E. I. DODDS.

ILLUMINATING MEANS.

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1,312,310. Patented Aug. 5, 1919.

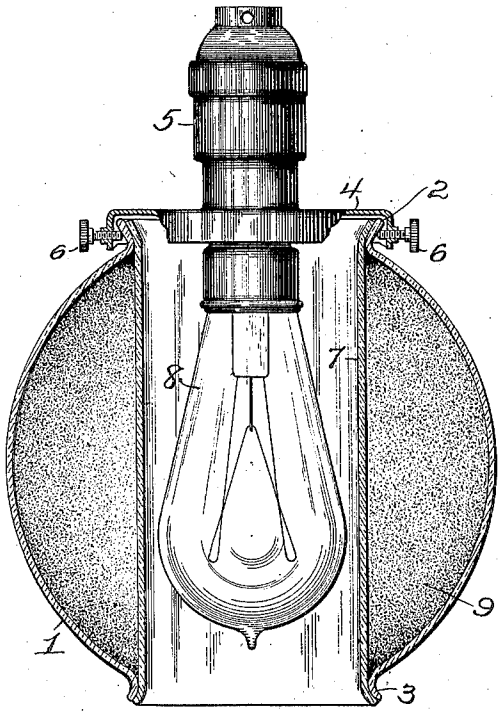


Fig. 1.

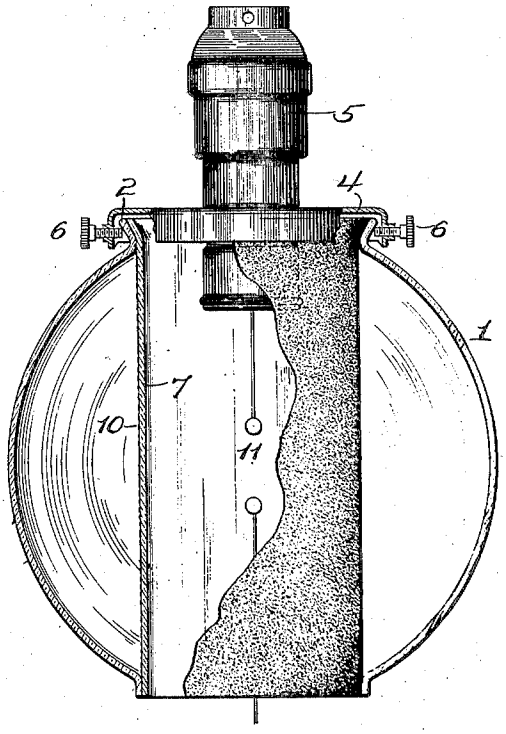


Fig. 2.

WITNESSES

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ILLUMINATING MEANS.

1,312,310. Specification of Letters Patent. **Patented Aug. 5, 1919.**

Application filed July 25, 1917. Serial No. 182,742.

To all whom it may concern:

Be it known that I, ETHAN I. DODDS, a citizen of the United States, and a resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Illuminating Means; 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 improvements in lighting or illuminating means and particularly to lamps,—one object of the invention being to provide a lamp which shall be especially useful where a moderate light is desired in a more or less limited area and where it is desirable to economize in the use of electricity for lighting purposes,—in such places, for example, as the cabins of ships, especially in submarines where space is limited for the accommodation and storage of apparatus.

A further object is to provide a lamp which will provide a cold light; which may be energized or activated periodically with the use of an electric lighting means placed within the globe forming the lamp, and to so construct the device that the electric lighting means shall be readily accessible.

With these and other objects in view, the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claim.

In the accompanying drawings; Figure 1 is a sectional view showing a lamp structure embodying my improvements, and Fig. 2 is a view showing a modification of the same.

1 represents a globe having a general spherical shape having openings at its upper and lower ends,—said globe being preferably provided with flanges 2, 3 at its open ends. The upper flange 2 of the globe may enter the flanged base 4 of a lamp fixture 5 and may be removably connected with the same by means of set screws 6.

A tube 7 of material which will permit the passage of light rays,—such for example, as glass,—extends through the globe 1 and through the openings in the latter. This tube may be open at both of its ends and it may be fused or otherwise fixed at its ends to the flanges 2—3 which surround the openings of the globe.

The tube 7 serves to contain a source of artificial light, such as an incandescent lamp bulb 8 connected with the lamp fixture 5, as shown in Fig. 1.

In the embodiment of the invention shown in Fig. 1, the inner surface of the globe 1 is coated as at 9 with a material capable of absorbing light and then emitting light so absorbed. Such material may comprise zinc or calcium sulfid or other material which will become luminous by exposure to a source of light, and said material may also contain an infinitesimal amount of radioactive salt, such as a salt of radium.

Experience has shown that when a globe thus coated is energized or actuated by a light flash from an incandescent lamp or other source of light within the globe, the said coating will become luminous and remain so for a considerable time after the extinguishment of the incandescent or other lamp, and that the light so furnished by the coated globe will be a cold light and will be sufficient for ordinary purposes in a room, especially if the walls of the room be white or light in color. Thus my improved lamp may be used to great advantage and with economy in the cabins of ships,—especially submarines.

Instead of applying the lighting coating to the inner face of the globe, the same may be applied to the exterior face of the tube 7 as at 10 Fig. 2, and instead of employing an incandescent electric lamp to supply the energizing light, we may use means for producing an electric spark or arc within the tube,—such for example as an oscillator 11 used in wireless telegraph apparatus, as illustrated in Fig. 2.

By providing the tube 7 open at both ends, ready access may be had to its interior for attaching the lighting means to the socket of the lamp fixture or removing the same therefrom.

Other changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope and hence I do not wish to restrict myself to the precise details herein set forth.

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

A lamp structure, comprising a lamp fixture, a tube and a globe supported by said

fixture, said tube closing both ends of the globe, phosphorescent material disposed between said tube and globe so as to be inclosed and protected by the same, and a source of light within said tube for activating the phosphorescent material disposed between said tube and globe.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ETHAN I. DODDS.

Witnesses:
CHAS. E. RIORDAN,
G. F. DOWNING.