(No Model.)

L. STIERINGER.

CEILING BLOCK FOR INCANDESCENT LAMPS.

No. 482,104. Patented Sept. 6, 1892.

Fig. 1

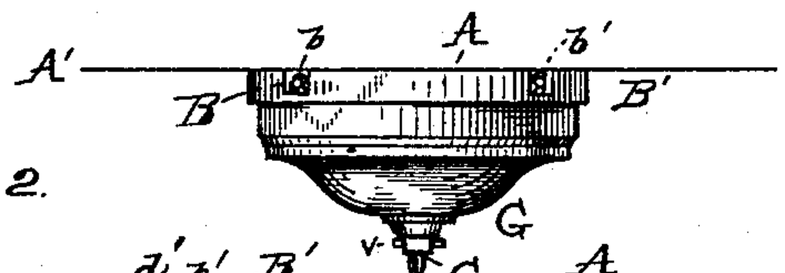


Fig. 2.

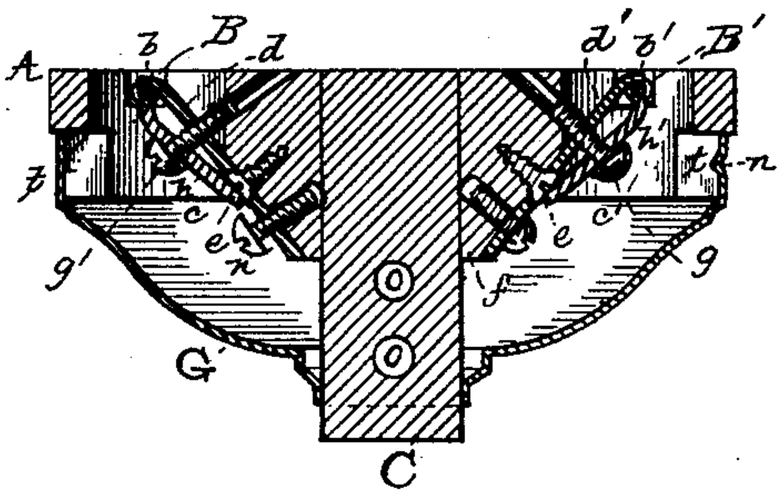


Fig. 3.

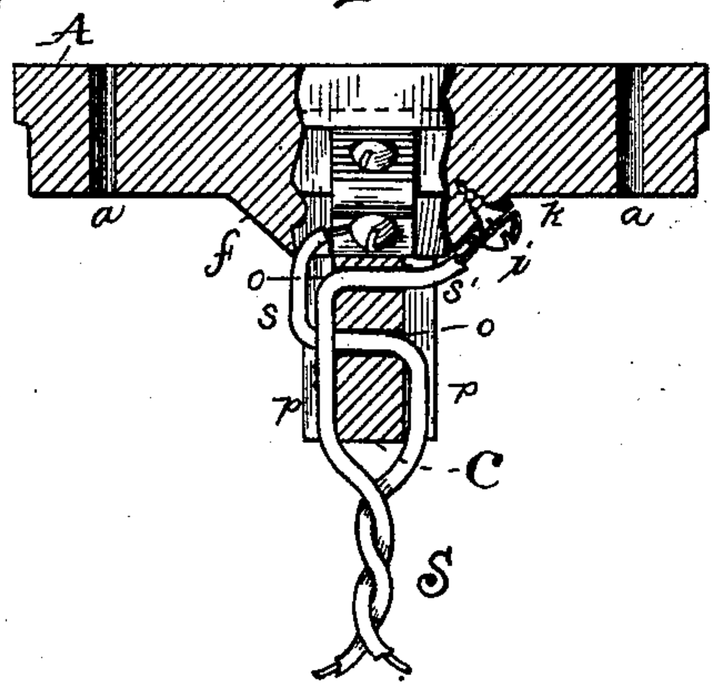


Fig. 4.

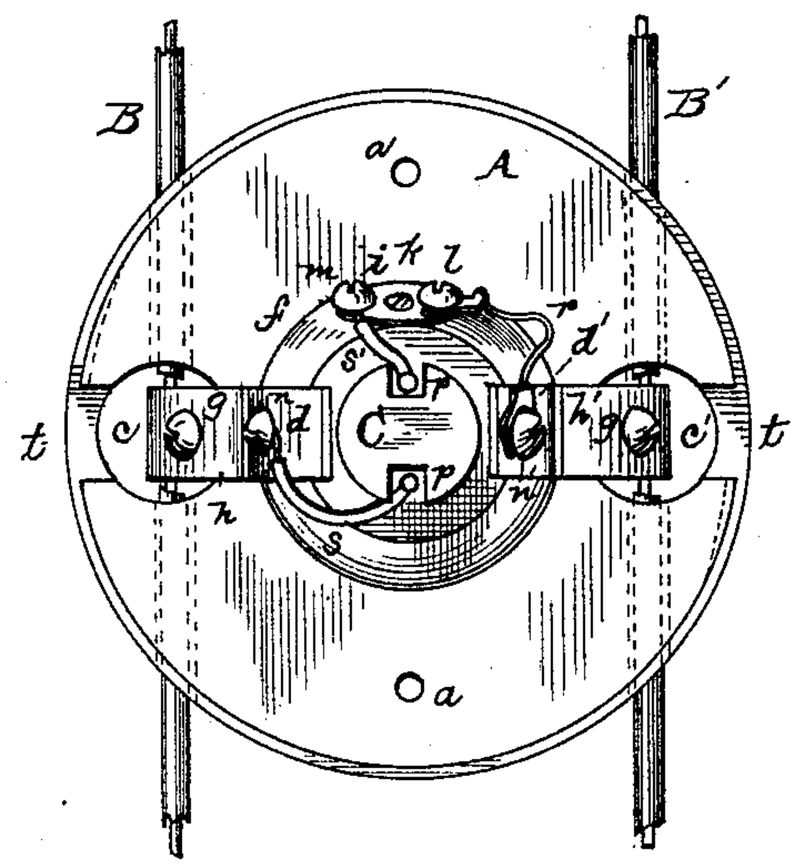
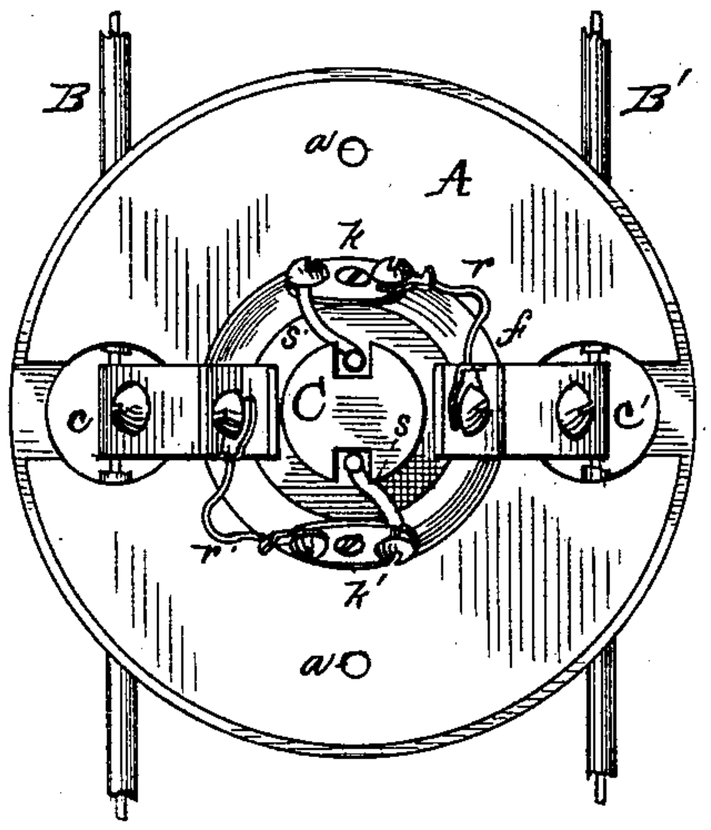
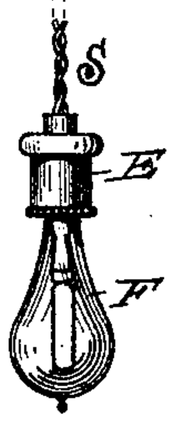


Fig. 5.





ATTEST:

E. C. Rowland

Thos. Belger

INVENTOR:

Luther Stieringer

By Dyer & Tibbey

Attys

UNITED STATES PATENT OFFICE.

LUTHER STIERINGER, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND WILLIAM J. JENKS, OF SAME PLACE.

CEILING-BLOCK FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 482,104, dated September 6, 1892.

Application filed July 3, 1886. Serial No. 207,068. (No model.)

To all whom it may concern:

Be it known that I, LUTHER STIERINGER, of New York, in the county and State of New York, have invented a certain new and useful Improvement in Connecting Devices for Electrical Circuits, of which the following is a specification.

The object of my invention is to produce simple, cheap, durable, and effective hanging or pendent electric-lamp fixtures or devices for suspending electric lamps from a ceiling or like support.

My invention relates to ceiling-blocks for pendent lamp-fixtures; and it consists, mainly, in providing means for removing the weight of the lamp and fixtures from the electrical connections on the ceiling-block and in the novel devices and combination of devices hereinafter specified, and pointed out in the claims.

That which I term a "ceiling-block" consists of a body or block of wood or other suitable insulating material adapted to be attached by screws or otherwise to a ceiling or like support. Such block is provided with metal clamps or other connecting devices for making electrical connection with the main or supplying conductors, in proximity to which the ceiling-block is placed. The block has also upon it connecting devices by which the flexible lamp-wires are attached to it and placed in electrical connection with the main conductors when the fixture is in position. At their lower ends the flexible wires are connected with a suitable lamp-socket receptacle or holder, within which connection is made between the ends of the wires and the socket-terminals, and thence to the terminals of an incandescent electric lamp placed in said socket or holder. I prefer that the flexible wires shall be insulated wires twisted together, so as to form a flexible conducting-cord. I prefer to so construct the fixture that there is a mechanical connection between the ceiling-block and the flexible wires in addition to the electrical connection, whereby the weight is taken partly or wholly from the electrical connecting devices. I prefer, also, to place upon or within the ceiling-block a fusible link or safety-catch, the same being connected between the connection of the main conductor and that of the flexible lamp-wire, so that the fusible link becomes a part of the circuit; or I may provide on the block two such links or safety-catches, one in each side of the lamp-circuit. In order to protect and shield the connecting devices on the ceiling-block from moisture and from external contact, I prefer to provide a covering shell or cap upon the block, through which the flexible wires pass. By this means I provide a lamp-supporting fixture which has many advantages over the rigid pendent structures composed of rigid tubes, which were employed prior to my invention. Some of these advantages are the greater cheapness and simplicity of construction and the readiness and convenience with which the fixture is put into place without the necessity of any especial skill; the fact that the flexible fixture will always hang true and in a straight line from any height, whereas it is only with the greatest pains that a number of rigid pendants can all be made to assume and maintain a vertical position, the weight of the lamp not being sufficient to cause them to do so; the diminished liability to injury of the lamp and shade by shocks and blows and by the moving of objects against them, the flexibility of my fixture allowing it to yield, and therefore to escape injury under such circumstances; the great convenience which it permits in altering the length of the fixture and the height of the lamp, since the flexible wires can readily be looped up or knotted and any desired length given to them, or to permanently shorten the fixture a portion of the wires can be readily cut off and the new ends attached to the socket; the fact that the lamp can be easily taken out of the way by looping the wire over some suitable support, and the diminished space occupied by the fixture in comparison with what is taken by the rigid pipe-supports.

My fixture (while it may be used in almost any situation) is especially adapted for use in lighting large spaces, such as railway-stations, halls, and exhibition-buildings, and its use results in the obtaining of a better dis-

tribution of light, because it enables large numbers of single lamps to be employed, it being a practical impossibility to make use of numbers of single lamps if each has to be supported by its individual piece of rigid pipe, and where ceilings are very high the great length of pipe necessary is a great obstacle to the use of rigid fixtures, whereas the height from which lamps may be suspended by my fixtures is practically unlimited. I prefer that the two flexible conductors which constitute the circuit of the fixture shall be twisted together or otherwise mechanically united throughout their length in such manner that they form a single flexible supporting-stem between the ceiling-block and the lamp-socket.

The invention is illustrated in the annexed drawings, in which—

Figure 1 is a view in elevation of a form of ceiling-block embodying my invention with a lamp suspended therefrom; Fig. 2, a central vertical section of the ceiling-block; Fig. 3, a vertical section thereof at a right angle to that in Fig. 2, with the central part of the block in elevation and with the inclosing cap removed; Fig. 4, a bottom view with cap removed, showing a single-pole safety-catch; and Fig. 5, a similar view illustrating a double-pole safety-catch.

A is a block or disk of wood or other suitable insulating material, having screw-holes *a a* extending through it, so that it may be secured by screws to the ceiling. In the upper side of the block are two grooves *b* and *b'*.

B and B' are the two main conductors which extend parallel along the ceiling, being secured thereto in any usual manner, and at a point where it is desired to suspend a lamp or lamps the block A is placed over such conductors, so that they pass through the grooves *b b'*. Apertures *c c'* extend through the block-intersecting grooves *b b'*, and opposite these apertures the insulation is removed from the conductors B B'. Metal plates *d d'* are attached by screws *e* to the sides of the conical center *f* of the block and extend up into the apertures *c c'*, and to these plates are attached by screws *g* plates *h h'*, whereby clamps are formed for making connection with the bared wires, such wires being placed between the ends of the two plates and the screws being tightened to make a good and secure electrical and mechanical connection. Upon part *f* is also secured by a screw *i* a plate *k*, Figs. 3 and 4, and this plate has two binding-screws *l* and *m* inserted in it. Clamp *d h* has a binding-screw *n*, and *d' h'* a binding-screw *n'*. In an aperture in the center of the block is firmly inserted and preferably secured by glue a wooden pin or plug C, extending below the block; or this part may be made in one piece with the block, if desired. It has apertures *o o* extending through it and longitudinal grooves *p p*, one in each side.

Referring especially to Fig. 4, from binding-screw *l* of plate *k* to screw *n'* of clamp *d' h'* a lead-wire safety-catch *r* extends. It preferably has copper terminals clamped under the heads of the screws. The flexible insulated lamp-wires *s s'* extend one from binding-screw *n* of clamp *d h* and the other from screw *m* of plate *k*. These wires are then brought into the grooves *p* of pin C and threaded, as seen in Fig. 3, through the holes *o o* in said pin, and thence they extend, being usually united into a single flexible cord S, to the lamp-socket E, which holds the lamp F; or the wires may branch, so as to support and supply two or more lamps instead of one. It will be seen that the weight of the lamp is taken by the block through the pin C, which forms an additional mechanical connection for the wires and there is therefore no strain either on the main conductors or on the connecting-plates and binding-screws. The circuit is most readily traced in Fig. 4, being from B by clamp *d h* and wire *s* to lamp, thence by *s'* to plate *k*, safety-catch *r*, and clamp *d' h'* to conductor B'. This is with a safety-catch in only one side of the lamp-circuit. For a double-pole safety-catch arrangement, or one in each side of the circuit, as seen in Fig. 5, an additional plate *k'* is placed opposite *k*, and safety-catch *r'* extends from clamp *d h* to this plate, wire *s* being taken from *k'* instead of directly from *d h*.

To protect and conceal the block and connections, I prefer to employ a cap or shell G, which may be of any suitable ornamental form and made of metal or any suitable material. This may be secured as shown in Fig. 2, the block having notches at *t* and the shell-indentations at *u*, and being first placed with the indentations in the notches and then turned, so that the indentations enter beveled grooves in the block and are held there. The lamp-wires, being in the grooves *p p*, do not interfere with the placing of the shell over the pin C. Instead of this a cross-pin *v*, Fig. 1, may be passed through pin C below the shell to hold it.

What I claim is—

1. The combination, in a hanging electric-lighting fixture, of an insulating-block adapted for mechanical attachment to a ceiling or like support, connecting devices on said block for making electrical connection with main or supplying conductors, connecting devices on said block in electrical connection with the connecting devices for the main conductors for making electrical connection with suspended conductors, flexible electrical conductors depending from the said last-named connecting devices, a socket or holder for an incandescent electric lamp supported by and having its terminals electrically connected with the said flexible conductors, and an additional mechanical connection of said flexible conductors with said block for removing

the weight from the electrical connections, substantially as set forth.

2. The combination, with the ceiling-block having the perforated projecting pin, of the flexible lamp-conductors depending therefrom and electrically connected with contact devices on the block, said wires being threaded through holes in said pin to remove the weight from the electrical connections, substantially as set forth.

This specification signed and witnessed this 2d day of July, 1886.

LUTHER STIERINGER.

Witnesses:

MORRIS E. STERNE,

WM. PELZER.