

VANCE & SMITH.
Drop Light Fixture.

No. 55,212.

Patented May 29, 1866.

FIG. 1

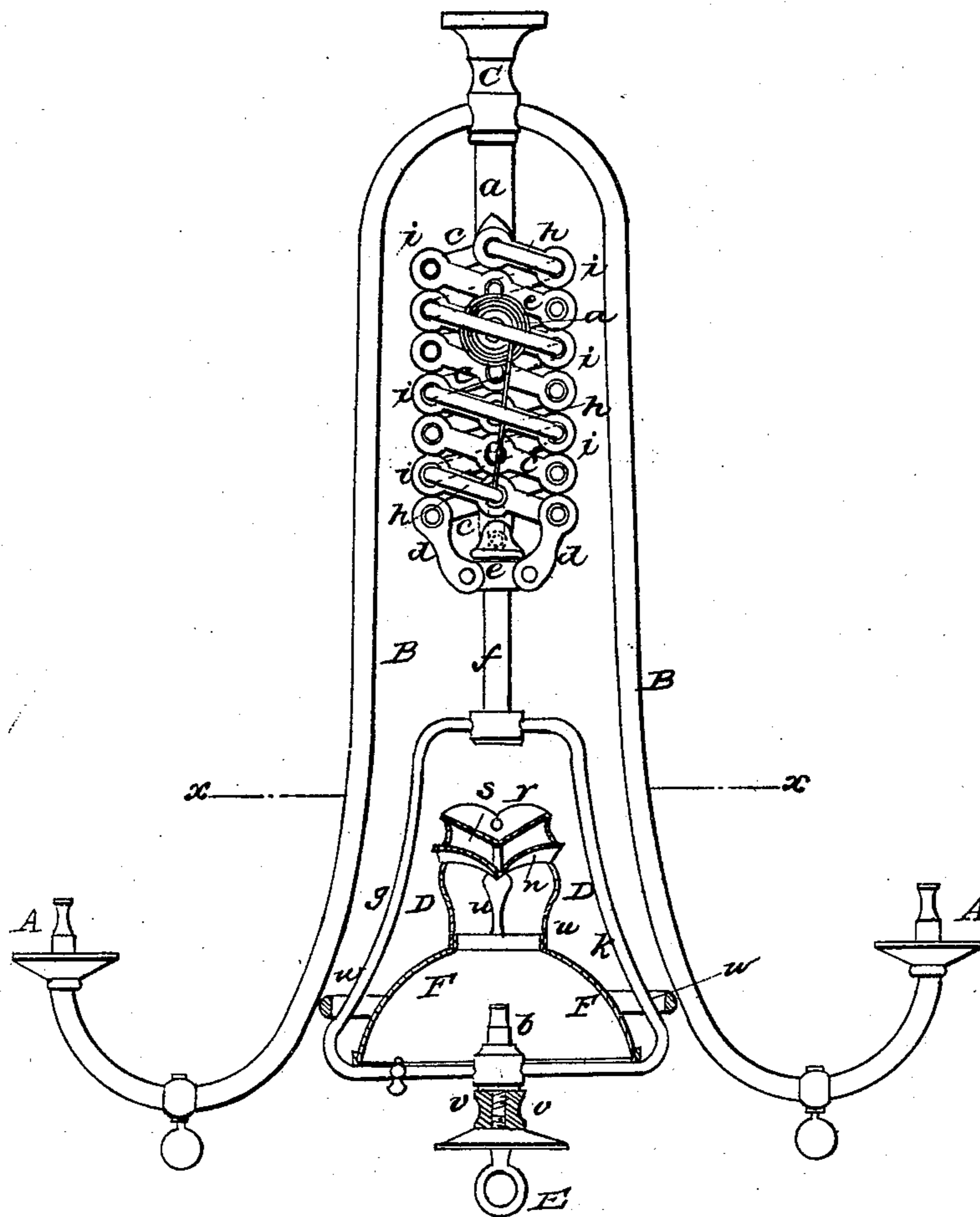
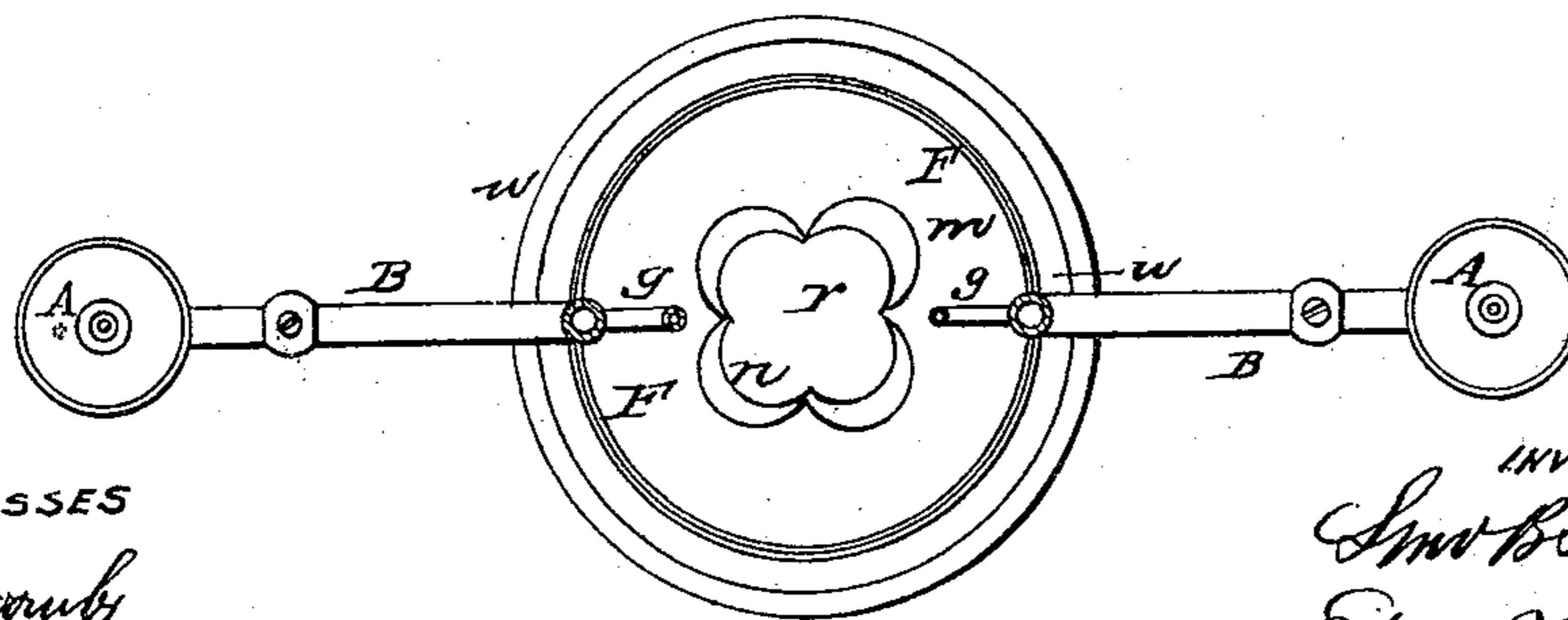


FIG. 2



WITNESSES
J. H. Coombs
L. H. Luns Jr

INVENTORS
Smoth & Vance
Edgar M. Smith

UNITED STATES PATENT OFFICE.

S. B. H. VANCE AND E. M. SMITH, OF NEW YORK, N. Y., ASSIGNORS TO
MITCHELL, VANCE & CO., OF SAME PLACE.

IMPROVED DROP-LIGHT FIXTURE.

Specification forming part of Letters Patent No. 55,212, dated May 29, 1866.

To all whom it may concern:

Be it known that we, SAMUEL B. H. VANCE and EDGAR M. SMITH, both of the city, county, and State of New York, have invented certain new and useful Improvements in Drop-Light Gas-Fixtures; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a partial central vertical section. Fig. 2 is a horizontal section taken in the line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in a novel arrangement of and mode of applying a drop-light with reference to the other burners and parts of a chandelier or gasolier, whereby the drop-light, constructed of a series of jointed tubes and links, similar to that shown in Patent No. 22,664, January 11, 1859, for holders for lamps, and constituting a series of lazy-tongs, may be very conveniently raised and lowered when desired without disturbing the other burners.

The invention also consists in a novel means of protecting the gas-conducting pipe of the drop-light from the heat of the flame thereof; and, furthermore, in a novel means of keeping the knob or handle by which the drop-light is raised and lowered in a cool condition, so that the hand may not be burned in grasping the same.

To enable others to understand the nature and construction of our invention, we will proceed to describe it with reference to the drawings.

A A represents two burners of a common stationary chandelier, the said burners being situated at the lower extremities of the curved pipes B B, which branch out and extend downward from the supply gas-pipe C, which extends downward from the ceiling in the usual way, and has its lower end projecting down into the upper part of the space between the pipes B B, as shown at *a* in Fig. 1. To this lower end of the pipe C is connected the extensible pipe which conducts the gas to the burner *b* of the drop-light D. This extensible pipe may be of any suitable construction, but, as represented in the drawings, is made and operated as follows:

c represents a number of suitable metallic links which are pivoted together in such manner as to constitute a series of lazy-tongs, the upper end of the said series being pivoted to the end *a* of the pipe C, while the lower end thereof is attached, by means of the two links *d* and the collar *e*, to the short pipe *f*, which communicates with the burner *b* by means of the curved pipe *g*, at one side thereof, the said curved pipe *g*, with a curved rod, *k*, of corresponding shape, upon the opposite side of the burner, also supporting the said burner, as shown in Fig. 1.

h represents a suitable number of short lengths of pipe which are placed alternately upon opposite sides of the series of lazy-tongs. These lengths of pipe communicate with each other by having their ends bent inward and passing through the pivots *i*, by which the alternate links of the lazy-tongs are pivoted together, as shown in Fig. 1, one end of each length *h* being fitted into the adjacent end of the length above it, and the uppermost length communicating with the end *a* of the pipe C, while the lowermost length is in communication with the pipe *f*, so that the gas may flow from the pipe C to the burner of the drop-light D, at whatever angle the lengths of the pipe *h* may be with reference to each other, the angle of the said lengths corresponding to that of the links of the lazy-tongs to which they are attached.

By pulling downward upon the drop-light, or upon its knob or handle E, the lazy-tongs are caused to expand in length, and the drop-light may be lowered to any desirable distance below the burners A A of the stationary chandelier, while by pushing the said drop-light upward it is brought between the burners A A of the chandelier, or between the pipes B B, where it occupies but little space and is kept entirely out of the way. The drop-light may be prevented from swinging when thus raised up by a ring, *w*, surrounding the same, and secured at opposite sides to the pipes B B.

y is a chain, one end of which is attached to the lower part of the lazy-tongs, while the opposite end is coiled around a fusee, *w*, which is operated by an internal counterbalance-spring in such manner as to retain the lazy-tongs in position when extended to a greater or less degree.

F is a reflector which is placed over the burner *b*, and has an opening, *m*, in its upper side, through which the air heated by the flame of the said burner and the products of combustion therefrom pass upward, and as the current of heated air, if allowed to come in contact with the pipes which convey the gas to the burner *b* of the drop-light, would heat the said pipes to a dangerous degree, it is necessary to interpose some means of protecting the pipes from the said current. To this end a guard formed of two plates, *n r*, with a space, *s*, between them, is fixed immediately over the opening *m*, and sustained in place and position by upright arms *u*, projecting upward from the deflector F, the lowermost plate, *n*, having its edge made flaring upward and outward, so as to deflect the current of hot air and gas from the burner *b* outward in all directions, thus preventing it from reaching the pipes just mentioned, while the upper plate, *r*, being situated at a little distance above the plate *n*, prevents the heat radiated from the plate *n* from heating the aforesaid pipes to any considerable extent.

E is a knob or handle attached to the burner D of the drop-light, and which is grasped by the fingers in lowering or raising the said drop-light, as hereinbefore explained; and in order to prevent the said knob from becoming heated and burning the fingers in moving the drop-light, a small block, *v*, of hard vulcanized rubber or other suitable non-conductor of heat,

is interposed between the knob and the burner, the said block *v* being screwed upon a small screw projecting downward from the under side of the burner, and the knob E being furnished with a similar screw, which is screwed into the block *v*, as shown in Fig. 1, this non-conducting block *v* effectually preventing the transmission of the heat from the burner to the knob.

Having thus described our invention, we do not claim the extension-tube consisting of a series of jointed tubes and links constructed on the principle of what is commonly known as "lazy-tongs;" but

What we claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of an adjustable drop-light, D, centrally between two or more curved pipes, B, of a stationary chandelier, operating substantially as shown and described.

2. The shield *r n*, combined and arranged in combination with the drop-light, substantially as herein set forth, for the purpose specified.

3. The non-conducting block *v*, in combination with the drop-light burner *b* and handle E, substantially as herein set forth, for the purpose specified.

SAML. B. H. VANCE.
EDGAR M. SMITH.

Witnesses:

A. LECLERC,
J. W. COOMBS.