

H. DESCHERE.
ELECTRIC ILLUMINATION.
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1,156,064.

Patented Oct. 12, 1915.

Fig. 1.

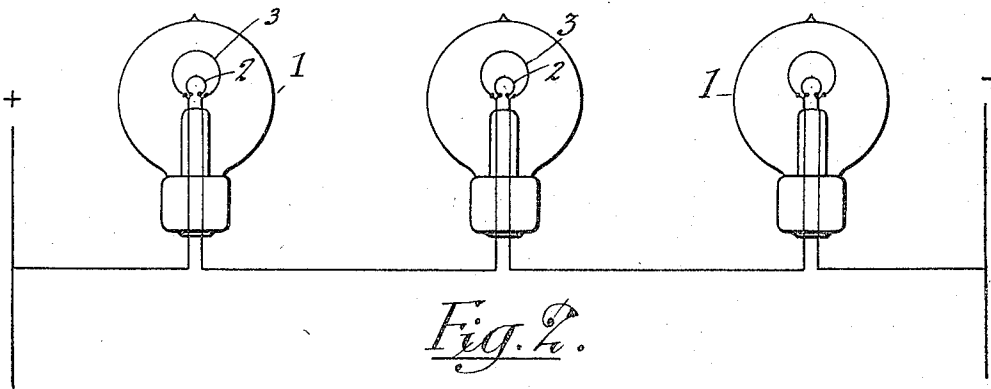
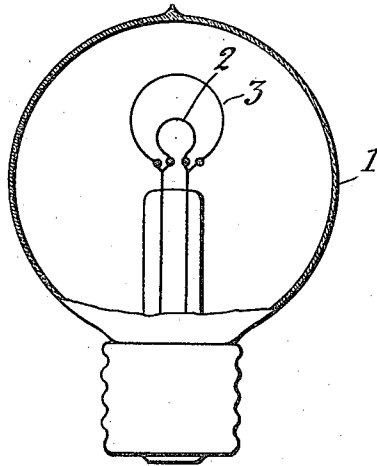


Fig. 2.

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UNITED STATES PATENT OFFICE.

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ELECTRIC ILLUMINATION.

1,156,064.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARVEY DESCHERE, a citizen of the United States, and a resident of the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful Improvements in Electric Illumination, of which the following is a specification.

This invention relates to electric lamps and lighting systems, and more especially to electric lighting as applied to signs of the kind wherein it is customary to use small lamps connected in series.

The object of the present invention is to provide means whereby a series group of lamps or filaments is not extinguished on the rupture of one filament, this means comprising supplementary filaments connected in shunt with the several other filaments. Such supplementary filaments should be completely or substantially dark under normal conditions, though carrying part of the current, becoming incandescent when the corresponding main filament is ruptured with the result that the supplementary filament carries increased current.

In the most advantageous embodiment of the invention the filaments are of different materials, thus the regular filament is desirably tungsten and the supplementary filament carbon.

In the accompanying drawings illustrating the invention: Figure 1 is a semi-diagrammatic view of a lamp embodying the invention; Fig. 2 is a semi-diagrammatic view showing a series of the lamps connected across constant potential mains.

In these views, 1 designates the bulb or exhausted glass container of any suitable or usual form, 2 is the regular filament, preferably tungsten, and 3 the supplementary filament, preferably carbon and connected in shunt with the regular filament. Fig. 2 shows a series of these lamps, and it will be apparent that if the regular filament of any of the lamps burns out or is ruptured for any reason, the corresponding supplementary filament, which previously carried part of the current, now carries all the current and maintains the flow for supplying the other lamps in series.

The supplementary or additional filaments may be incandescent under normal conditions, or they may be feebly incandescent or black. When, however, the rupture of one of the other filaments causes the corresponding supplementary filament to serve full duty its incandescence is materially increased. Preferably, the supplementary filament is adapted to remain black or much less brilliant than the regular filament under normal conditions. By using a supplementary filament in which the heating effect due to the passage of its proportion of the current is comparatively small, it is insured that the supplementary filament will be intact when the regular filament breaks. When such supplementary filament is caused to carry the entire current it is rendered incandescent, if it was not before, but as compared with the appearance of the other lamps its light is much yellower, if a carbon filament is used so that a visual indication is afforded that replacement is desirable. Until such replacement is made, however, the lamps of the series continue to burn, up to the limit of the life of the carbon filament in question.

What is claimed as new is:

1. A group of incandescent electric lamps connected in series and having normal-service light-giving filaments, in combination with means to prevent the extinguishment of the group upon the rupture of one filament, said means comprising supplementary filaments connected respectively in parallel with the normal-service filaments and so proportioned that they do not assume light-giving incandescence until subjected to the increased potential due to the rupture of the associated normal-service filaments.

2. A group of incandescent electric lamps connected in series and having normal-service light-giving filaments, in combination with means to prevent the extinguishment of the group upon the rupture of one filament, said means comprising supplementary filaments connected respectively in parallel with the normal-service filaments and so proportioned that they do not assume light-giving incandescence until subjected to the increased potential due to the rupture of the

associated normal-service filaments, said supplementary filaments being adapted to produce, when subjected to said increased potential, a light-giving effect differing
5 from that of the normal service filaments and affording a visual indication of the rupture of the normal service filament.

In witness whereof, I have hereunto set my hand this 14th day of March, one thousand nine hundred and thirteen.

HARVEY DESCHERE.

In the presence of—

CLARENCE G. GALSTON,
G. H. EMPEY.