July 9, 1929. S. M. THOMAS 1,720,155

LUMINESCENT SIGN

Filed April 9, 1928

Fig. 1.

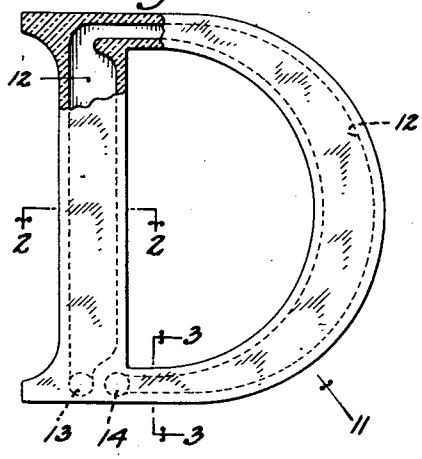


Fig. 2.

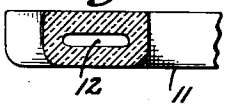


Fig. 3.

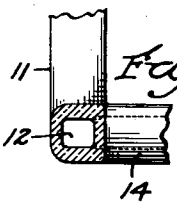


Fig. 4.

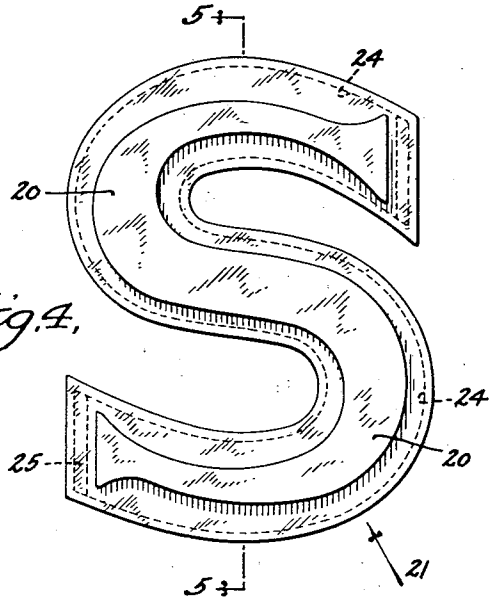
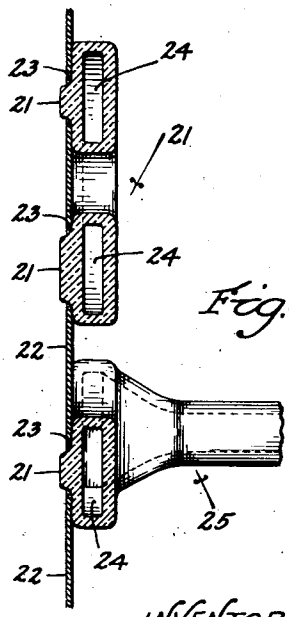


Fig. 5.



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Patented July 9, 1929. 1,720,155

UNITED STATES PATENT OFFICE.

SAMUEL M. THOMAS, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO DAVID E. ANDERSON, OF LOS ANGELES, CALIFORNIA.

LUMINESCENT SIGN.

Application filed April 9, 1928. Serial No. 268,436.

My invention relates to the art of illumination, being more particularly a luminescent sign of the type in which inert gas, such as neon, is used.

Ordinarily, signs of the type just referred to consist of glass tubes bent to form the figure or outline of the subject to be displayed, such tubes being of a constant diameter throughout their length, which feature is the cause of an undesirable similarity between signs of this type.

The ordinary luminescent gas sign requires highly skilled mechanics in the glass blowing art during manufacture and such signs, when completed, must be handled with extreme care.

The efficiency of a neon or other inert gas sign is not dependent upon maintaining a constant diameter of the tube or conduit forming the sign, but is dependent on a constant cross sectional area of the chamber in the sign which contains the gas, consequently the cross sectional configuration of the gas chamber may be varied as desired, provided the cross sectional area remains constant.

Taking advantage of this characteristic of a sign of this character, the undesirable similarity of luminescent signs of the type referred to may be done away with, in that letters may be used of different classes, such as bold face type, etc.

It is one of the principal objects of my invention to produce luminescent signs of the character described, of simple form and construction, wherein the container for the gas is of either constant or varying size with the gas chamber therein of varying width, resulting in a display, the face of which is illuminated with uniform intensity, although of irregular contour.

Other objects and advantages will appear hereinafter from the following description and drawings.

Referring to the drawings, which are for illustrative purposes only,

Fig. 1 is a face view of a sign embodying a form of my invention.

Fig. 2 is a sectional plan view on line 2—2 of Fig. 1.

Fig. 3 is a sectional view on line 3—3 of Fig. 1.

Fig. 4 is a face view of a sign embodying a modified form of my invention, and

Fig. 5 is a vertical sectional view on line 5—5 of Fig. 4.

More particularly describing the embodiment of my invention shown in the accompanying drawings, 11 designates a sign consisting of the capital letter "D" of the character of type usually designated "bold face". This letter is made of glass, having therein a chamber 12 containing an inert gas such as "neon". The chamber 12 is of constant cross sectional area, but varies as to width. In the form shown the outline or configuration of the gas chamber conforms generally in shape to the outline of the letter.

13 and 14 designate inlet and outlet tubes respectively for the gas, such outlet tubes being adaptable for the reception of electrodes (not shown), or in cases where the letter shown is but a part of composite features making up the sign, such as a word, the tubes 13 and 14 are connected to similar tubes of other features in the sign in any suitable manner, as is well known to those skilled in the art.

As shown in Figs. 2 and 3, the cross sectional outline of the gas chamber varies, the gas chamber being so proportioned that where the depth of the gas chamber is increased the width is decreased, and vice versa, so that the cross sectional area of the chamber remains constant.

The sign as contemplated in my invention may be made by casting, blowing or molding, and may be of the desired transparency or translucency, and formed of glass or other colloidal substance.

In the form shown in Figs. 4 and 5, the sign is in the form of the letter **S**, the face 20 of the letter 21 being raised and fitted in a cover plate 22, consisting of a thin sheet of copper or other suitable material, having a display opening 23 of the configuration desired, which is preferably smaller than the gas chamber 24 shown in dotted lines in Fig. 4.

In the form shown in Figs. 4 and 5, inlet and outlet tubes, similar to those used in the form shown in Figs. 1 to 3, inclusive, are also used, the inlet tube 25 being shown wherein the gas conduit changes in outline from the flat cross sectional outline in the letter proper to a round tube 26.

From the above description, it will be understood that a luminescent sign of the char-

acter described may be made, in which an illuminated letter or other sign of varying outline will be illuminated with equal luminosity over its entire face, it is to be understood that the term sign used herein is inclusive of any luminescent tube having the characteristics defined in the following claims.

I claim as my invention:

1. A luminescent sign containing inert gas, having a gas chamber therein of varying cross sectional shape and of equal cross sectional area.

2. A luminescent sign containing inert gas, consisting of a light transmitting member forming a tortuous gas chamber of varying cross sectional outline and of equal cross sectional area throughout its length.

3. A luminescent sign containing inert gas, consisting of a light transmitting member of varying width, having formed therein a gas chamber of substantially the same outline as said member, varying in cross sectional outline and of equal cross sectional area throughout its length.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 3 day of April, 1928.

SAMUEL M. THOMAS.