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2,678,381

ADJUSTABLE RECESSED LAMP

Filed Jan. 19, 1951

3 Sheets-Sheet 1

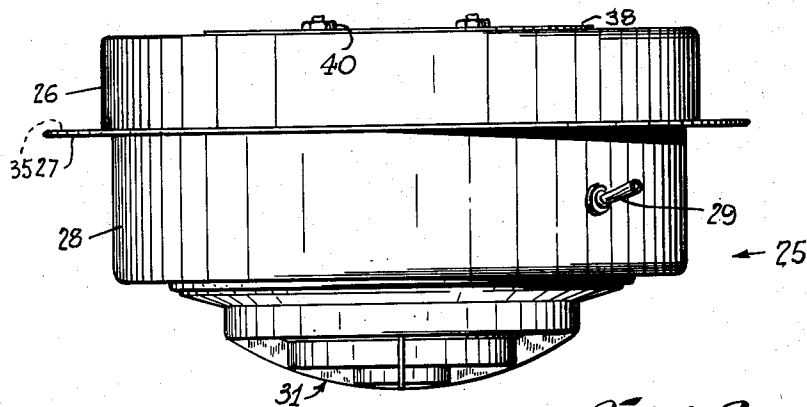


Fig. 2.

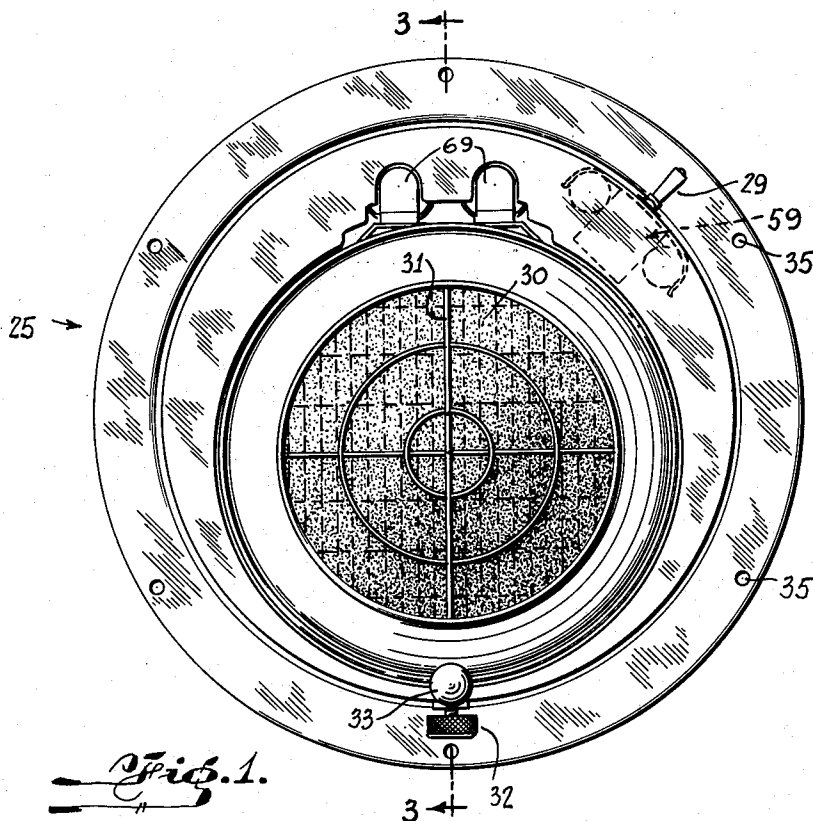


Fig. 1.

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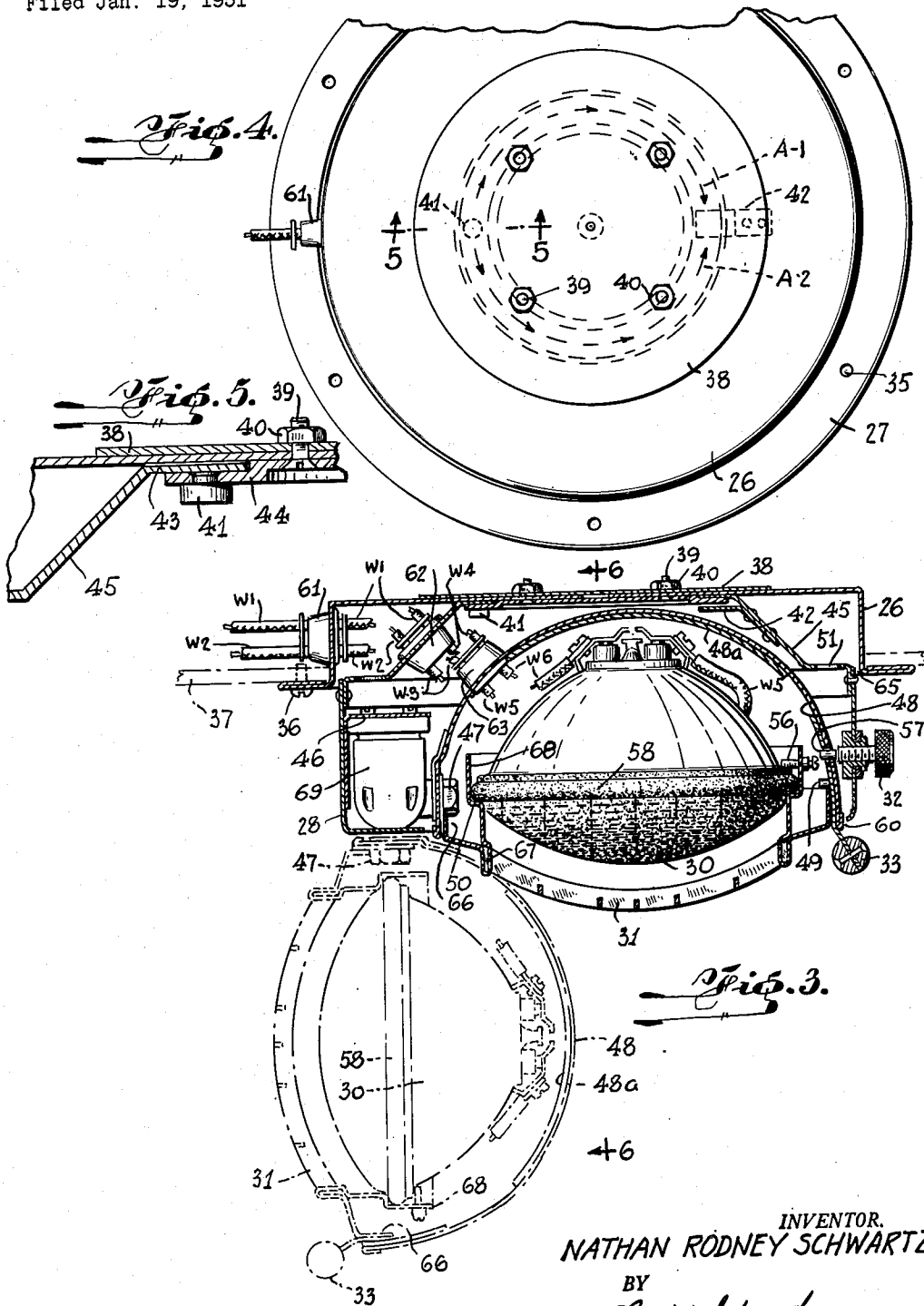
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3 Sheets-Sheet 2



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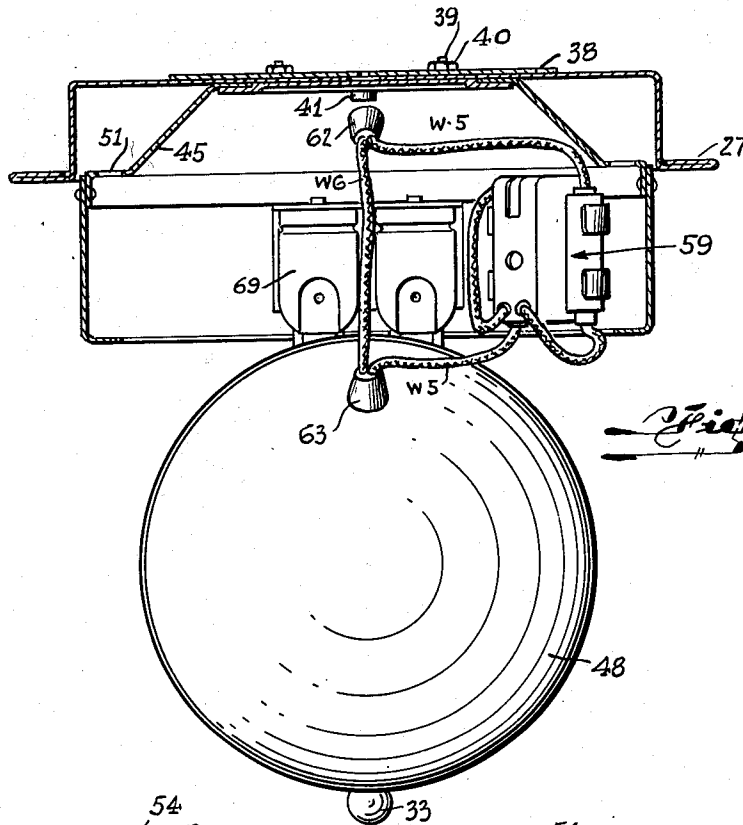
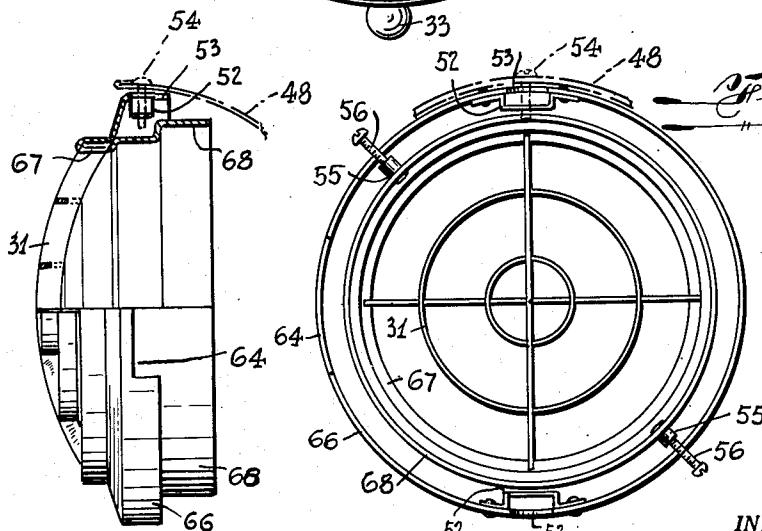
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

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ADJUSTABLE RECESSED LAMP

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1 Claim. (Cl. 240—78)

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This invention relates broadly to lighting units and more particularly to a lamp which is primarily intended for use by members of the medical profession, such lamp being commonly referred to as a surgical lamp.

The primary object of the present invention is to provide a lamp for the illumination of the interior of an ambulance. Ambulances are commonly equipped to accommodate six patients, and they generally have a lamp in the ceiling, which casts its rays directly downward. However, inasmuch as cots for the occupants of the ambulance are positioned along two opposite walls of the ambulance, it is difficult to administer food or treatment because of dim and insufficient illumination.

In order to eliminate this condition, it is the principal object of the present invention to provide a lamp for the interior of an ambulance, which may be secured to the ceiling of the ambulance, and which is adapted to be turned angularly up to 90° of its normal axis.

And it is a further aim of the present invention to provide a lamp of this character, which may be turned substantially one complete revolution in either direction.

And a yet further aim of the present invention resides in the provision of means to limit the angular and the rotative movements of the lamp.

And a still further purpose of the present invention resides in the provision of means to lock the lamp in its normal position.

And another feature of the present invention lies in the provision of a wire chamber in a lamp of this character, in which excess wire may be housed and its twisting during the rotation of the lamp prevented.

Another purpose of the present invention resides in the provision of a lamp of this character, which may be so adjusted that its rays may be cast in any desired direction, the arrangement being such that the lamp will automatically retain any of its adjusted positions until such time as the adjusted position is manually altered.

These and other meritorious aims and advantages are achieved by the novel construction, combination and arrangement of parts, hereinafter described, and illustrated in the accompanying drawing, forming a material component of this disclosure, and in which:

Figure 1 is a bottom plan view of a lamp made in accordance with the present invention.

Figure 2 is a side elevational view of the lamp illustrated in Figure 1.

Figure 3 is a sectional view of a lamp of the present invention, the section being taken on line

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3—3 of Figure 1, the lamp being shown in its normal position in the housing, and in an adjusted position, the latter being illustrated in dot and dash lines.

5 Figure 4 is a top plan view of Figure 3, partly broken away.

Figure 5 is a detail view in section, the section being taken on line 5—5 of Figure 4.

Figure 6 is a view taken on line 6—6 of Figure 3, showing the lamp in one of its adjusted positions.

Figure 7 is a plan view of the front of a lamp, showing a louver with which it may be provided.

Figure 8 is a side view in half cross section of the view illustrated in Figure 7.

Referring in greater detail to the drawing, the numeral 25 designates in general a lamp made in accordance with the present invention, which comprises a cylindrical wire housing 26 having a roof at one end, its other end terminating in an outstretched flange 27.

The lamp further comprises a hollow cylindrical shell 28 the diameter of which is slightly less than the diameter in wire housing 26, so that the shell may be entered into and retained in housing 26, as will hereinafter become more fully apparent. Somewhere on its wall, shell 28 may be provided with a conventional switch lever 29.

Movably retained in the shell 28 is a dome shaped bulb housing 48 the open end of which is adapted to have entered therein a bulb 30, over the lens, which is here illustrated as being concavo-convex in cross-section, there may be positioned a louver 31. On one point on its periphery, shell 28 may have a lock screw 32 passing there-through. In order to facilitate the manipulation of bulb housing 48, a handle 33 may be provided near the edge of housing 48. Housing 48 is hingedly secured to shell 28 by means of a swivel hinge 69 which will hereafter be more fully described.

Flange 27 may be provided with a plurality of spaced-apart openings 35 about its periphery for the passage of fastening means such as screws 38 therethrough, by means of which the lamp may be secured to the roof 37 of an ambulance, the roof being shown in dotted lines in Figure 3, the attachment here illustrated being such that wire housing 26 is embedded in the ceiling of the ambulance up to flange 27, the lower face of member 27 being exposed. An opening may be provided in the center of the roof of housing 28, which may be closed by cover plate 33, the cover plate being provided with openings for the passage of screws 39 or other fastening means there-through, retainable by nuts 40 or the like. Cover plate 33 is preferably positioned on the outer side of the roof of housing 26, the inner side of the

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housing having a swivel plate 44 positioned therein, plate or cover 44 being provided with a plurality of openings which are adapted to be brought into alinement with the openings in the cover plate 33, so that screws 39 will pass through the openings in both covers. Plate 44 may be provided on its inner face with a stop knob 41 adapted to engage a stop flange 42 secured by rivets or otherwise to housing 26 and so positioned that it will lie in the path of knob 41. Swivel members 69 are secured to a swivel bracket 46 which is attached by rivets or otherwise to the inner face of housing 26, each swivel member having a neck which extends into the bulb housing 48 near the rim thereof, where each neck is secured by a bolt 47 or in any other desirable and suitable manner. The inside of housing 26 is tapered as at 45. For the purpose of insulation, housing 48 may be provided with asbestos, as at 48a, or any other suitable and desirable material. A pair of swivel members 69 are used to permit angular adjustment of the lamp.

Bulb 30 may be contained in a flange member 50 having a plurality of spaced-apart brackets 52, each bracket being provided with a slot 53, each of said slots adapted to receive a screw 54 which extends inwardly from the interior of housing 48, whereby the inward movement of the bulb into the housing is limited. There may also be provided in flange 50 a plurality of spaced-apart sleeves 55, each of which is adapted to receive a screw 56 by means of which the bulb 30 is retained in sleeve 50. Housing 48 may also be provided with an opening 57 which, when the lamp is in its normal or retracted position, is adapted to receive screw 32 in order to lock the lamp in that position. Bulb 30, at its widest point, may be provided with a bead 58, which is conventional with bulbs of this type, which is adapted to seat in flange 50. A conventional switch 59 may be provided in housing 26, conventional plugs, such as 61, 62 and 63 may be provided, air openings such as at 35, 60 and 65 may be provided, and flange member 50 may have an outer wall 66 and an inner wall 68, the inner wall being adapted to have a plurality of baffles secured thereto, said baffles forming the louver 31. The several wires used in conventional wiring are illustrated at W1, W2, W3 and W4 and arrows A1 and A2 indicate the direction of swiveling. The edge of housing 48 is turned inwardly to form an eccentric flange 69.

The lamp operates as follows: Inasmuch as the preferred use for the lamp hereabove described is in an ambulance, provision has been made to mount it in and attach it to the ceiling of an ambulance. Housing 26 has been provided for that purpose. After an opening has been made in the ceiling of an ambulance the opening being as large as the diameter of housing 26, the lamp is entered therein up to flange 27 and is there secured in any convenient and desirable manner. When the lamp is in its normal or retracted position, it may be desirable to lock it in that position since, when the ambulance travels over bad roads it is possible, although extremely unlikely that the lamp may swivel angularly. To lock it, screw 32 is turned by its knob and will enter opening 57 in housing 48. It may be desired to cause the rays of the lamp to be cast upon the right hand side of the ambulance or upon the left hand side or in any other desirable direction. Screw 32 is then withdrawn from the housing 48 and the lamp may be hingedly withdrawn from housing 48. Handle 33 has been provided to facilitate

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the manipulation of the lamp, the handle being provided preferably at a point diametrically opposite the swivel means. The housing 48 and the bulb 31 secured thereto may be moved up to 90° of its normal axis and will remain in any adjusted position. The lamp may also be rotated substantially one complete revolution in either direction. Housing 26, being mounted to a support, will remain stationary. Since swivel plate 44 is secured to housing 26 and cover plate 33, it remains stationary, shell 28 in which housing 48 is secured, rotates, and when flange 42 makes contact with knob 41 which is formed on swivel plate 41, rotation in that direction is stopped, and the lamp must be turned in the other direction.

Many uses can be found for this lamp in addition to the one hereabove indicated. It can be used with great effectiveness by a dentist. In such use, the attaching means might be so modified that the lamp can be attached to a support on or in association with a dentist's chair. Another modification might be in the use of more swivel units than are indicated in the drawing, or in the use of only one swivel unit. It might also be desirable to attach the lamp to an ambulance in a manner other than here indicated by attaching it to the surface of the ceiling instead of partly imbedding it in the ceiling.

There has thus been shown a universally adjustable surgical lamp in the best known form of its construction. However, applicant reserves the right to make such changes in the construction of the device as might come within the scope of the appended claim, without thereby departing either from the spirit or the scope of the appended claim, since the present disclosure is to be regarded merely as illustrative and descriptive of one of the forms and not as limitative or restrictive to the exact details shown.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent, is:

In a universally adjustable surgical lighting fixture having a retractable lamp adjustable about vertical and horizontal axes, a hollow wire box having a side wall and a roof, a cover plate on the outer face of said roof, a swivel plate on the inner face of said roof means joining said plates and closing said opening, a hollow shell in said wire box extending partly therefrom, said shell rotatably retained in said wire box, means cooperating between said wire box and said shell limiting the rotative movement of said shell, a lamp hingedly mounted in said shell, and means extending through said shell and the wall of said lamp releasably locking said lamp in said shell.

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