the purpose set forth.

3. In combination with the extensible pipe A B and drop D *d d*, constructed and connected substan-

tially as shown, the deflector G, constructed, arranged, and employed substantially as represented and described, for the purpose set forth.

HUGH L. McAVOY.

Witnesses:

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