

[54] LIGHT FIXTURES

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[21] Appl. No.: **219,740**

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Primary Examiner—Robert P. Greiner

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292/43

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[58] Field of Search 240/25, 41.5, 41.55, 146,
240/147; 292/DIG. 31, 113, 114, 256, 256.5,
247

[57] ABSTRACT

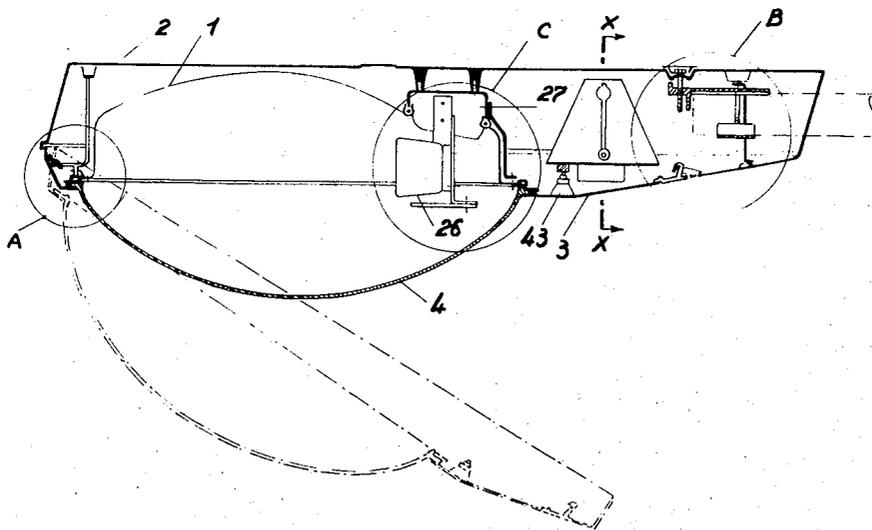
The body of the light fixture is made of two portions, of which the upper supports the reflector, the bulb, and the power supply gear and comprises means for securing the light fixture on the arm or on the upper end of a lamp post, while the other, lower, is provided with an ordinary bowl and permits, by its opening, access to the aforesaid members without the aid of tools.

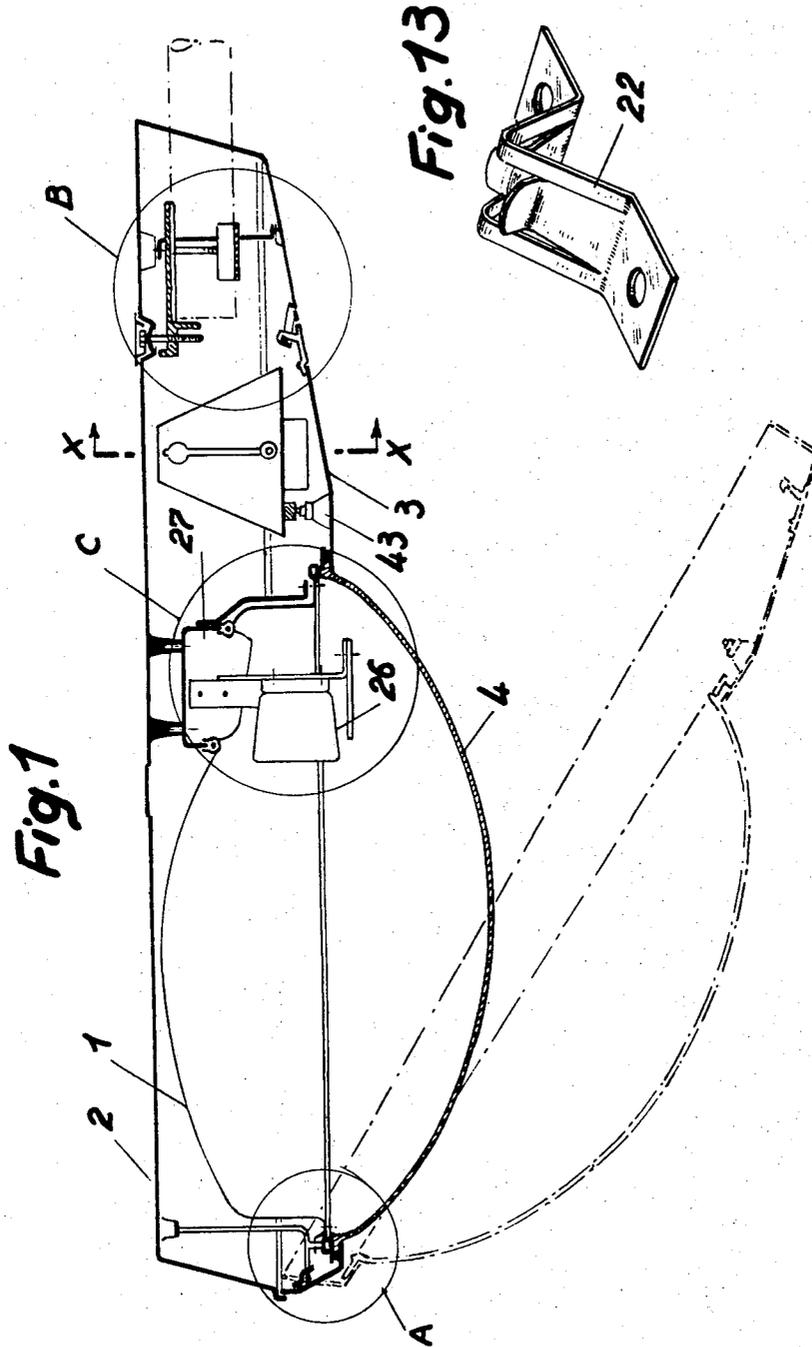
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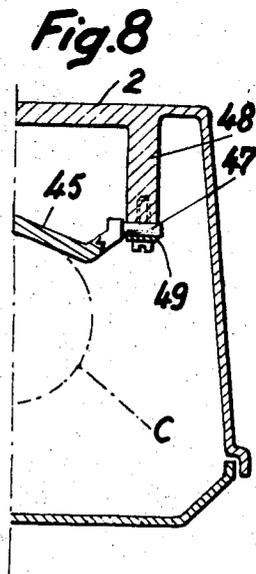
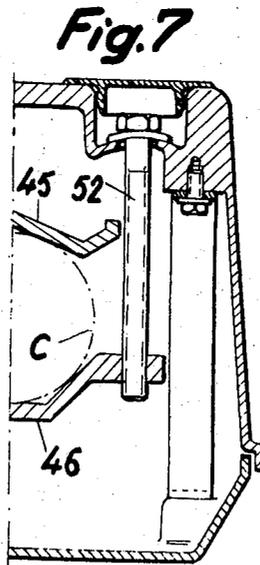
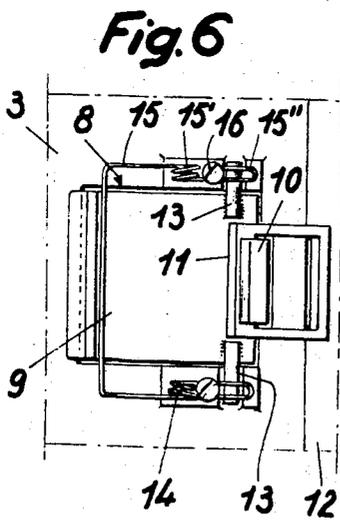
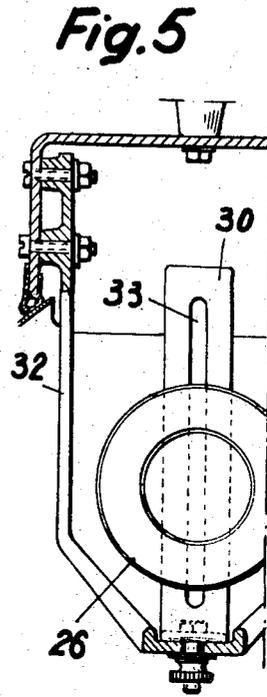
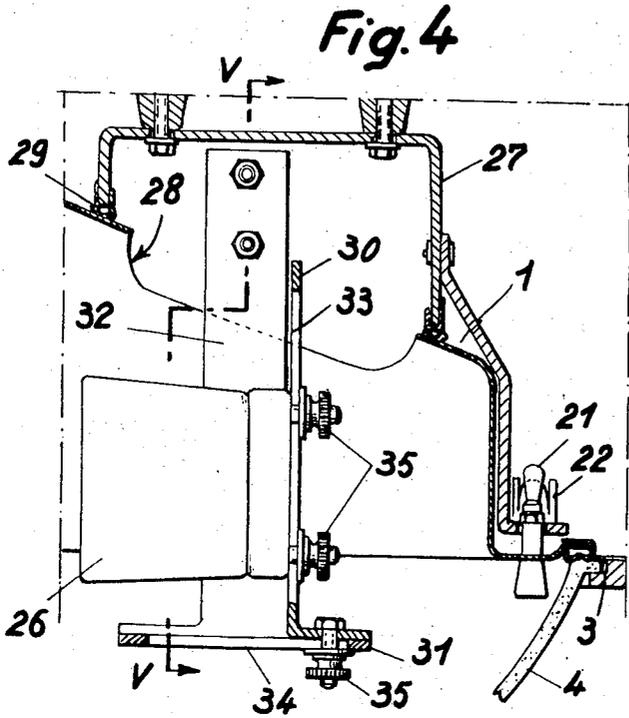
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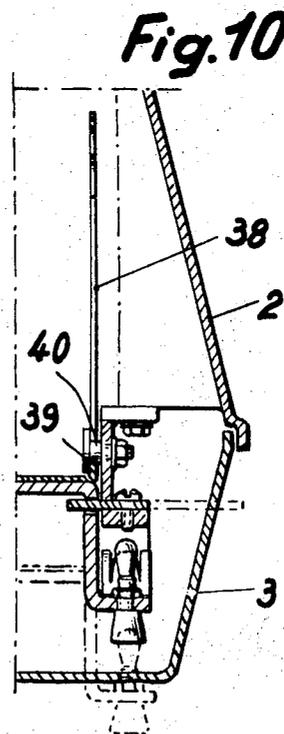
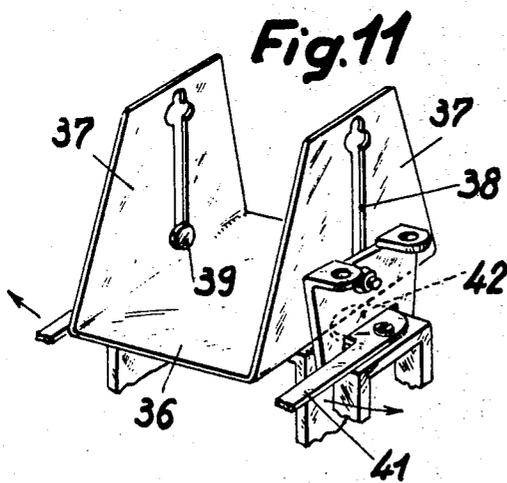
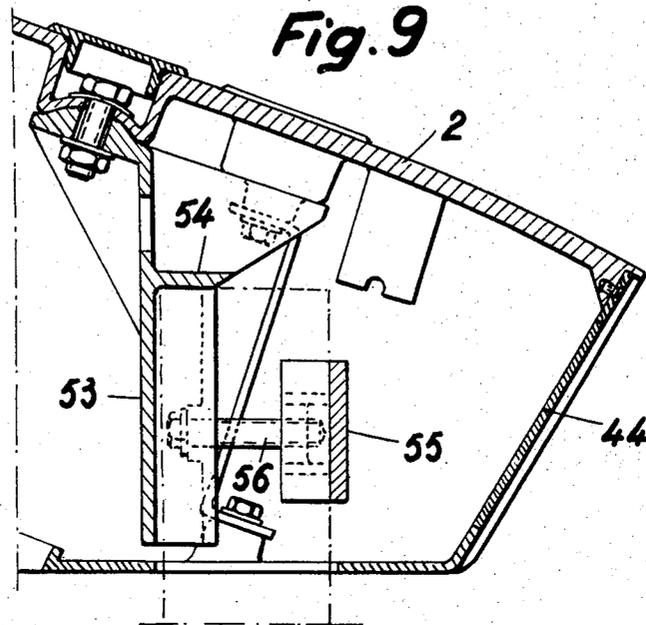
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1 Claim, 13 Drawing Figures









LIGHT FIXTURES

The present invention relates to a light fixture of the kind used, among others, for the lighting of public roads.

This light fixture is remarkable in that its reflector is arranged inside a body of two portions which can be taken apart without the aid of tools, in that it comprises means for adjustment of the bulb which can be displaced in the plane of symmetry of said reflector, in that it comprises means giving easy access to the power supply gear, and means permitting it to be secured either on a vertical mast or a horizontal arm.

The invention will become more evident from the description which follows, made with reference to the drawings annexed by way of indicative example only, in which:

FIG. 1 is a schematic view of the light fixture in longitudinal section;

FIG. 2 is a view on a larger scale of the detail A of FIG. 1;

FIG. 3 is a view on a larger scale of the detail B of FIG. 1;

FIG. 4 is a view on a larger scale of the detail C of FIG. 1;

FIG. 5 is a partial view in section taken along line V—V of FIG. 4;

FIG. 6 is a partial view taken along the arrow F of FIG. 3;

FIG. 7 is a partial view in section taken along line VII—VII of FIG. 3;

FIG. 8 is a partial view in section taken along line VIII—VIII of FIG. 3;

FIG. 9 is a view analogous to FIG. 3 showing the fastening of the light fixture on a vertical mast;

FIG. 10 is a partial view in section on a larger scale taken along line X—X of FIG. 1;

FIG. 11 is a partial view in perspective of the movable support of the power supply gear;

FIG. 12 is a perspective view of an arm, and,

FIG. 13 is a perspective view of a retention piece.

Referring to the drawings, it is seen that the reflector 1, generally made of aluminum of small thickness to facilitate its shaping, is disposed in a sturdy protective assembly, or body, which besides the functions of protection against shocks, permits also to insure those of assembly of the various parts constituting the light fixture, protection against the introduction of liquids and solids, electric protection and maintenance.

According to the present invention, the body of the light fixture comprises two portions 2 and 3. The reflector 1 is secured in portion 2, while portion 3 supports the bowl 4.

As work on a light fixture is very costly, it must be done quickly.

To that effect, the fixation of portion 3 under 2 and its disassembly are carried out without tools and the removal of said portion 3 permits access to all members of the light fixture.

Portion 3, which nests in portion 2, presents at its front end a fork 5 which rests against the end of an arm 6, FIG. 12, integral with portion 2 and presenting, to that effect, two lateral pivot pins 7.

At its rear end, portion 3 presents an opening 8 in which is lodged a flap 9 presenting on its inner face a hook 10 normally in engagement with a catch 11 integral with a piece 12 forming the prolongation of portion 3 but fastened to portion 2.

The flap 9 presents also on its inner face two pivot pins 13 lodged in open bearings provided in two bosses 14 arranged on either side of the opening 8. The returning of flap 9 is insured by a U-shaped spring 15 whose lateral branches spiraled at 15' have their ends 15'' likewise bent in U form, which extend on the pivot pins 13. Two screws 16, screwed into the bosses 14 and passing between the two branches of the ends 15'', insure at the same time the holding of spring 15 and of flap 9. The lateral branches of the spring 15 are judiciously cambered to maintain flap 9 in the prolongation of portion 3, with the result that hook 10 is held in engagement with the catch 11, FIGS. 3 and 6.

To open the light fixture it suffices to pivot flap 9 according to arrow F₁, FIG. 3, to release hook 10 and the lower portion 3 of the body can then pivot about pivot pins 7 of piece 6 while remaining hooked to portion 2, FIG. 1 and 2.

The opening of the body 2—3 permits, notably, getting to the reflector 1 and to the bowl 4.

The reflector 1 presents a collar 17 reproducing the contour of a peripheral cord 18 provided at the upper portion of the bowl 4. Regardless of what reflectors are used, they all comprise a collar identical to that of 17 which is provided with a joint 19, made of an elastic material normally compressed between the cord 18 and the edge of the collar 17 on which said joint is gripped, FIG. 2.

The holding of the bowl 4 on portion 3 is insured by claws 20 such as shown in FIG. 2.

The reflector 1 is removably fastened to the body 2, and to that effect it comprises toward its rear end a locking finger 21 susceptible of being elastically engaged in a retention piece 22 with the assembly 21—22 operating in the manner of a pushbutton. A preferred form of piece 22 is illustrated in FIG. 13. The fastening of the front portion of reflector 1 is effected by the interposition of claws 23 extending over its collar and forming, in combination with the latter, forks normally engaged on lateral extensions 24 of a lower prolongation 25 of arm 6.

The withdrawal of the reflector is effected by exerting a downward traction on the finger 21, to release it, and then by displacing said reflector rearwardly to disengage the claws 23 in the extensions 24.

It should be noted that the opening or closing of the body as well as the positioning or withdrawal of the reflector area are effected easily and without need of tools.

According to another characteristic of the invention, the bulb-receiving socket 26 is integral with a casing 27 fastened to portion 2. An opening 28 is provided in the reflector 1 to permit the passage of the support members and/or the members for adjustment of the socket 26, the tightness being insured by a peripheral joint 29 engaged on the lower edge of the casing 27.

The support of the socket 26 consists essentially of an L-shaped arm 30, against the vertical wing of which arm it is removably fixed with said arm 30 being fixed by its horizontal wing on the median portion 31 of a U-shaped piece 32 integral with the casing 27 by the upper ends of its lateral branches. The vertical wing of arm 30 and the median portion of piece 32 present, respectively, grooves 33 and 34 whose axes are perpendicular and lie in the plane of symmetry of the reflector 1. Thus it is possible, by acting on the fastening nuts 35, FIGS. 4 and 5, to displace the bulb in the plane of sym-

metry of the reflector. The openings 28 provided in the reflector 1 increases the capacity of adjustment as it is thus possible, theoretically, to place the bulb very close to the reflector.

The power supply gear, consisting essentially of the elements necessary for starting up and for stabilizing the discharge of the bulb, may accidentally be put out of order and its replacement must be carried out in the shortest possible time of work on the site.

For this purpose, the aforesaid gear is fixed on a plate 36 forming the median portion of a U-shaped piece whose lateral branches 37 can be moved toward each other elastically, each of the branches 37 presenting a vertical groove 38 opening at its upper portion in a hole which permits the passage of the head 39 of a guide nipple 40 integral with the body 2. It is thus possible, by letting the plate 36 descend, to easily get to the power supply gear which, in the low position, lies well below the lower edge of portion 2 of the body. In this position it is also possible to withdraw the assembly 36-37 by elastically tightening the branches 37 whose upper holes of the grooves 38 then coincide with the heads 39 of the nipples. Conventional manual disconnectors serve to separate the power supply gear of the electric circuit.

The locking of plate 36 in its high position can be insured, as shown in FIG. 10, by a pushbutton device similar to elements 21-22 used for the reflector or by a pivoting lever 41 articulated on portion 2 and having an extension 42 capable of extending under plate 36, FIG. 11. These two devices can be used separately or in combination.

Work on the light fixture can take place when the latter carries current. A general disconnecting device is provided such as indicated at 43 in FIG. 1, which electrically insulates the apparatus when the body is opened.

According to another characteristic of the invention, the piece 12, integral with portion 2 and forming the rear portion of the light fixture, takes on the form of a square and presents on each of its branches a hole plug 44 which can easily be pushed out and which permits the introduction of the end of an arm C, whether the latter is arranged vertically or horizontally.

When the arm C is disposed horizontally, FIG. 3, two

half-collars 45 and 46 are used.

The half-collar 45 presents at one of its ends two lateral pivot pins 47 resting on two half-journals provided in bosses 48 of portion 2 with the holding of said pivot pins being insured by plates 49 as shown in FIGS. 3 and 8. A screw 50 is engaged in the other end of the half-collar 45 with the head of said screw taking support on an arched surface 51, being immobilized in translation and capable of being handled from the outside, FIG. 3.

The fastening of the half-collar 46 is effected preferably as shown in FIG. 7, that is, with the aid of screws 52 capable of being handled from the outside.

This device permits compensating the divergences due to the manufacture of the arms and aligning of the light fixtures.

FIG. 9 shows an example of securing the light fixture on a vertical mast.

The half-collar 53, which is integral with the portion 2, presents a stop 54 which limits the introduction of the end of the vertical mast. The half-collar 55, identical with the aforementioned half-collar, is fixed directly on 53, with direct access to the lock screws 56 from the interior when portion 3 of the body is open.

I claim:

1. Light fixture for a lamp post comprising, in combination a reflector, a bulb, a power supply gear, an elongated body having two portions, the upper portion of which supports said reflector, bulb, and power supply gear and means for securing said light fixture on the usual support, a bowl provided on the other lower portion, said lower portion, which nests in the upper portion being fixed on said usual support and presenting at its front end, at least, a hook, a lateral extension of a fixed piece capable of engaging said hook and being integral with said upper portion, on which said lower portion remains hooked when the body is open for access, simultaneously, to said bulb and said power supply gear, said lower portion presenting, moreover, toward its rear end, an opening, a flap in said opening, pivots pins on said flap, a hook on the inner face of said flap, a catch on said upper portion of the body and a spring tending to maintain said hook in engagement with said catch and also maintaining said pivot pins in their seat.

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