March 10, 1970 I. S. SZENTVERI 3,500,036

DECORATIVE STRIP LIGHTING

Filed June 14, 1966

Fig. 1

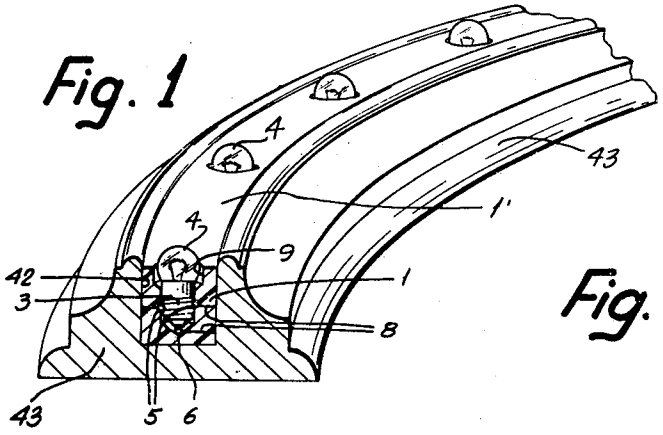



Fig. 3

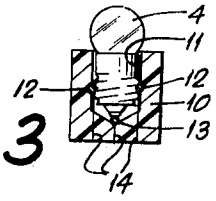



Fig. 2

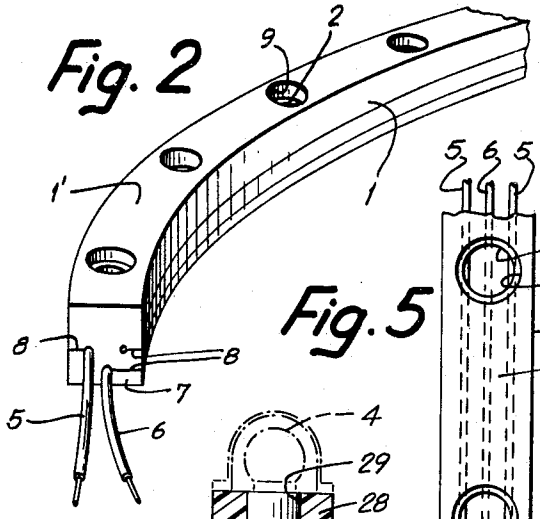



Fig. 4

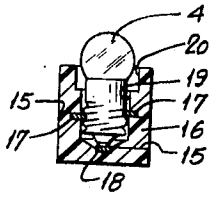



Fig. 5

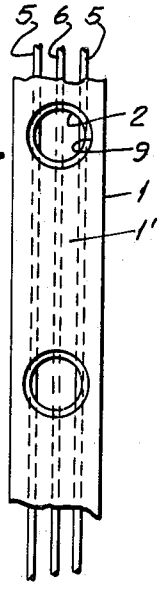



Fig. 6

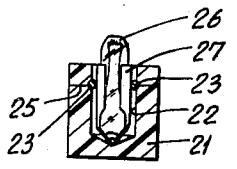



Fig. 7

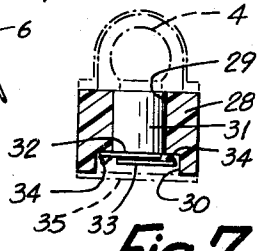
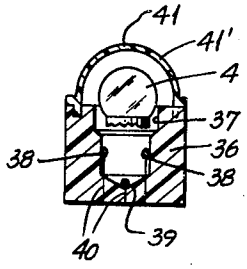



Fig. 8




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# DECORATIVE STRIP LIGHTING

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## ABSTRACT OF THE DISCLOSURE

A decorative strip lighting system constructed of a flexible dielectric material. The system consists of an elongated body with a plurality of slits arranged longitudinally of the strip such that electrical conducting wires may be inserted therein. Also arranged along the length of the strip are a series of blind bores open on one face to admit light bulbs.

The present invention relates to a lighting fixture, more particularly for decorative strip lighting.

It is often necessary to provide a plurality of substantially equally spaced light bulbs disposed along a line of any desired curvature to provide a decorative effect or for use in illuminated signs to form the letters and numbers, or to illuminate the lines of a drawing or the like.

Up to now the usual practice of obtaining such decorative strip lighting was to fix individual light sockets, at a required distance apart and along the desired curved or wavy line, to a rigid support surface in holes provided in said surface. Thus, the production of such light fixtures was time-consuming and very expensive.

It is, therefore, the general object of the present invention to provide a lighting fixture for obtaining decorative strip lighting, in a very easy and economical manner, and wherein the row of light bulbs may be arranged in accordance with any curved line to follow any decorative pattern, lettering or drawing.

Another object of the present invention resides in the provision of an elongated flexible strip of dielectric material provided with substantially equally spaced bores opening at the exposed surface of said strip, said bores adapted to be used as sockets for the base of light bulbs, said strip further incorporating means for connecting the light bulbs in parallel to a supply of electricity.

Another object of the present invention resides in the provision of a strip of the type mentioned above, which forms itself a decorative molding to be applied to a wall or other surfaces to be decorated with the strip lighting of the invention.

Another object of the present invention resides in the provision of a method of applying decorative strip lighting to a wall or the like, including forming on said wall a raised molding longitudinally curved in accordance with any desired decorative pattern, forming in said molding an outwardly opening channel running longitudinally of the molding and placing the above-described strip in said channel, while flexing the strip to conform to the channel.

The foregoing and other objects of the present invention will become more apparent during the following disclosure and by referring to the drawings, in which:

FIGURE 1 is a partial perspective view, partially in cross-section, of a decorative molding provided with a decorative lighting strip in accordance with a first embodiment of the invention;

FIGURE 2 is a partial perspective view of the lighting strip itself in accordance with the first embodiment;

FIGURE 3 is a cross section of the lighting strip in accordance with a second embodiment;

FIGURE 4 is a cross section of the lighting strip in accordance with a third embodiment;



FIGURE 5 is a top plan view of the lighting strip of FIGURE 2;

FIGURE 6 is a cross section of the lighting strip in accordance with a fourth embodiment;

FIGURE 7 is a cross section of the lighting strip in accordance with a fifth embodiment; and

FIGURE 8 is a cross section of the lighting strip in accordance with a sixth embodiment.

Referring now more particularly to the drawings in which like reference characters indicate like elements throughout, the first embodiment shown in FIGURES 1, 2, and 5 consists of an elongated body or strip **1** made of a dielectric material which is flexible, such as plasticized polyvinyl chloride of a Shore hardness of 89, although other synthetic resin materials which are flexible and electric-insulating, can be used.

This strip **1** is preferably extruded as a bar of rectangular or square cross section and one face is drilled to provide a plurality of blind bores **2**, of circular cross-section, which are substantially equally spaced along the length of strip **1**.

Bores **2** are adapted to receive the base **3** of a conventional light bulb **4**, such that the filament of the light bulb will be exposed at the top face of strip **1**. Bores **2** have an enlarged external portion **9** in order to allow for recessing the bulb slightly more with respect to the exposed face **1'** of strip **1**.

A pair of naked, round, flexible electric wires **5** run longitudinally of strip **1** and are exposed at each side of the several blind bores **2**, so as to make electric contact with the base **3** of the light bulb **4** and to engage the threads of said base **3** to hold the light bulb in position within the bores.

A third wire **6**, also round and flexible, runs longitudinally of the strip **1** and is exposed at the bottom of the bores **2** to come in electric contact with the center terminal of the light bulbs. The wires issue from the strip at the ends thereof in order to be connected to an electric supply, or to be connected to the similar wires **5**, **6** of an adjacent strip **1**. One wire **5** can be cut at the end faces of strip **1** to serve only as holding means for the bulbs **4**.

If it is desired to dispose strips **1** in adjacent end-to-end relationship, the bottom end corner **7** can be cut off to make room for connecting the adjacent wires **5**, **6** of the two strips, while the top corners of said adjacent strips will abut each other. Also, the strips **1** may be cut if necessary to space the blind bores at the ends of two adjacent strips a distance equal to the standard distance between the remaining bores **2**.

In the production of strip **1**, the latter is provided with slits **8** made through the body of the strip and running from the location of the wires to the external lateral surfaces of the strip. Slits **8** serve to insert the wires **5**, **6** in position within strip **1**. FIGURE 3 shows another embodiment wherein bulbs **4** are more exposed than in the first embodiment, strip **10** having bores **11** of uniform diameter. Also, FIG. 3 shows that wires **12**, **13** may be inserted through slits **14** which extend to the bottom face of strip **10**.

FIGURE 4 shows another embodiment in which the slits **15** open at the lateral faces of the strip **16**. Also, the wires **17**, **18** are in the shape of flat ribbons to have a better hold on the screw-threaded base **3** of the light bulb **4**. FIGURE 4 shows also that the bores **19** may have an enlarged external portion **20** in order to sink the light bulb a little more within the bore or with respect to the top face of the strip.

FIGURE 6 shows a strip **21** provided with equally spaced blind bores **22**, of circular cross section, and

longitudinally runnning wires **23**, the pair of wires **23** being inserted through slits **25** opening at both lateral faces of the strip **21** and exposed at the sides of all the bores **22** near the top face thereof, said bores adapted to receive another type of conventional light bulb **26**, of elongated shape and provided with two electrically insulated resilient contact tongues **27** upwardly arranged so as to make resilient electric contact with the respective wires **23**.

These light bulbs **26** are, for instance, used in telephone apparatuses for illuminating the dial.

FIGURE 7 shows still another embodiment in which a strip **28** is provided with a plurality of equally spaced through bores **29**, of circular cross section. The bottom face of the strip **28** is provided with a longitudinally extending channel **30**. Each through bore **29** receives with a tight fit a metal socket **31** which is either inwardly threaded or has bayonet slots for receiving the screw-threaded base of a light bulb **4** or the bayonet base of a light bulb.

The socket **31** is exposed in the channel **30** and is provided with terminals **32** and **33**, terminal **32** being electrically connected to the socket and terminal **33** being insulated therefrom, so as to form a center terminal for the light bulb.

Insulated wires **34** run longitudinally within channel **30** and are connected to the terminals **32** and **33** of each socket **31**, so that the latter are connected in parallel.

The channel **30** may be thereafter filled with putty or closed by a cover **35** adhered to the strip **20**.

FIGURE 8 shows another embodiment in which a strip **36** is provided with stepped bores **37** for receiving light bulbs **4**, the light bulbs being held in position by pairs of wires **38** engaging the screw threads at the sides of the light bulb base and also making a first electrical contact therewith. A third wire **39** runs along the bottom of the bores **37** to engage the center terminal of the bulbs **4**. Wires **38**, **39** are inserted through slits **40** opening at the underface of strip **36**.

Each bulb **4** may be covered by a coloured or non-coloured transparent or translucent dome **41** removably affixed to strip **36**. Dome **41** has a hole **41'** for ventilation. A dome may be provided to cover several adjacent light bulbs, in which case the dome would be flexible longitudinally.

The strip of any embodiment is tightly fitted in a groove **42** made in a decorative molding **43** of any desired curvature and applied to a wall or other surface to be decorated. The strips may come in standard lengths and arranged in end-to-end relation and cut to the length of any specific groove **42**.

The strip may be made an integral part of molding **43** which would be of flexible dielectric material.

The system in accordance with the invention has been found to reduce considerably the work involved in providing decorative strip lighting.

The lighting strips may be used in lettering and in association with all kinds of drawings to illuminate the lines and for other similar applications wherein it is desired to provide a line of light bulbs arranged in accordance with any curvature.

The strip in accordance with the invention has been found to be capable of being bent at a radius as short as 3". In the systems in accordance with FIGURES 1, 3, 4, 6 or 8, when bending the strips, the wires become slightly displaced during bending, but jump back into their proper position. The embodiment of FIGURE 4 requires a somewhat larger bending radius, but has the advantage of providing a firmer hold on the light bulb base.

While preferred embodiments in accordance with the



invention have been illustrated and described, it is understood that various modifications may be resorted to without departing from the scope of the appended claims.

What I claim is:

**1.** A decorative strip lighting system comprising a moulding adapted to be applied to a wall or other surface, said moulding having variable longitudinal curvature and having a groove running longitudinally of the moulding and opening at the exposed face thereof, and an elongated strip made of dielectric flexible material tightly fitted within said groove of said moulding, said strip having an exposed face and having a plurality of holes opening at said exposed face and disposed longitudinally of the strip, said holes being substantially equally spaced and forming light bulb receiving sockets, flexible electric wires running longitudinally of the strip and means at each hole for parallel connection of the light bulbs to said wires, said wires issuing from said strip at the ends thereof for connection to an electric supply.

**2.** A decorative strip lighting comprising a strip having a first flat face adapted to be directly applied to a wall or other surface and a second flat face opposed and substantially parallel to said first flat face, said strip being flexible at least in a plane parallel to said faces, so as to be applied to a surface along a line of variable curvature, said strip provided with a plurality of spaced blind bores opening at said second face and arranged in a row longitudinally of the strip, said blind bores forming light bulb sockets for receiving the base of light bulbs, flexible electric wires running longitudinally within the strip, exposed at each bore and protruding therein to make an electric contact with the base of a light bulb inserted therein and to also hold said light bulb in position within the bore, said strip having slits opening at at least one face of said strip, extending through the strip and opening within said bores, said slits serving for insertion of said wires within the strip.

**3.** A decorative strip lighting as claimed in claim **2**, wherein said slit opens at at least one lateral face of said strip.

**4.** A decorative strip lighting as claimed in claim **2**, wherein said slit opens at said first flat face of said strip.

**5.** A decorative strip lighting as claimed in claim **2**, wherein said wires include a pair of wires protruding within the bores at diametrically opposed lateral portions thereof.

**6.** A decorative strip lighting as claimed in claim **5**, wherein said wires have a rounded cross section.

**7.** A decorative strip lighting as claimed in claim **5**, wherein said wires have a flat ribbon-like cross section.

**8.** A decorative strip lighting as claimed in claim **2**, wherein said wires consist of a pair of wires exposed at diametrically opposed side zones of each bore to contact opposite sides of the rounded metal base of a light bulb and hold the same in the bore, and of a third wire exposed at the center of the bottom of the bore to contact the center terminal of the light bulb base, there being one slit associated with each wire.


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U.S. Cl. X.R.

240—6, 8.2; 339—21