Dec. 31, 1929. W. H. YATES 1,741,965

ELECTRIC LAMP FIXTURE

Filed March 27, 1928 2 Sheets-Sheet 1

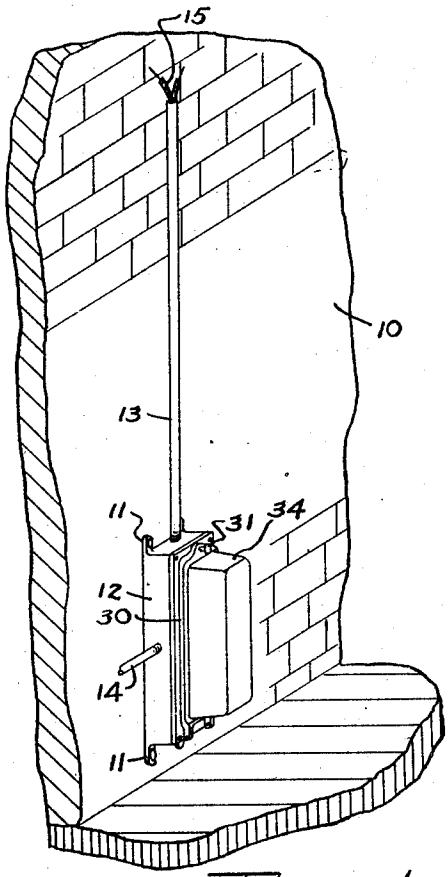

Fig 1

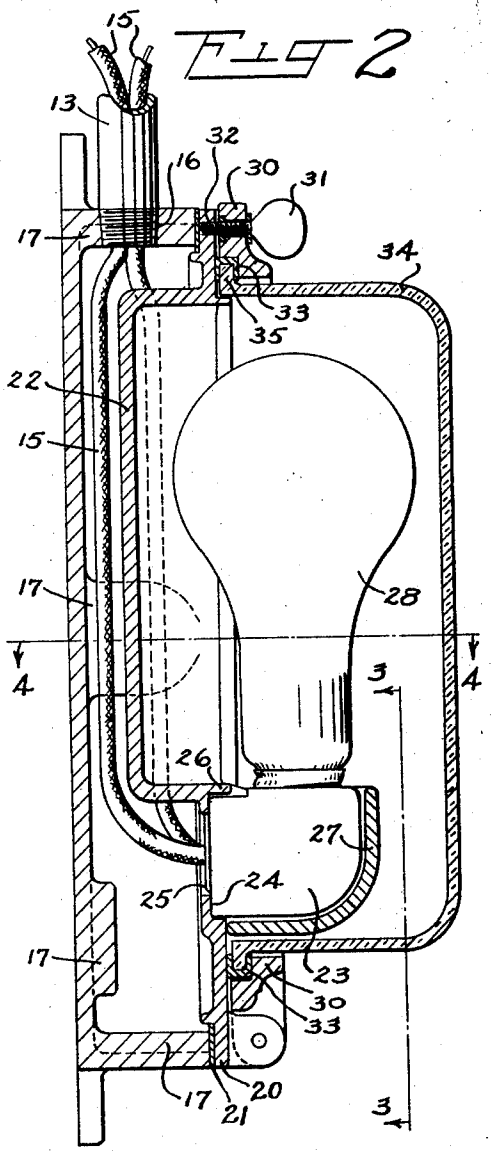

Fig 2

Fig 3

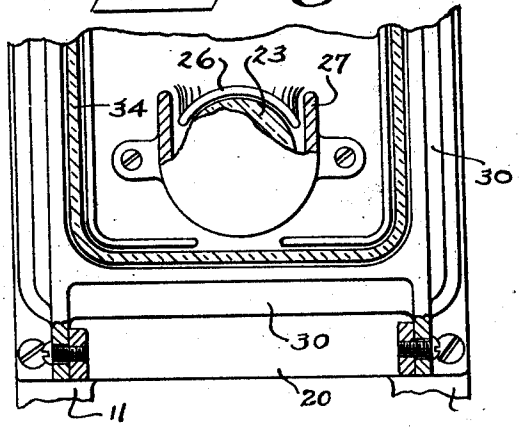

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Fig 4

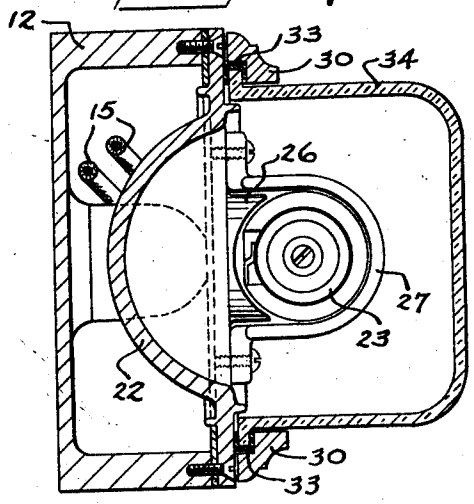
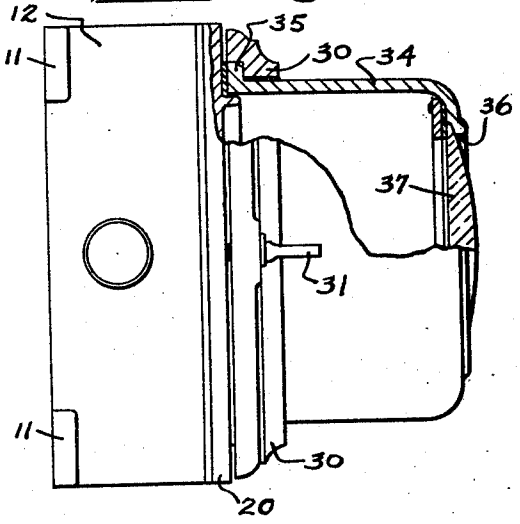


Fig 5



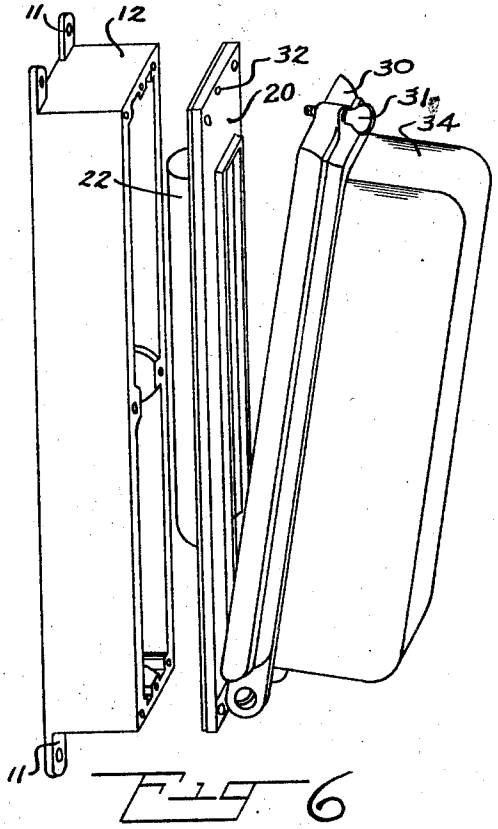


Fig 6

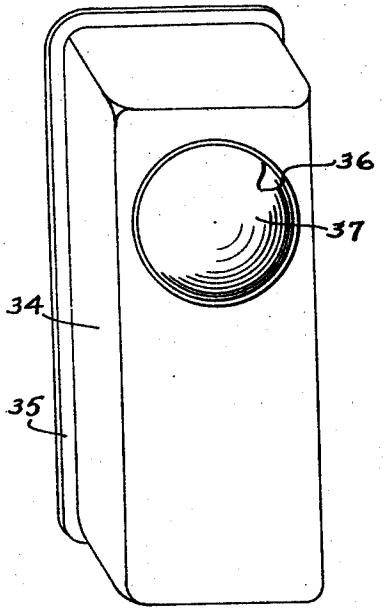


Fig 7

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UNITED STATES PATENT OFFICE

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ELECTRIC-LAMP FIXTURE

Application filed March 27, 1928. Serial No. 265,207.

The invention relates to electric lamp fixtures, more especially of the gas- or vapor-proof and water-tight type wherein a suitably protected lamp is so mounted that neither moisture nor gas or vapor can come in contact with the conductor-containing portion of the fixture even should the lamp itself become broken.

It has for its object a fixture of this type wherein not only the interior of the compartment for electrical conductors to the lamp but also the interior of a compartment for the lamp itself will be effectively sealed against the entrance of gases, vapors, water, etc., the novel fixture being especially adapted for use in garages, gasoline filling stations, dyeing and cleaning establishments, paint manufactories, benzol and like plants, powder mills and other industries where hazardous atmospheric conditions prevail.

The invention has for its object, also, an arrangement of conductor box or compartment whereby conduits for the conductors may be accommodated from any desired angle or position and the fixture thus may conveniently be installed and at a considerable saving in labor and expense. The fixture, also, is readily adaptable to various locations and may readily be positioned to afford the most desirable distribution of the light.

A further object of the invention resides in a protective fixture of this character which shall be of extremely rugged construction and designed to stand up almost indefinitely under the most rigorous conditions so as to safeguard both property and persons working in the vicinity thereof.

In carrying out the invention, the fixture is arranged with a conductor box having a specially designed sealing lid which provides also a reflector for the lamp and contains a socket for mounting the same, the said lid having hinged thereto a cover member with a transparent portion through which the light may shine when the circuit is closed to the lamp.

The nature of the invention, however, will best be understood when described in connection with the accompanying drawings, in which:—

Fig. 1 is a perspective view illustrating the installation of the novel lamp fixture.

Fig. 2 is a detail vertical section through the fixture.

Fig. 3 is a fragmentary vertical section taken on the line 3—3, Fig. 2, and looking in the direction of the arrows, and with portions broken away.

Fig. 4 is a transverse horizontal section taken on the line 4—4, Fig. 2 of the drawings, and looking in the direction of the arrows, the lamp being removed.

Fig. 5 is a plan view of the fixture with portions broken away.

Fig. 6 is a detached or disassembled view of the members composing the novel fixture.

Fig. 7 is a perspective view of a modified form of cover member.

Referring to the drawings, more particularly Fig. 1 thereof, 10 indicates, for example, the wall of a room to which the novel fixture is indicated as secured through lugs 11 of the conductor box portion 12 thereof. Into the latter are brought the conduits or pipes 13 and 14 for the conductors 15, said pipes being threaded at the box ends into one or more tapped openings 16 provided in bosses 17 of the inner wall and disposed along various portions thereof suitably for receiving at the desired angle or position the conduits 13, 14, etc. A gas or vapor- and water-tight junction is thus afforded for these conductors to the interior of the box 12 which is arranged to be completely sealed by means of a top member or lid 20 and an intermediate gasket 21, of rubber, asbestos and the like, the lid being screwed to the box in well-known manner.

The said lid, furthermore, is provided with a depressed or bowl-shaped portion 22 designed to extend into the box 12 but in manner such that ample space remains therein for accommodating the conductors 15 which are arranged therein to be connected to a socket member 23. This member is of the right-angle type and to which the conductors 15 are sealed at the base, the latter being seated upon a circular shelf or seat 24 of the lid 20 and formed about an opening 25 provided at this point in the said cover member to admit the conductors 15, the socket

with lid serving thus to conceal entirely the wiring to said socket.

A ridge or arcuate lip 26 also extends upwardly from said lid at the one side of the opening; and a protective housing or shield 27 is removably secured over the socket 23, being screwed to the top of said lid member, as indicated, and serving to hold the socket tightly to its seat. The lamp 28 for affording the desired illumination is adapted to be screwed into socket 23 in the usual manner, being disposed longitudinally over the reflector portion 22 of said lid, the depressed portion thereof accommodating also the lamp bulb and allowing of reduction in the thickness of the fixture.

Moreover, there is hingedly connected to said lid member at one end a cover frame 30 which may be firmly secured to the said cover by means of a thumb screw 31 passing through the frame 30 and adapted to fit into a tapped opening 32 of the lid member, a suitable gasket, for example a channel-shaped rubber gasket 33, being provided to insure proper sealing of the lamp chamber thus formed between the top of the lid 20 and a transparent cover 34. The latter is held in the frame 30 and about its flanged edge 35 is secured the channel-shaped gasket aforesaid, a double sealing action being thus afforded by said gasket, viz: between the cover 34 and its frame 30, and between the latter and the lid 20, the pressure applied being controlled by taking up more or less on the thumb screw 31. If desired, the usual protective wire screen (not shown) may be mounted over cover 34 for further protection.

It will be thus observed that not only is the lamp 28 adequately protected by the transparent cover 34 which permits the light to pass therethrough, but the chamber within which said lamp is mounted is tightly sealed against the entrance of gases, vapors or water. Even if these could, for example through breakage of the cover member, enter said comparement, it would not be possible for them to pass to the conductor compartment of the box 12 as the lid 20 securely seals the same at its union therewith, while the conductor opening 25 is fully sealed by the socket member 23 contacting with its seat 24 through the action of its protective cover 27.

Moreover, the conductor entrance through the openings 16 being effected through the substantial pipe conduits 13, 14 threaded therein, no gas or water may enter at these points; and the conductors are thus fully protected within said conductor compartment and do not extend into the lamp compartment, which contains only the socket and lamp bulb fitted therein.

While the cover 34 has been indicated as composed entirely of transparent material, it will be evident, of course, that for certain purposes only a portion thereof need be transparent, for example, a bull's eye window or opening 36 having a lens 37 sealed therein may be provided; and, as indicated in Fig. 7 of the drawings, the remaining portions of the cover may then be entirely of metal or other substantial material and having the edge flange 35 as in the previously described embodiment. This type is suitable for spot light, semaphore and like work and may be provided, if desired, with the usual reflectors, etc. (not shown).

I claim:

1. A fixture of the character described, comprising a conductor receiving box, conductors entering said box through a sealed inlet, a lid adapted to be fitted thereto to seal said box, said lid being provided with a depressed reflector portion extending into the said box, a socket member adapted to receive a lamp fitting into the depressed reflector portion, the said lid being provided with an outlet opening for the conductors for attachment of the same to the said lamp socket and a circular shelf extending therein from the lid, a shield for the socket, means to secure the same to the lid to force the base of the socket against the shelf and effect a seal thereat, and a cover member hinged to said lid and including a transparent portion.

2. A fixture of the character described, comprising a conductor receiving box, conductors entering said box through a sealed inlet, a lid adapted to be fitted thereto to seal said box, said lid being provided with a depressed reflector portion extending into the said box, a socket member adapted to receive a lamp fitting into the depressed reflector portion, the said lid being provided with an outlet opening for the conductors for attachment of the same to the said lamp socket and a circular shelf extending therein from the lid, a shield for the socket, means to secure the same to the lid to force the base of the socket against the shelf and effect a seal thereat, the said lid being provided with an upstanding ridge for locating said socket, and a cover member hinged to said lid and including a transparent portion.

In testimony whereof I affix my signature.

WILLIAM H. YATES.