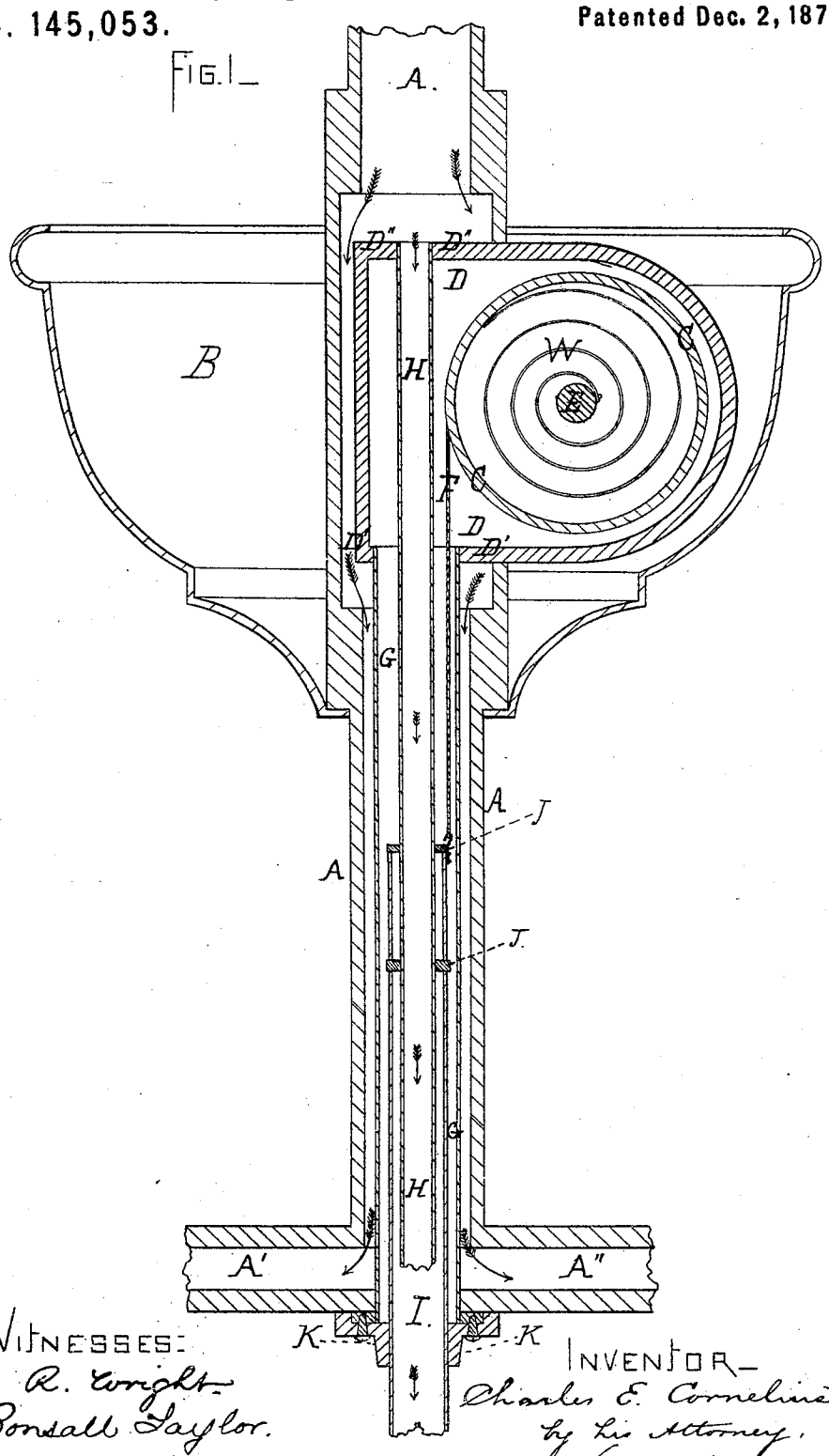
2 Sheets--Sheet 1.

C. E. CORNELIUS.

Drop-Lights for Chandeliers.

No. 145,053. Patented Dec. 2, 1873.

FIG. 1.



WITNESSES:
Wm. R. Wright.
J. Bonsall Taylor.

INVENTOR.
Charles E. Cornelius,
by his Attorney,
George Harding

2 Sheets--Sheet 2.

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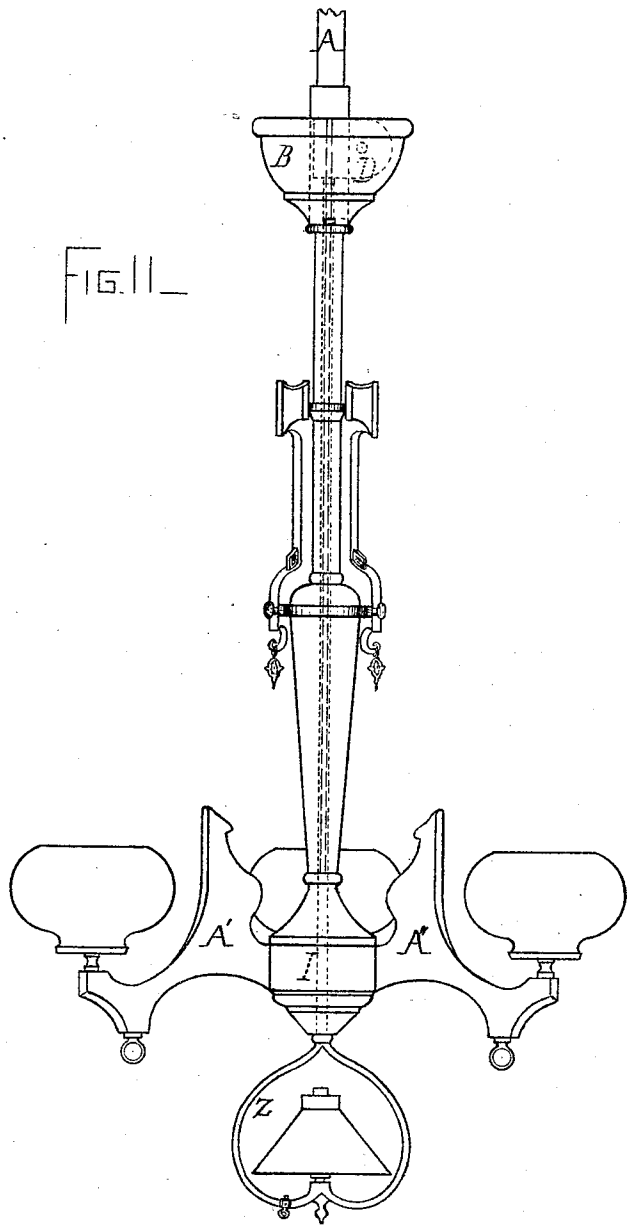

WITNESSES:

Tom. R. Wright

J. Bonsall Taylor.

INVENTOR.

Charles E. Cornelius,

by his Attorney,

George Harding.

UNITED STATES PATENT OFFICE.

CHARLES E. CORNELIUS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN DROP-LIGHTS FOR CHANDELIERS.

Specification forming part of Letters Patent No. **145,053**, dated December 2, 1873; application filed February 26, 1873.

To all whom it may concern:

Be it known that I, CHARLES E. CORNELIUS, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Drop-Lights for Chandeliers; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, which forms a part of the specification, and in which—

Figure 1 is a longitudinal section of my improvement through the center. Fig. 2 is a side view of said improvement applied to a chandelier.

The same letters refer to the same parts in both the figures.

My invention has for its object the ready lengthening or shortening of the drop-lights of chandeliers, or of the chandeliers themselves.

A is the main pipe of the chandelier; A′ and A″, distributers, carrying at their outer extremities burners and globes. B is the canopy. These are features of every chandelier.

My improvement consists in inclosing in said canopy, in such a manner as to hide it from view, and in any manner mechanically adapted to effect this purpose, a cylinder or drum of brass, C, or other material, of any convenient diameter, held in place by an inclosed spring box, D, and containing within it a compressed spiral band-spring, W, of any suitable substance, rigidly connected at one extremity to a pin, E, centrally located within the drum, but attached to the inclosed spring-box D, and at the other rigidly connected with the inside of the circumference of the drum itself. The result of this contrivance is to have inclosed in the canopy of a chandelier a drum held firmly in place, but free to rotate to a certain extent, as controlled by a spiral spring compressed within it. Around the outer surface of the drum C is wound several times a cord, F, of catgut, wire, hemp, or other suitable material, one end of which is fastened to the drum, the other attached in a manner hereinafter to be described. Inclosed within the main pipe A, and branching out and downward from the lower surface D′ of inclosed spring-box D, is a second pipe, G, terminating in the lower faces of distributers A′ A″. Said pipe G, being centered concentrically with main pipe A, and of much smaller diameter, allows the free ingress of gas downward, through the annular space between the inner surface of the main pipe A and the outer surface of the inclosed pipe G, to the distributers A′ A″, as indicated by the large arrows. Inclosed within this second pipe G, and branching downward from the upper surface D″ of the inclosed spring-box D, is a third pipe, H, concentric with the second pipe G, and of yet smaller diameter, terminating on the line of the distributers A′ A″, through which the gas flows downward from the main pipe A, passing the distributers, and coming into a fourth pipe, I, hereinafter to be described, all in the manner indicated by the small arrows. Inclosed and sliding between the second and third pipes G and H is a fourth pipe, I, of square section, to prevent its turning; or it may be of triangular, elliptical, eccentric, or any irregular or polygonal section, or having one or more ribs or corrugations on its exterior contour, so as to prevent rotation on its axis as it slides up and down, as a pipe of cylindrical section would tend to do. It is fitted gas-tight by means of a packing of leather, J, around the third pipe H, and is kept from rotation by means of a collar, K, of corresponding conformation, which is firmly attached to the lower part of the distributers A′ A″. Attached to the upper extremity of this fourth pipe is the lower end of the cord F, before mentioned; attached to its lower extremity is a drop-light branch pipe and fixture of any kind or description. The whole contrivance is so arranged as to protect the spring-box, drum, and cord from contact with the gas, and to conceal the same. The cord, passing downward in the annular space between the pipes G and H, is held in position by said pipes, while the sides of the spring-box prevent its slipping off the drum, and the irregular section of the sliding pipe prevents the string being wrapped around the third inclosed pipe H. The whole arrangement, being inclosed in the canopy and main pipe, is screened from view, and the chandelier is as well adapted for ornamentation as if it were unprovided with the contrivance.

In other arrangements now existing for this purpose, there are always ungainly and troublesome arrangements of ropes, chains, pulleys, and the like, marring the appearance greatly.

The operation of my invention is as follows: The drum and spiral spring are wound round tightly in the manufacture of the chandelier, but not to the full extent of their power of being compressed, the cord being wrapped around the drum in so doing, and the fourth pipe I, together with the drop-light fixture attached thereto, raised up to the level of the distributers A′ A″. Now, when it is desired to lower the fixture Z, all that is necessary is to grasp it firmly and exert a steady traction downward, the effect being to unwind the cord upon the drum and compress still further the spring, the fixture descending gradually to any point desired. The spring is of such elasticity as to balance the weight of the fixture at any point, and support it firmly there.

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

1. In combination with the canopy and main pipe of a chandelier, the spring-box and drum concealed within the canopy, and the cord concealed within the main pipe of the chandelier, as hereinbefore described.

2. The concentric pipes G and H, forming between them an annular space for the reception and concealment of the sliding pipe I, and of the cord which descends from the spring-box and drum located within the canopy above, and connects with the sliding pipe.

3. The sliding pipe I, in connection and combination with the cord which descends from the spring-box and drum within the canopy, and passes through the annular space formed by the concentric arrangement of the pipes G and H.

Witnesses: CHAS. E. CORNELIUS.
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