

(No Model.)

2 Sheets—Sheet 1.

H. B. MEECH.
ELECTRIC LIGHTING APPARATUS.

No. 462,444.

Patented Nov. 3, 1891.

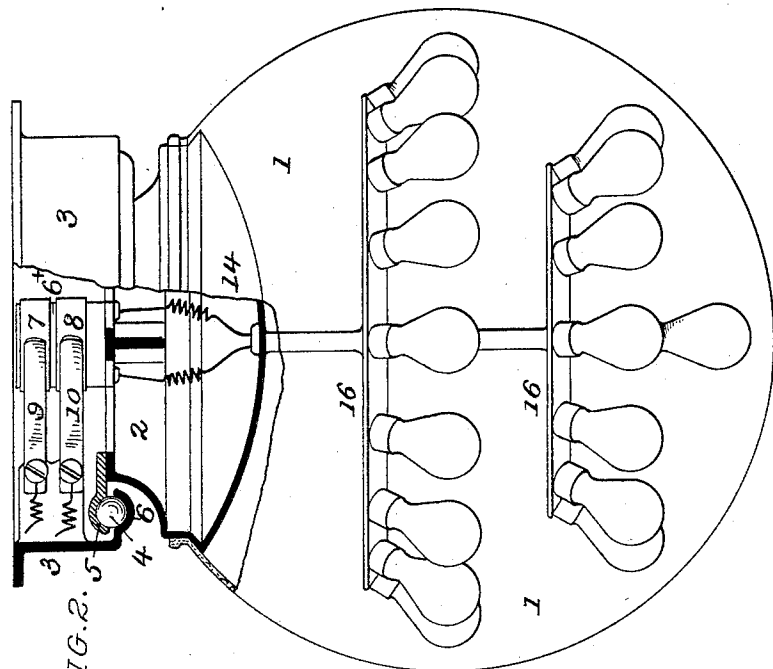


FIG. 2.

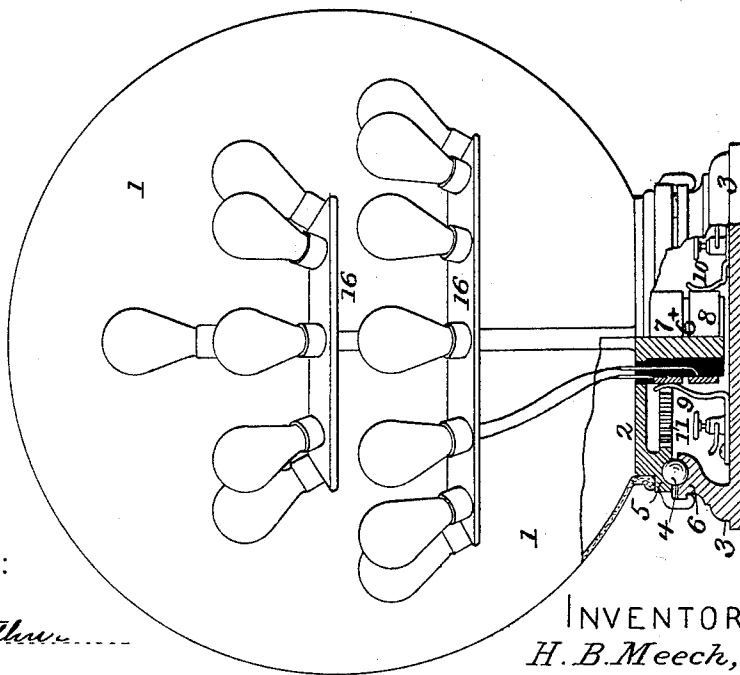


FIG. 1.

ATTEST:

Geo. H. Arthur

M. H. Holmes

INVENTOR:
H. B. Meech,

by his Atty, Robert Burns.

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FIG. 3.

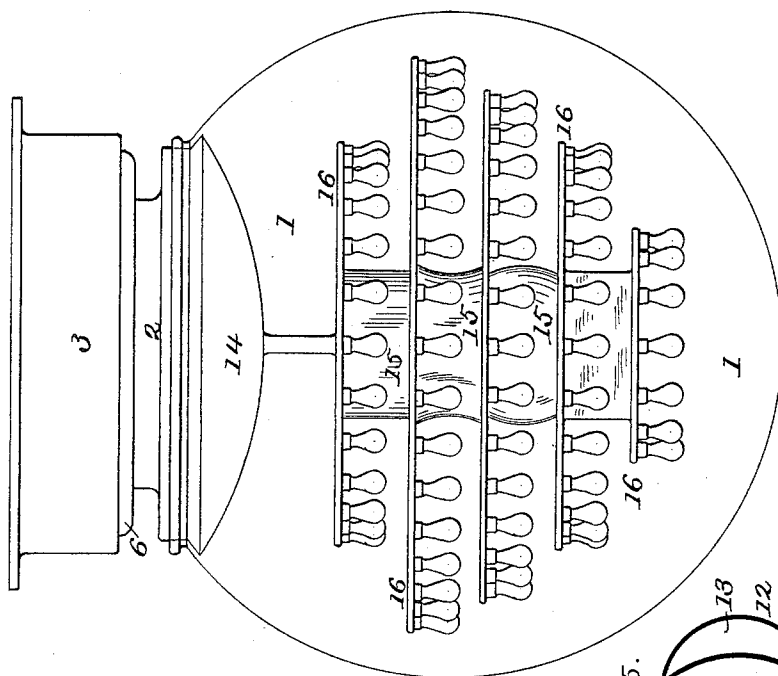


FIG. 4.

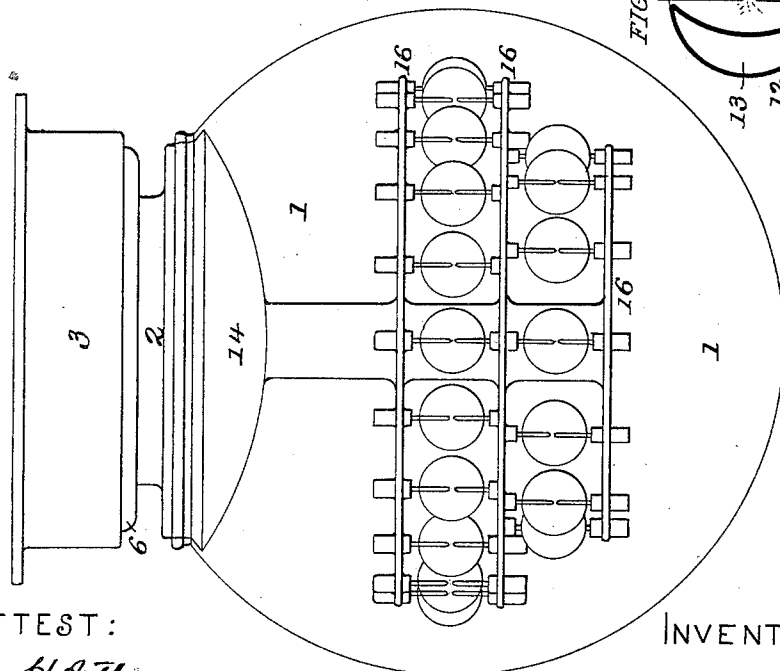
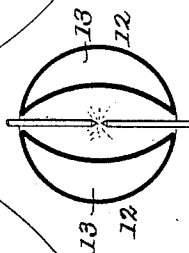


FIG. 5.



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UNITED STATES PATENT OFFICE.

HARRISON B. MEECH, OF CHICAGO, ILLINOIS.

ELECTRIC-LIGHTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 462,444, dated November 3, 1891.

Application filed November 24, 1890. Serial No. 372,526. (No model.)

To all whom it may concern:

Be it known that I, HARRISON B. MEECH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electric-Lighting Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to electric-lighting apparatus, either arc or incandescent, and in which a series of lamps are preferably used to afford the illumination.

The object of the present invention being in the main to improve the quality and brilliancy of the light and render the same of an exceedingly steady and uniform nature, I attain such objects by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, partly sectioned, of my improved electric-lighting apparatus arranged upon a supporting-foot for tower and like uses; Fig. 2, a similar view of an overhead or suspended apparatus; Fig. 3, a side elevation of the apparatus, illustrating a modified arrangement of the series of incandescent lamps and reflectors or mirrors for the same; Fig. 4, a similar view illustrating the use of a series of electric-arc lamps in my improved apparatus, and Fig. 5 a vertical section of an individual shade or globe more especially adapted for arc lamps.

Similar numerals of reference indicate like parts in the several views.

Referring to the drawings, 1 represents the inclosing glass globe made in one single piece or built up in sections in any well-known and approved manner and provided with a neck 2, by which it is supported, so as to rotate upon the supporting base or housing 3, the journal between the parts being formed in any well-known and suitable manner, preferably by means of an annular series of anti-friction balls or rollers 4, arranged between the annular tracks 5 and 6 on the neck 2 and housing 3, respectively, and as represented in Figs. 1 and 2.

In the present invention the neck 2 of the globe 1 is formed with an axial hub 6, upon

which is arranged in an insulated condition the rings 7 and 8, through which the electric current is conducted into the lamps arranged within the globe by means of suitable insulated conductors, and the rub-plates 9 10 on fixed housing 3, which in turn are connected to the positive and negative electric terminals, as shown in Figs. 1 and 2. The base or housing 1 furnishes a ready and convenient means for the attachment of an electric or other motor for rotating the globe, the neck whereof is provided with a concentric rack formation 11 to gear with and be driven by the usual pinion of an electric-motor shaft. The electric lamps are arranged within the globe in one or more tiers or clusters concentric with the axis or otherwise, and in the case of a use of incandescent lamps in the apparatus it is preferable to make the globe gas-tight and fill the same with a suitable gas that will aid in imparting brilliancy to the illumination, as fully set forth in my former application, Serial No. 370,975, filed in the United States Patent Office November 10, 1890.

In the case of the use of electric-arc lamps I make use of an individual globe 12 for each lamp, which will consist of two walls having a lunar shape in vertical section, so as to form an annular gas-holding chamber 13 of such lunar shape with a vertical axial chamber to receive the arc-forming electrodes, as clearly illustrated in Fig. 5.

14 is a convex reflector at the upper end of the globe that forms a portion of the neck 2, as shown, and aids in reflecting the light downward and outward.

15 are reflectors arranged inside the lamps to aid in reflecting the light outward, and they may be of a flat, concave, or convex form, as desired or found most suitable. (See Fig. 3.)

16 are the supports for the cluster of lamps used in the apparatus and which in the present invention are made of plates of glass, so as to offer but little, if any, obstruction to the passage of the light from a lamp in whose path of light it may lie.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an electric-lighting apparatus, the combination of an inclosing globe containing

a series of electric lamps, a supporting-neck for said globe and lamps formed with a circular track 5, with the stationary supporting-housing having a circular track 6, the series
5 of electric lamps, and the inclosing globe rotating together, substantially as set forth.

2. In an electric-lighting apparatus, the combination of an inclosing globe containing a series of electric lamps, a supporting-neck
10 for said globe and lamps and formed with a reflector 14, and a circular track 5, with the stationary supporting-housing having a circular track 6, the series of electric lamps, and the inclosing globe rotating together, substan-
15 tially as set forth.

3. In an electric-lighting apparatus, an inclosing globe and neck therefor provided with an axial hub carrying insulated contact-rings

7 and 8, and wire connections to the lamps, in combination with the base or housing carrying 20 insulated rub-plates 9 and 10, connected to the electric terminals or conductors, the globe 1 being journaled to the housing 3, so as to rotate, substantially as set forth.

4. In an electric-lighting apparatus essentially as herein described, the individual lamp-shade 12, formed with an annular gas-containing chamber 13, substantially as set forth.

In testimony whereof I affix my signature in 30 presence of two witnesses.

HARRISON B. MEECH.

Witnesses:

ROBERT BURNS,
GEO. H. ARTHUR.