J. M. BROWN.

SWITCHBOARD LAMP.

APPLICATION FILED JULY 15, 1920.

1,415,984. Patented May 16, 1922.

Fig. 1.

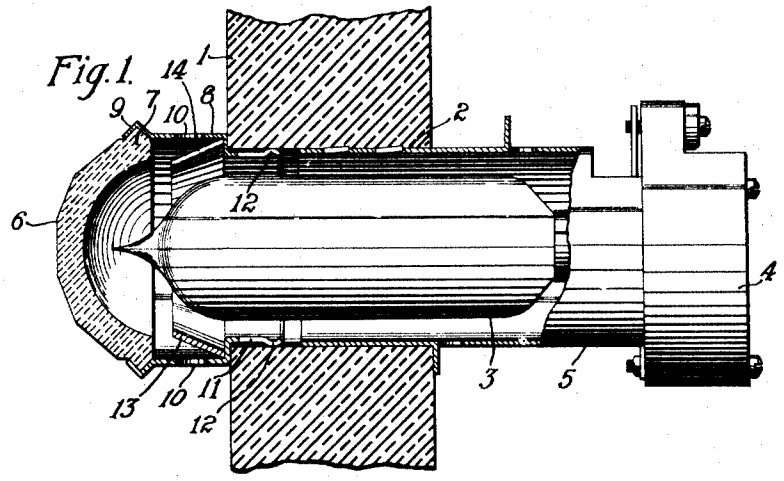


Fig. 2.

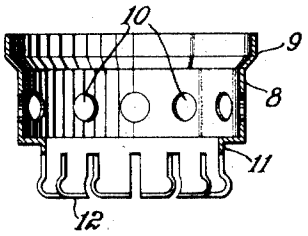


Fig. 3.

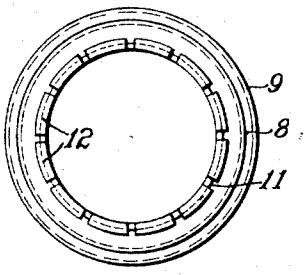
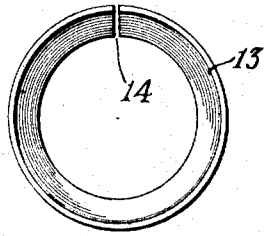


Fig. 4.



Fig. 5.



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SWITCHBOARD LAMP.

1,415,984. Specification of Letters Patent. Patented May 16, 1922.

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To all whom it may concern:

Be it known that I, JAMES M. BROWN, a citizen of the United States, and a resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Switchboard Lamps, of which the following is a specification.

My invention relates to switchboard devices and particularly to indicating lamps therefor.

One object of my invention is to provide a device of the above indicated character that shall be simple and durable in construction, economical in manufacture and effective in operation.

Another object of my invention is to provide an indicating switchboard lamp that shall be adequately ventilated and that shall permit only the emission of light rays having the color of the lens.

Another object of my invention is to provide an expansible connecting or holding member that shall permit the ready mounting and dismounting of a switchboard lamp lens by simple thrust movements, as in a plug and socket connector.

In certain switchboard practice, it is customary to provide relatively small lamps having lenses of various colors on the front side of the switchboard to indicate the condition of circuit interrupter and other apparatus operated from the board. The lenses of these lamps are usually of substantially bowl-shape supported by cylindrical metal rings having peripheral ventilating ports or ducts which permit the white light from the lamps to illuminate the switchboard for a considerable distance on all sides of the lamp. Where several of these lamps are arranged in proximity to each other, the white light radiation from one of them is sometimes a source of confusion as to which lamp is burning.

In practicing my invention, I provide a switchboard lens and supporting means therefor that may be readily connected to a switchboard panel by a simple thrust movement and, that, while permitting adequate ventilation for the lens, prevent the emission of white light rays, thus rendering each lamp clear and distinct and avoiding the above mentioned confusion as to which lamp is burning.

Figure 1 of the accompanying drawings is a sectional side view of a portion of a switchboard and an indicating lamp structure embodying my invention.

Figs. 2 and 3 are detail side sectional and end elevational views, respectively, of a member for holding the lens to the switchboard panel, and

Figs. 4 and 5 are views, similar to Figs. 2 and 3, of a barrier member embodied in my invention.

A switchboard panel 1 is provided with a recess 2 wherein is disposed a usual incandescent lamp 3 mounted in a socket terminal member 4 and secured to the panel by a tubular member 5. A lens 6, usually constructed of colored glass, is of substantially bowl-shape and has an annular projecting flange 7 at its open-end perimeter. A substantially cylindrical, preferably metal, sleeve 8 has an end portion 9 crimped over the flange 7, ventilating ports 10 and a longitudinally-split portion 11 of reduced diameter to provide a plurality of gripping fingers 12 for engagement with the panel 1 in the recess 2. A hollow frusto-conical member 13 is provided with a slot 14 extending longitudinally through one side thereof to permit it to be sprung into position in the member 8 opposite the ports 10.

The lens 6 and the members 8 and 13 constitute a unitary structure that may readily be placed in, and taken from, position in the recess 2 to provide access to the lamp 3, and the member 13 prevents lateral light rays from passing through the ports 10.

While I have shown and described a particular form of my invention, changes may be effected therein without departing from the spirit and scope thereof, as set forth in the appended claims.

I claim as my invention:

1. In a switchboard signal device, the combination with a switchboard panel having a recess and a lamp in the recess, of a lens of substantially bowl-shape disposed with its open-side over said recess, a tubular member supporting the lens on the panel and having a ventilating passage communicating with the outer air adjacent to the panel, and a frusto-conical member disposed in the tubular member adjacent to the panel and converging toward the lens to prevent the direct emission of light rays through said passage.

2. The combination with a switchboard panel having a recess and a lamp in the re-

cess, of a lens of substantially bowl-shape disposed with its open side over said recess, a yieldable sleeve having a portion conforming to the surface of the panel in said recess and a portion conforming to a portion of the lens for supporting the latter, said sleeve having a ventilating port, and a frusto-conical barrier member converging toward the lens for preventing the emission of light through said port.

3. In a switchboard signal device, the combination with a switchboard panel having a recess and a lamp in the recess, of a lens spaced from the panel opposite said recess, a tubular supporting member for the lens having an opening and an interior shoulder, and a hollow frusto-conical member opposite said opening and disposed against said shoulder and converging toward the said lens.

4. The combination with a switchboard panel having an opening and a lamp in the opening, of a lens of substantially cup-shape disposed with its open end over said opening, a cylindrical member having two portions of different diameter, the smaller portion being biased against the inner surface of the panel in said opening and the larger portion being perforated and engaging said lens to readily removably secure said lens to the panel, and a collapsible frusto-conical barrier member disposed in the larger portion of the cylindrical member and adapted to be inserted therein through the portion of smaller diameter when in a collapsed condition.

In testimony whereof, I have hereunto subscribed my name this 9th day of July, 1921.

JAMES M. BROWN.