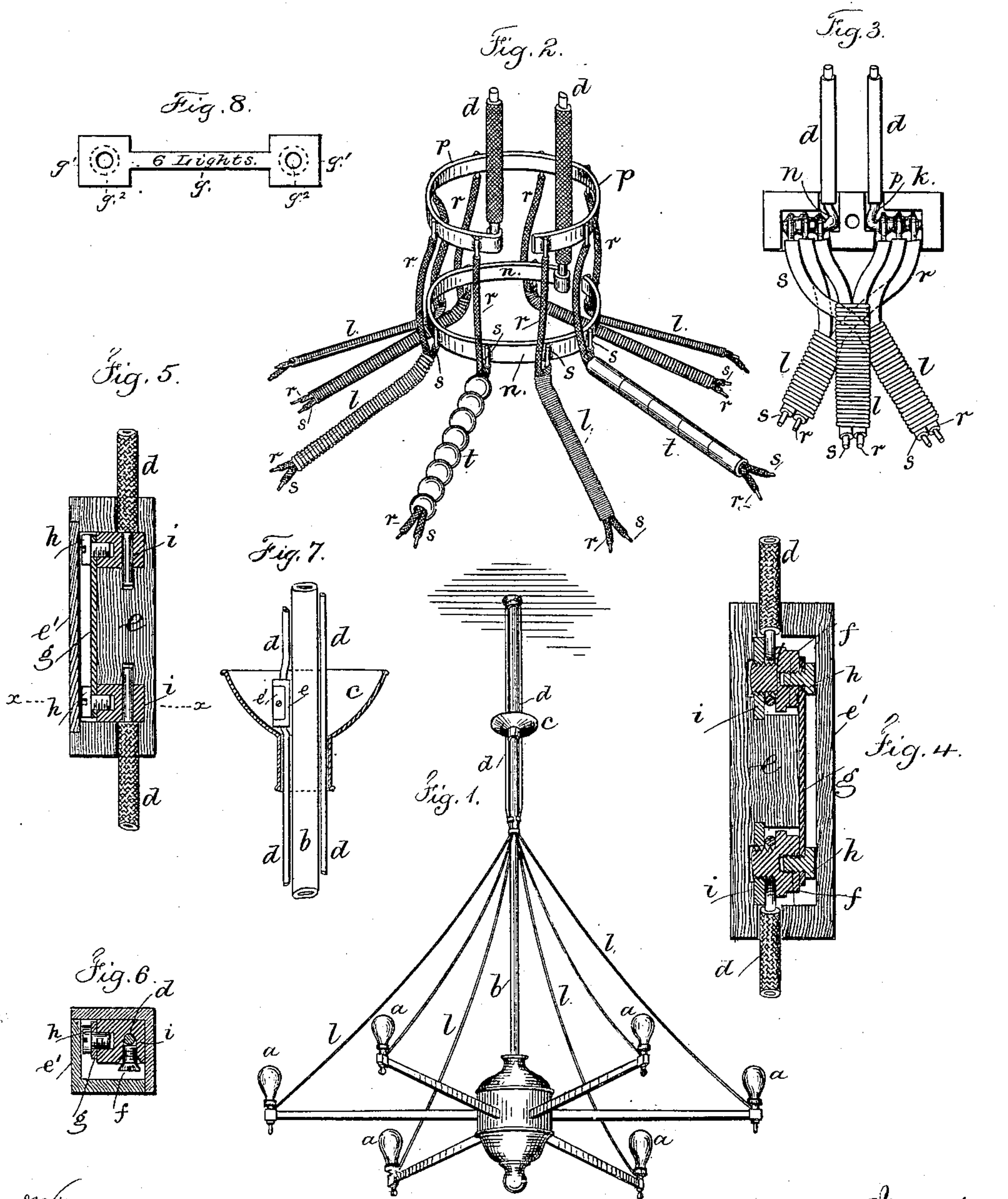


(No Model.)

L. STIERINGER.  
ELECTRIC LIGHT CHANDELIER.

No. 266,550.

Patented Oct. 24, 1882.



Witnesses

Chas. H. Smith  
J. Haib

Inventor

Luther Stieringer  
per Lemuel W. Penell  
att.



# UNITED STATES PATENT OFFICE.

LUTHER STIERINGER, OF NEW YORK, N. Y., ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO HIMSELF AND CHARLES F. HANINGTON, OF SAME PLACE, AND RICHARD N. DYER, OF MENLO PARK, N. J.

## ELECTRIC-LIGHT CHANDELIER.

SPECIFICATION forming part of Letters Patent No. 266,550, dated October 24, 1882.

Application filed December 27, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, LUTHER STIERINGER, of the city, county, and State of New York, have invented a certain new and useful Improvement in Electric-Light Chandeliers, of which the following is a specification.

The object I have in view is principally to produce means for the external wiring of fixtures for electric lamps, and more especially for the convenient and efficient wiring for electric-light purposes of the gas-fixtures already in use, which are of such construction that they cannot be wired internally, or which for other reasons it is not desired to provide with internal wires, which means will be simple, efficient, and compact in construction, can be readily applied, and will not injure the ornamental appearance of the fixtures or present themselves an objectionable appearance; and my object is further to provide an efficient construction of ornamental conductors for electric lamps, designed more especially for the external wiring of fixtures, but well adapted for use wherever the conductors are necessarily exposed, and also a compact form of safety-catch, and a highly-efficient form of fusible link for the same, which from its construction can be made of accurately-graduated sizes for different numbers of lamps, and can be readily replaced when burned out.

My invention consists in the peculiar means employed by me to accomplish the foregoing object, as fully hereinafter explained, and pointed out by the claims.

In the accompanying drawings, forming a part hereof, Figure 1 is a perspective view of a chandelier embodying my invention. Figs. 2 and 3 are a perspective view and an elevation, respectively, of two forms of the distributors or connections at the junctions of the primary and secondary conductors. Fig. 4 is a separate sectional view of the safety-catch. Fig. 5 is a similar view of the safety-catch in a slightly-modified form. Fig. 6 is a cross-section on line *xx* of Fig. 5. Fig. 7 represents the safety-catch located within the canopy of the chandelier; and Fig. 8 is a separate plan or top view of the safety-catch link.

Like letters denote corresponding parts in all the figures.

The chandelier, to which the devices are shown as applied, has the usual supporting-stem, *b*, sustaining the central body, from which project the arms carrying the electric lamps *a*. The stem carries, as usual, a canopy, *c*, in the form of an open-top shell, and all the parts may be of any shape and ornamentation. Two primary conductors, *a a*, extend from the ceiling down the sides of the stem *b*. These conductors are insulated wires, which are large enough to conduct the current for all the lamps of the chandelier. They extend below the canopy to any desired point, and terminate in two branches or distributors, *p n*, which may be horizontal ring-shaped pieces, as shown in Fig. 2, extending around the stem *b* and formed of or secured to the ends of the conductors, or these distributors may be outwardly-extending parts formed of the ends of the wires, or of pieces secured to such wires, as shown in Fig. 3.

To the distributors *p n* are permanently fastened and soldered the ends of the pairs of secondary or branch conductors, *r s*, after which such distributors and the connections with the secondary conductors are wrapped or covered with insulating material if the form shown in Fig. 2 is employed, for which purpose a piece of split-rubber tubing may be secured upon each distributor. When the distributors are in the form shown in Fig. 3 they are retained in position and insulated by the clamp *k*, which is made of two pieces of wood or similar insulating material secured together by one or more screws. This clamp has recesses formed to receive the two distributors and their connections, which recesses are separated by a solid portion of the clamp. The clamp *k*, which may be made more or less ornamental in shape, prevents accidental contact of the parts with each other or with the metal chandelier. The secondary conductors, *r s*, run in pairs from the distributors to the lamps, the wires being properly insulated. The separately-insulated wires of each pair are secured together by an ornamental covering. This may be a wrap-



ping of ornamental cord or metallic thread, *l*, covered with an adhesive material—such as gum or varnish—so that the covering will not fray out or become loose when the pairs of wires are cut into proper lengths. This mode of covering the pairs of insulated wires is adapted for use generally wherever the wires are necessarily exposed. The ornamental pairs of wires can be manufactured in any desired length and cut up as desired. In making connections the covering can be unwound and the insulation removed to expose the end of the wire, and after the connection is made the ornamental covering may be rewound upon the end of the wire.

Instead of using the wrapping *l*, the insulated wires may be run in pairs through ornamental beads *t*, or other forms of ornamental covering can be employed.

It will be seen that, in consequence of the before-described mode of connecting the primary and secondary conductors, the circuits of the several lamps will be uniform in length, or nearly so, and the secondary conductors will not hang loose and irregular, disfiguring the fixture; neither need they be twined around the chandelier stem and arms, since they are of an ornamental character, and may hang free from the chandelier, as shown, and extend in festoons from the distributors to the lamps.

The safety-catch which I use with each fixture has a block, *e*, of wood or other insulating material, provided with recesses at its ends, in which are placed or secured metallic plates or blocks *i*. One of the wires *d d* is cut, and its bare ends are secured to the metal plates or blocks *i* at the opposite ends of *e* by means of screws *f*. The fusible safety-catch link is secured in position, so as to complete the circuit by screws *h*, which enter the heads of screws *f*, Fig. 4, or turn into the blocks *i*, Figs. 5 and 6. The safety-catch is provided with a movable cover, *e'*, which is secured to *e* by screws or otherwise, and completes the insulating inclosing case of the fusible link. For chandeliers, the safety-catch is located in the open-top shell *c*, forming the canopy. The safety-catch is thus hidden from sight; but on account of the location of the canopy at a point below the ceiling and its construction with an open top the safety-catch can be readily reached by means of a step-ladder for the purpose of inspection, for testing the wiring of the chandelier, and for replacing the fusible link when destroyed. This fusible link is of peculiar construction. Instead of using lead wire twisted around binding-screws or fused to metallic parts, I employ a flat link, *g*, of lead or other suitable material, having enlarged clamping ends *g'*, which are provided with holes *g<sup>2</sup>* for the reception of the binding-screws *h*. This con-

struction enables the links to be stamped from sheets of lead and with their central portions or webs of definite graduated sizes and predetermined carrying capacity. The enlarged ends give good contact-surfaces for the binding-screws, while the size of the central web determines the capacity of the link. Each link may be stamped with a mark showing the minimum number of lights it is designed to carry.

It will be understood that all the features and devices before described, with the exception of the location of the safety-catch in the canopy, are applicable to wall-brackets and other forms of fixtures, as well as to chandeliers.

What I claim is—

1. In fixtures for electric lamps, the combination, with the two primary conductors and the separate distributors, of the secondary conductors running in pairs to the lamps, one conductor of each pair being connected with one of the distributors and the other conductor with the other distributor, substantially as set forth.

2. In fixtures for electric lamps, the combination, with the primary conductors and the separate distributors, of the secondary conductors running in pairs from such distributors, each pair being composed of two separately-insulated wires secured together by an ornamental covering, substantially as set forth.

3. In combination with the primary conductors, their branches, and the pairs of secondary conductors united to the branches of the primary conductors, a clamp of insulating material to keep the branches separate, substantially as set forth.

4. A safety-catch for chandeliers for electric lights, having a block of non-conducting material, screws for securing two wire ends to such block, and a safety-catch link composed of a flat strip with perforated ends secured by other screws, and completing the circuit between such wire ends, substantially as set forth.

5. In a safety-catch for electric-light chandeliers, the combination, with two wire ends, *d d*, of the separable case *e e'*, of non-conducting material, the perforated safety-catch link *g*, and the screws *f h*, substantially as described and shown.

6. In safety-catches for chandeliers for electric lights, the flat fusible link constructed with a central web of definite carrying capacity and enlarged clamping ends, substantially as set forth.

Signed by me this 22d day of December, A. D. 1881.

LUTHER STIERINGER.

Witnesses:

GEO. T. PINCKNEY,  
CHAS. H. SMITH.