(No Model.)

A. N. LOVELACE.

SAFETY CUT-OUT FOR ELECTRIC LAMPS.

No. 598,733. Patented Feb. 8, 1898.

FIG. 1.

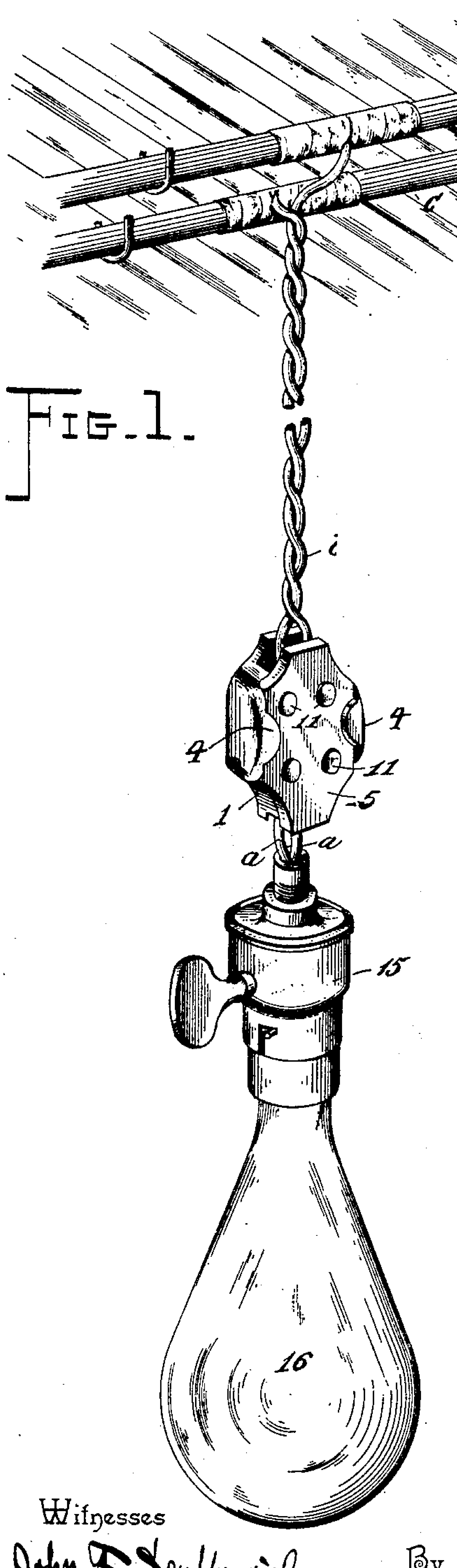


FIG. 2.

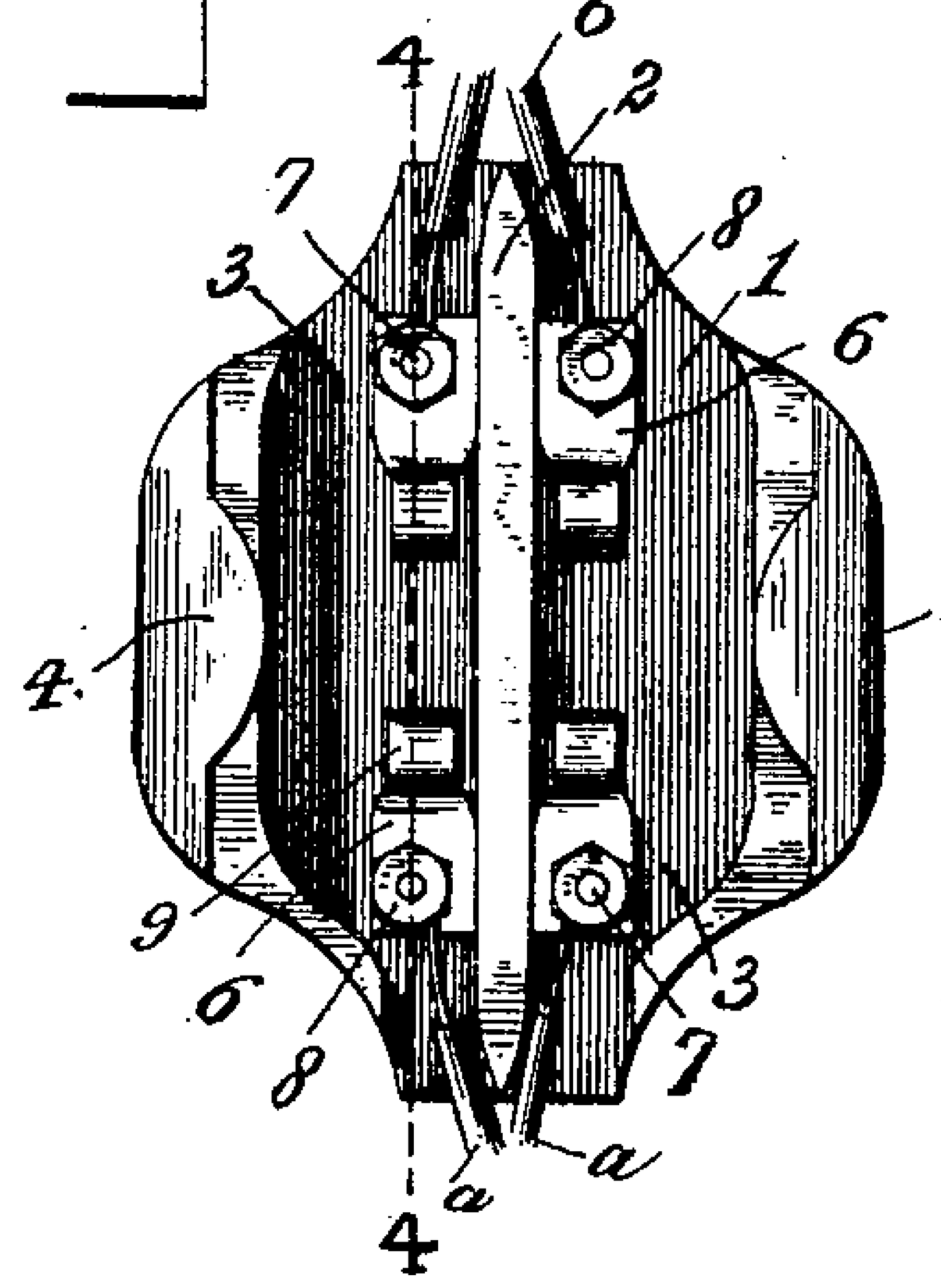


FIG. 4.

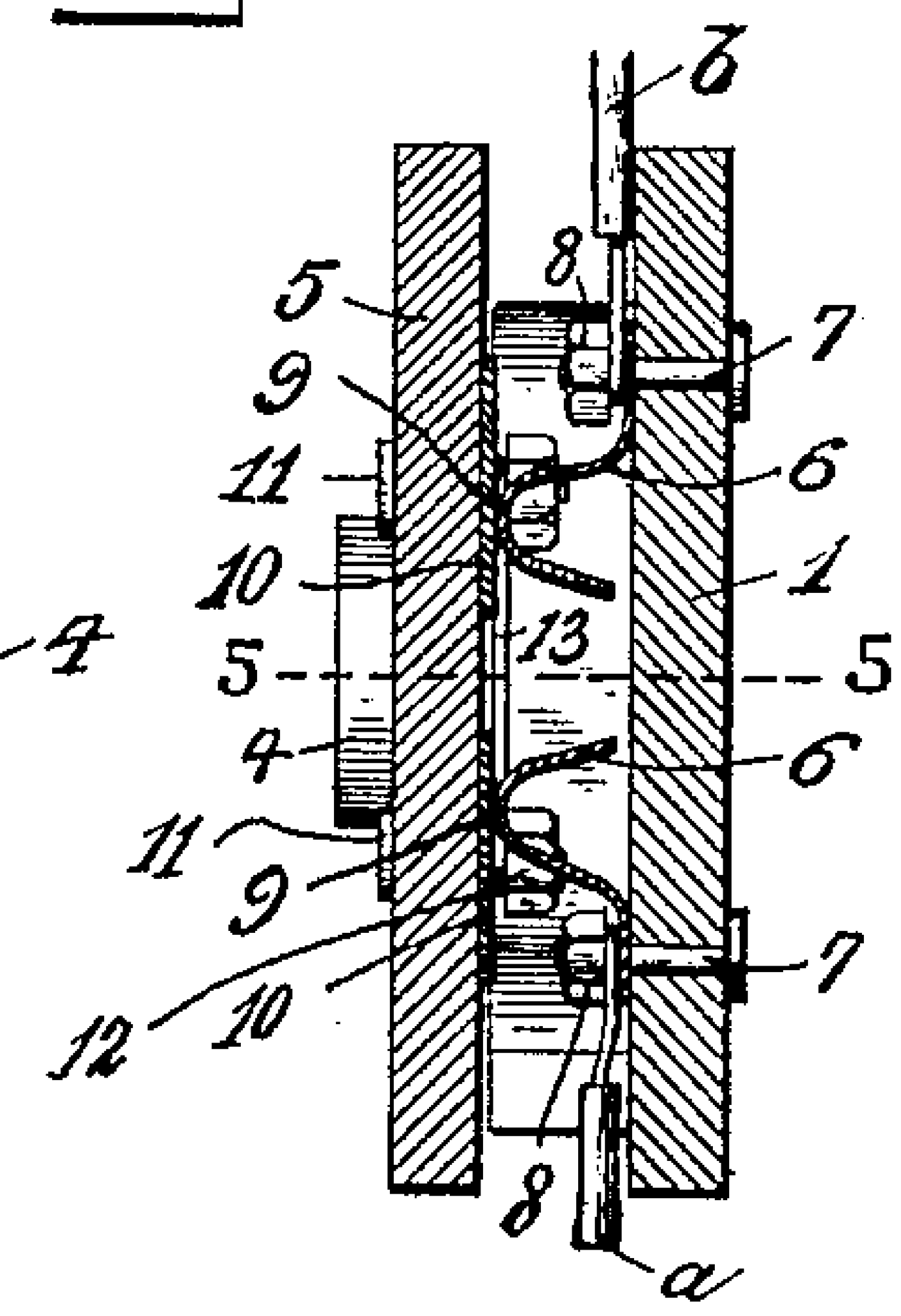


FIG. 3.

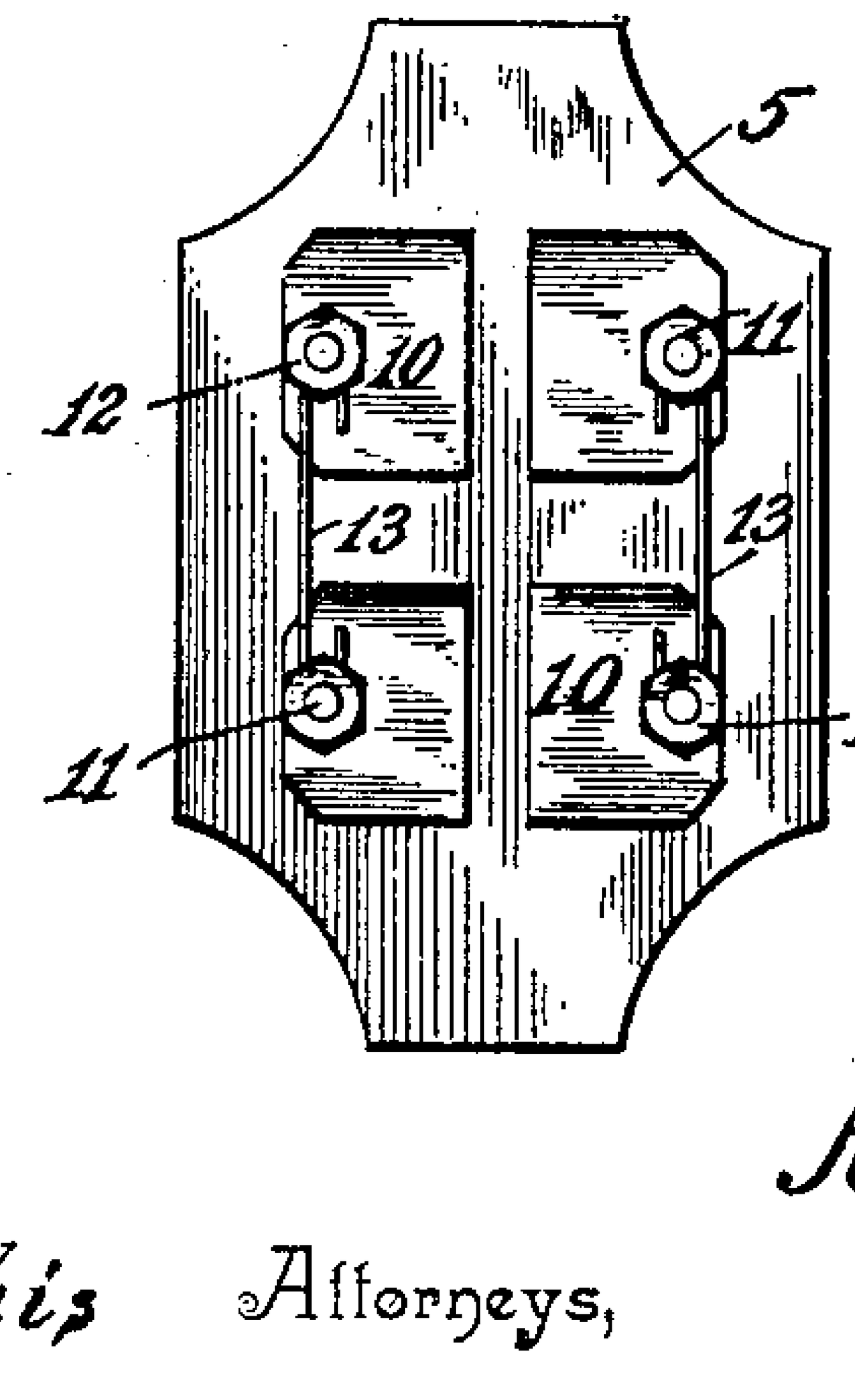
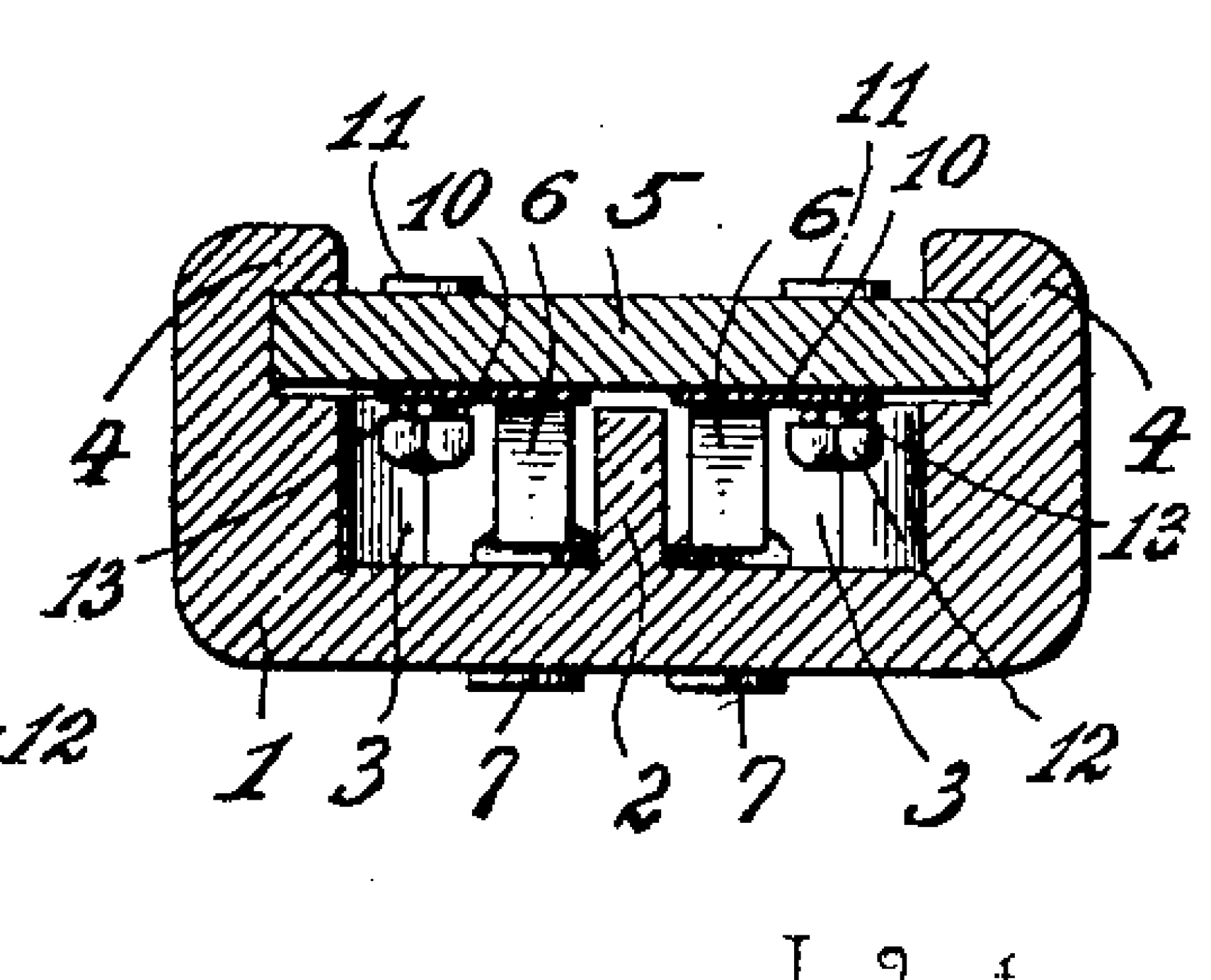


FIG. 5.



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SAFETY CUT-OUT FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 598,733, dated February 8, 1898.

Application filed June 12, 1897. Serial No. 640,551. (No model.)

To all whom it may concern:

Be it known that I, ALFRED NOTT LOVELACE, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Safety Cut-Out for Electric Lamps, of which the following is a specification.

This invention relates to safety cut-outs for electric lamps; and it has for its object to provide a simple and efficient cut-out of this character that is specially designed to be suspended by the hanging-cord, together with the lamp, at a convenient distance above the floor, and thereby dispensing with the usual overhead or ceiling cut-out, which is very inconvenient to reach when the fuse burns out.

To this end the main and primary object of the invention is to construct a safety cut-out, which may be properly termed a "drop" cut-out or fuse-box, which is constructed with special reference to being hung from the electric cord, while at the same time contemplating simple and efficient means for the quick and convenient replacing of the fuse-wires when the latter are burned out.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a general perspective view showing a safety cut-out constructed in accordance with this invention and arranged in its operative position. Fig. 2 is a plan view of the fuse-box with the fuse-carrying lid removed. Fig. 3 is a similar view of the inner side of the fuse-carrying lid for the box. Fig. 4 is a sectional view on the line 4 4 of Fig. 2 with the lid of the box in position. Fig. 5 is a cross-sectional view on the line 5 5 of Fig. 4.

Referring to the accompanying drawings, the numeral 1 designates a fuse box or base hollowed at one side for the reception of certain parts of the cut-out, and said box or base is made of porcelain, vulcanized rubber, or other suitable non-conducting material. The fuse box or base 1 is provided at one side with a central longitudinal partition-strip 2, which divides the interior of the box or base into separate compartments 3, so that the contacts for each wire will be thoroughly separated and insulated to prevent short-circuiting. The box 1 is further provided at opposite side edges with offstanding inturned retaining-flanges 4, which are adapted to slidably embrace the opposite side edges of the removable fuse-carrying lid 5, which conforms to the shape and size of the box and serves as a lid or cover for the open side thereof, said lid 5 being capable of being readily slid in and out of engagement with the offstanding side-retaining flanges 4 of the box proper.

A pair of alined metallic contact-springs 6 is secured to the inner side of the box 1 within each compartment 3 at each side of the longitudinal partition 2 of the box. The contact-springs 6 of each pair are arranged in longitudinal alinement at a suitable distance apart, and are secured at one end to the box 1 by means of the screw-bolts 7, passing through the box and having binding-nuts 8 on their inner threaded extremities, which binding-nuts also serve as binding-post connections for securing the wire-terminals in contact with the springs 6. The free ends of the contact-springs 6 are curved, as at 9, and normally project slightly beyond the edge of the partition-strip 2, so as to firmly contact with the flat metallic contact-plates 10, that are secured flat against the inner side of the lid 5 by means of securing-bolts 11, which carry at their inner ends the binding-nuts 12, which also serve to bind the terminals of the short fuse-wires 13 against the surfaces of the plates 10. It will also be observed that the pressure of the springs 6 against the plates 10 serves to firmly hold the lid 5 against accidental displacement.

There are two pairs of metallic contact-plates 10 secured to the inner side or face of the lid 5 and arranged, respectively, at the opposite sides of the longitudinal center of the lid in correspondence with the arrangement of the contact-springs 6, and the plates 10 of each pair of such plates are arranged in longitudinal alinement and metallically connected in the manner described by means of the short fusible wires 13, which may be readily replaced when burned out by loosening the binding-nuts 12. When the lid 5 is placed over the open side of the fuse-box, under the retaining-flanges 4 thereof, the con-

tact-plates 10 will press firmly against the rounded or curved ends 9 of the springs 6, so that each pair of such springs will be metallically connected in the lighting-circuit by means of one of the short fuse-wires 13, which when burned out immediately breaks the circuit and prevents injury to the dynamo.

The separated contact-springs 6 at one end of the fuse-box have connected thereto by means of the binding-nuts 8 the separate lamp-wires *a a*, respectively, which lamp-wires lead from the ordinary key-socket 15 of an electric lamp 16, while the separated contact-springs 6 at the opposite end of the fuse-box have respectively connected therewith the two terminals of the hanging or drop cord *b* for the lamp, which cord has its opposite terminals connected in the usual way with the main feed-wires *c c*, which are usually strung on the ceiling.

In the event of the current becoming short-circuited the wires 13 will become fused and thereby immediately interrupt or cut out the circuit from the dynamo, so as to prevent injury to the dynamo, and to replace the fuse-wires 13 it is simply necessary to remove the lid 5 without disturbing the fuse-box proper or its connections.

The many advantages of the herein-described cut-out will be readily apparent to those skilled in the art, and it will be readily understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

In a safety cut-out, a fuse-box provided at opposite side edges with inturned retaining-flanges and with a central longitudinal partition-strip, a pair of alined contact-springs arranged at each side of the partition-strip and having curved free ends normally projected beyond the edge thereof, a removable lid slidably engaging beneath said flanges, and separate pairs of alined contact-plates fitted to the inner side of the lid and connected by short fuse-wires, said contact-plates being engaged by the curved free ends of said springs which exert a pressure thereagainst, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALFRED NOTT LOVELACE.

Witnesses:

ROY J. SCOTT,

CHAS. GLENN.