Sept. 15, 1953 C. H. BISSELL 2,652,482

VENTED EXPLOSION-PROOF LIGHTING UNIT

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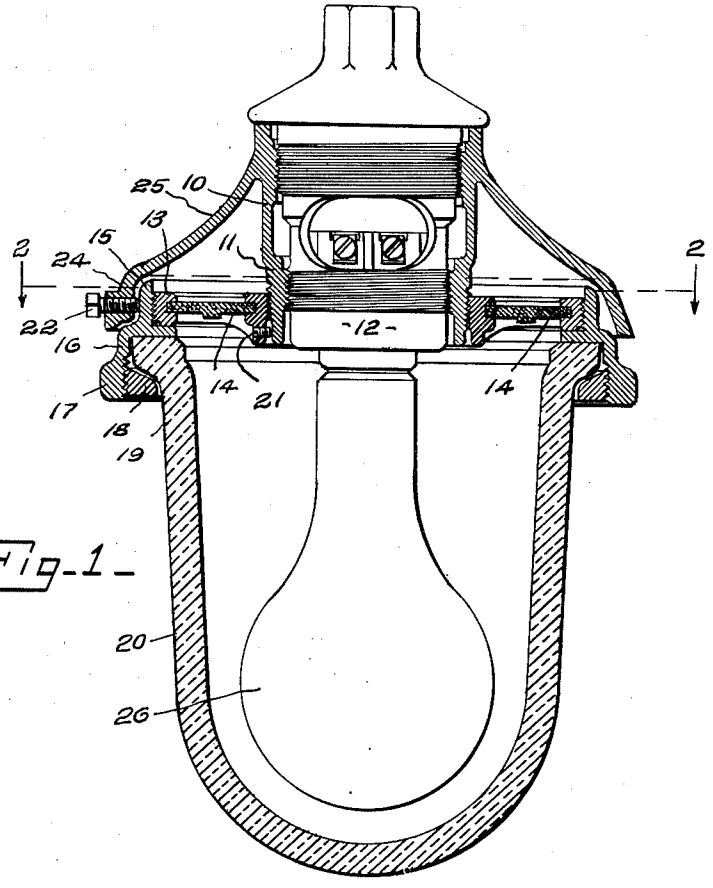


Fig-1

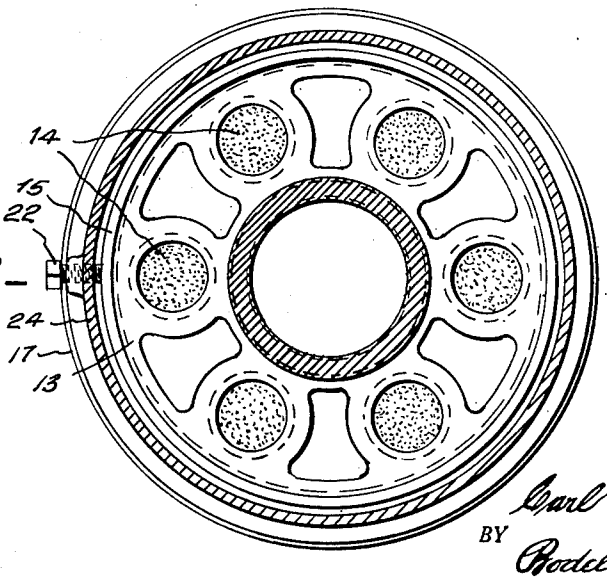


Fig-2

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VENTED EXPLOSION-PROOF LIGHTING UNIT

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1 Claim. (Cl. 240—11.2)

1

This invention relates to explosion proof lighting units and has for an object an explosion proof lighting unit embodying a structure wherein the lamp chamber of the unit is provided with a large venting area, or areas, of the flame arresting type, whereby there is developed substantially no pressure within the fitting in the event inflammable gases within the lamp chamber are ignited, the structure being particularly economical to manufacture and assemble.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

In the drawings—

Figure 1 is a vertical sectional view of a lighting unit embodying my invention.

Figure 2 is a view taken on line 2—2, Figure 1.

The body of the fitting consists of a cylindrical portion 10 having a depending annular flange 11 threaded internally and externally. A lamp receptacle 12 is threaded into the flange 11, and a supporting member 13 is threaded on the exterior of the flange. The supporting member 13 is of annular formation having a plurality of circumferentially spaced areas of slightly reduced thickness in which there are mounted a series of porous flame arresting vents 14. The vents 14 may be in the form of circular disks formed of sintered metal with their peripheral marginal portions embedded in the supporting member. A supporting member of this structure may be produced by arranging the sintered metal disks in a mold in which the supporting member is cast.

The peripheral edge of the supporting member is provided with threads to receive the internally threaded flange 15 of a globe ring 16. The ring 16 has a depending flange 17 threaded internally to receive an annular nut 18 coacting with a radial flange 19 of the glass globe 20, to detachably position the flange of the globe in flame tight relation against the ring 15, as illustrated in Figure 1.

The supporting member 13 may be secured on the flange 11 of the body against displacement by means of a set screw 21, and the globe ring 15 may be likewise secured in place by a set screw 22 threaded into a depending flange 24 of a canopy 25 carried by the body and overhanging the support 13.

2

With this arrangement, the receptacle 12, support 13 and globe 20 form a flame tight compartment for the lamp 26.

Due to the annular formation of the supporting member, several of the vents 14 can be provided to establish a large venting arrangement which is effective to quickly permit exploded gases within the lamp chamber to be vented therefrom and accordingly minimize the possibility of any pressure being built up within the fitting by the explosion.

The canopy 25 overhanging the supporting member 13 and encircling the periphery thereof effectively prevents foreign material from falling onto the vent members 14. However, the supporting member 13 can be quickly and conveniently removed from the unit for cleaning in the event it should become necessary to do so. Inasmuch as the venting members 14 constitute part of the supporting member 13, it is impossible to assemble the unit without the supporting member in proper position. This avoids the possibility of a workman dis-assembling the unit for any reason and re-assembling it without the flame arresting vent members 14 being put in operative position.

What I claim is:

An explosion proof lighting unit comprising a cylindrical body having an end portion threaded externally and internally, a lamp receptacle threaded into the threaded end of the body, a flat annular supporting member threaded on the body and extending radially therefrom, the periphery of said supporting member being threaded externally, a globe supporting ring threaded on the periphery of said supporting member, a globe detachably secured to said ring in flame tight relation thereto, said body being formed with an integral canopy portion extending radially over said supporting member and having a depending flange encircling said globe ring in spaced relation thereto, said supporting member being formed with a plurality of porous flame arresting vents formed of sintered material.

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