

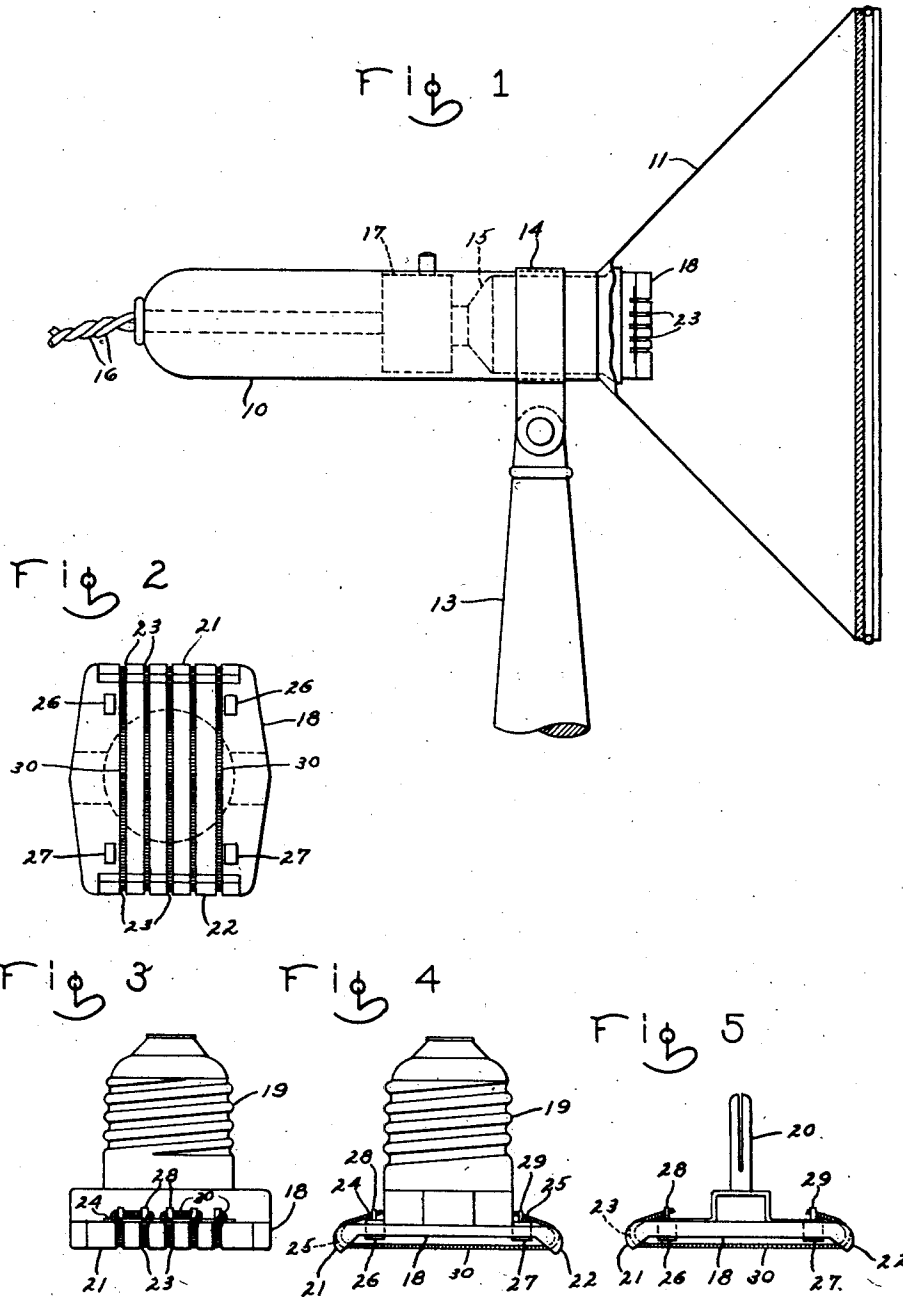
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ELECTRICAL DEVICE

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ELECTRICAL DEVICE

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My invention relates to electrical devices for emitting light of high intensity for use, for instance, in photography, and is especially adaptable to that class of devices in which the light is produced by passing a high electric current through a filamentary wire, even to the point of vaporization. This device may be used in the so-called photoflash lamps.

According to my invention, the filamentary wire is mounted on an insert comprising an insulating block which is provided with terminal connections for insertion in a holder or housing, so that it may be readily removed and another wire placed therein. The insert is preferably in the form of a plate or frame with two opposite projecting edges. The wire is supported by the projecting edges and extends to contact strips on the back of the plate. One of the advantages of such inserts is their ready interchangeability in the same housing or projector. A supply of inserts may be kept on hand and renewed simply by inserting a new wire therein. Another advantage is the construction of the projecting edges which serve to prevent arcing at the connections when the filament burns through, thus preventing a fusion of the connections. Further features and advantages of my invention will appear from the following detailed description of species thereof and from the drawing.

In the drawing, Fig. 1 is an elevation, partly in section, of the holder or projector; Fig. 2 is a plan view of the insert; Figs. 3 and 4 are front and side views thereof; and Fig. 5 is a side view of an insert with a modified form of terminal connection.

Referring to Fig. 1, the projector consists of a cylindrical housing 10 having a reflector 11 mounted at the forward end thereof. The housing 10 is mounted on a support arm 13 by a bracket 14. A socket 15 is located in the forward end of housing 10 and is connected to current supply wires 16. A switch 17 is also provided in the housing 10.

Referring to Figs. 2 to 4, the insert comprises a plate 18 of insulating material such as asbestos, shale, steatite, magnesite, soapstone or similar material. Said plate 18 carries terminal connections comprising a screw-threaded base 19 such as is commonly used on incandescent lamps, or a pair of split pins 20, one of which is shown in Fig. 5. Two opposite edges 21, 22 of the plate 18, are made heavier or project forwardly of the surface of the plate and are provided with grooves 23. A pair of contact strips 24, 25 are provided on the back of plate 18, the ends 26, 27 projecting

through holes in said plate 18 and being bent over to clamp said strips to said plate. The said contact plates 24, 25 are provided with upstanding lugs 28, 29 formed therefrom. The light producing means comprises a filamentary wire 30, which may be of tungsten, and is strung between the lugs 28, 29, portions thereof lying in the grooves 23 in the projecting edges 21, 22. The wire is thus disposed in parallel rows across the face of plate 18 as shown in Fig. 2, the rows being electrically connected in multiple. Since the ends of the individual rows lie in the grooves 23 in the overhanging or projecting edges 21, 22, the arcs formed when the wire is burned through will be intercepted by those edges and thus prevented from reaching the contact strips 24, 25. To light the filament, the switch 17 is closed, thus applying a potential across the contact strips 24, 25 and the ends of the filament. When a momentary flash of light of high intensity is desired, the filament is of course designed for a sufficiently low voltage so that it will be almost instantaneously vaporized.

What I claim as new and desire to secure by Letters Patent of the United States, is:

1. An electrical device for emitting light consisting of an interchangeable insert comprising an insulating plate having a pair of oppositely disposed projecting edges, a terminal connection member mounted thereon, a pair of contacts on said plate, and a filamentary wire having the ends thereof connected to said contacts and passing over said projecting edges.

2. An electrical device for emitting light consisting of an interchangeable insert comprising an insulating plate having a pair of oppositely disposed projecting edges, a terminal connection member mounted thereon, a pair of contacts mounted on the back of said plate and having a plurality of upstanding lugs thereon, and a filamentary wire wound around said lugs and across said edges in a plurality of rows.

3. An electrical device for emitting light consisting of an interchangeable insert comprising an insulating plate having a pair of oppositely disposed projecting edges having grooves therein, a terminal connection member mounted thereon, a pair of contacts on said plate, and a filamentary wire having the ends thereof connected to said contacts and passing over said projecting edges through the grooves therein.

4. An electrical device adapted for photographic and other uses requiring high light intensity and consisting of an interchangeable plug comprising an insulating plate carrying terminal connection

- members, contacts carried by said plate and electrically connected with said terminal connection members, and a filament extending across the face of said insulating plate and designed so that upon receiving a very high electric current it is instantaneously vaporized and emits light of high intensity, said filament having electrical connection with said contacts without being integrally united thereto.
5. An electrical device adapted for photograph and other uses requiring high light intensity and consisting of an interchangeable plug comprising an insulating plate carrying terminal connection members, contacts carried by said plate and electrically connected with said terminal connection members, and a refractory metal filament extending across the face of said insulating plate and designed so that upon receiving a very high electric current it is instantaneously vaporized and emits light of high intensity, said filament having electrical connection with said contacts without being integrally united thereto.
6. An electrical device adapted for photographic and other uses requiring high light intensity and consisting of an interchangeable plug com-

prising an insulating plate carrying terminal connection members, contacts carried by said plate and electrically connected with said terminal connection members, and a tungsten filament extending across the face of said insulating plate and designed so that upon receiving a very high electric current it is instantaneously vaporized and emits light of high intensity, said filament having electrical connection with said contacts without being integrally united thereto.

7. An electrical device adapted for photographic and other uses requiring high light intensity and consisting of an interchangeable plug comprising an insulating plate carrying terminal connection members, a pair of contacts carried by said plate and electrically connected with said terminal connection members, and a filament strung in a plurality of rows across the face of said plate, each of said rows being removably connected at one end to one of said contacts so that said rows are electrically connected in multiple, said filament being designed so that upon receiving a very high electric current it emits light of high intensity.

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