

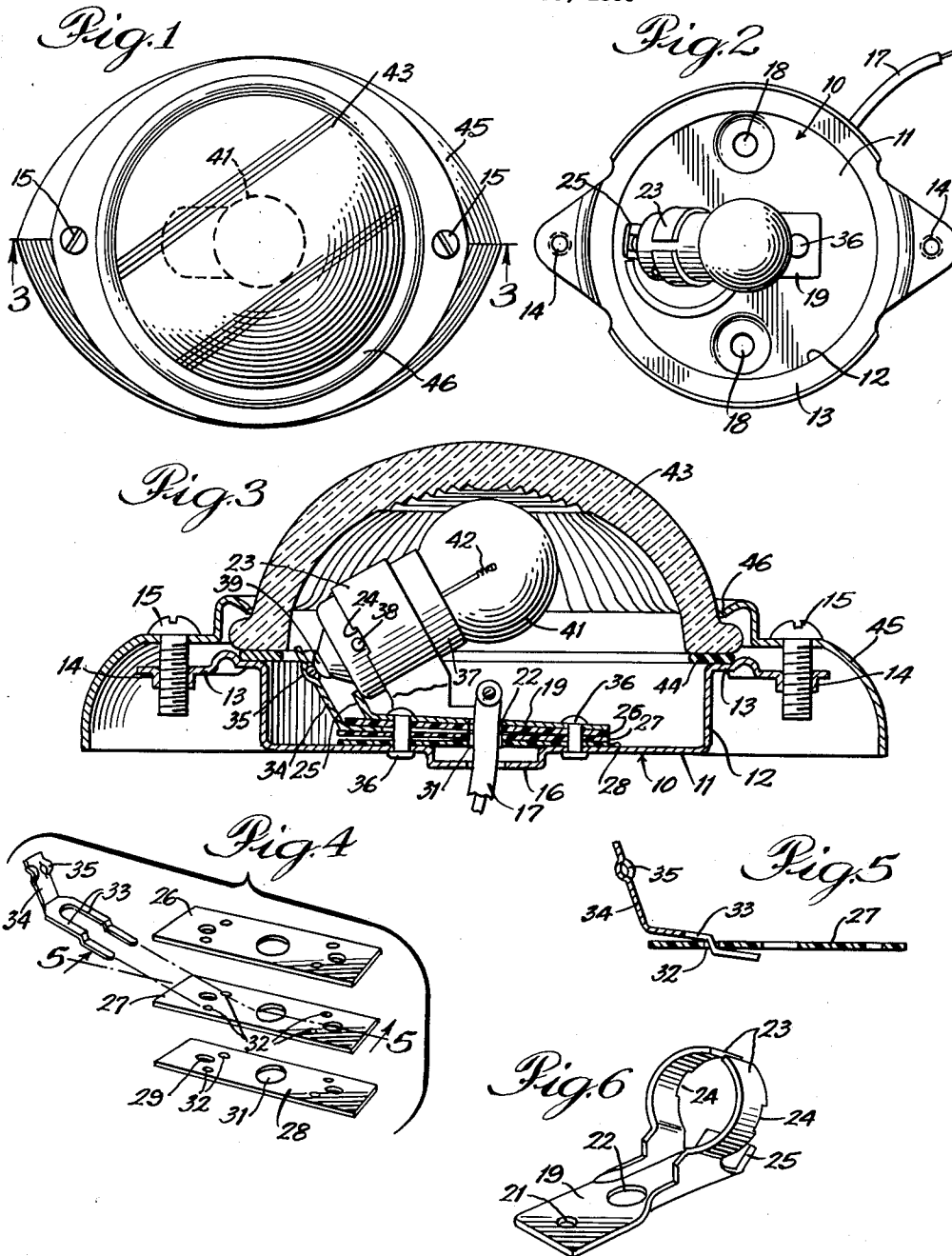
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CLEARANCE LAMP

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## CLEARANCE LAMP

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This invention relates to clearance lamps and more particularly to a signal lamp assembly of the type adapted to be mounted on the walls of trucks or trailers and sometimes on fixed structures to indicate the outline or position of the structure.

In clearance lamps of this type it is essential that the overall height of the assembly be maintained at a minimum so that it will project a minimum distance beyond the wall on which it is mounted. When a conventional lamp socket is employed projecting at right angles to the wall and covered by a transparent cover or lens, the height becomes excessive and structures of this type are therefore not satisfactory.

In an attempt to satisfy all of the requirements for a unit of this character, clearance lamps have heretofore been made with a cup-shaped sheet metal base closed by a transparent lens or cover which has generally been dome-shaped and with an electric lamp lying substantially flat in the base. Such constructions provide minimum height of the assembly, but the lamp is positioned with its filament close to one side of the base and lens so that the light is not uniformly distributed. The assembly is therefore not efficient for its intended purpose and has not been completely satisfactory.

It is therefore one of the objects of the present invention to provide a clearance lamp in which the lamp filament is centered relative to the lens to obtain maximum effective light distribution without increasing the size of the unit.

Another object is to provide a clearance lamp in which the lamp is supported adjacent to one side of the base at an acute angle thereto so that the lamp filament lies centrally on the interior side of the lens.

A further object is to provide a socket assembly for a clearance lamp which is simple and inexpensive to manufacture and which occupies a minimum of space.

According to a feature of the invention, the socket assembly is formed by a stack or sandwich of strips, including an outer metal strip having upstanding curved side flanges defining a collar to receive the base of an electric lamp and an upstanding lug to engage the end of the lamp base and limit movement thereof into the collar. The outer metal strip is engaged by an insulating strip constituting one of a pair of insulating strips between which a second strip is sandwiched which is punched to receive offset prongs of a terminal strip which is secured in place by engagement of the prongs with the adjacent insulating strips. The terminal strip extends upwardly into alignment with the collar to engage a center terminal on the lamp base.

The above and other objects and features of the invention will be more readily apparent from the following description when read in connection with the accompanying drawing, in which:

Figure 1 is an elevation of a completed clearance lamp assembly embodying the invention;

Figure 2 is a view similar to Figure 1 with the cover and lens removed;

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Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is a disassembled view of the terminal strip and insulating strip sandwich;

Figure 5 is a section on the line 5—5 of Figure 4 showing the terminal strip assembled in the supporting strip therefor; and

Figure 6 is a perspective view of the upper metal strip constituting the collar.

The clearance lamp unit, as shown, comprises a base indicated generally at 10 which is preferably formed of sheet metal with a flat bottom portion 11 and an upstanding circular side wall 12. A peripheral flange 13 projects outward from the top of the side wall 12 to define a seat for the lens and is provided at its opposite ends with threaded lugs 14 to receive fastening screws 15. The flat bottom 11 of the base may be punched out in its center, as indicated at 16, and formed with an opening through which the wire 17 may extend to conduct electric current to the lamp. The base may be mounted on the wall of a truck, trailer, or the like, by means of fastening screws extending through openings 18 in the bottom wall of the base and the wire 17 may extend through an opening in the truck or trailer wall into the base.

The base carries a socket assembly which is formed, as best shown in Figures 4, 5 and 6, of a stack or sandwich of strips defining a collar to receive the base of a conventional filament type electric lamp and a terminal strip to engage the center contact or terminal on the lamp base. The sandwich or stack is formed of an upper metal strip 19, as shown in Figure 6, which is generally flat and is formed with punched openings 21 therethrough to receive rivets and with a central enlarged opening 22 through which the wire 17 may extend. At its sides adjacent to one end, the strip 19 is formed with upwardly projecting curved flanges 23 whose concave surfaces face each other to define a split collar of a size to receive the base of an electric lamp. It will be noted that the flanges are spaced slightly from each other at the top and bottom of the collar to provide passages through which the mounting prongs on the lamp base may pass. Additionally, the flanges may be notched, as indicated at 24, to provide seats for the mounting pins on the lamp base to prevent it from accidentally turning in the collar. The end of the strip 19 is turned up to provide a short lug 25 adjacent to the collar to engage the lamp base and limit movement thereof into the collar, as described hereinafter.

Three strips 26, 27 and 28 which may be, and preferably are, identical are stacked beneath the strip 19 and are formed with end openings 29 to receive rivets and with enlarged central openings 31 through which the wire 17 may pass. The outer strips 26 and 28 are formed of insulating material, such as mica, or a relatively hard plastic and the center strip 27 may be formed of the same insulating material or may, if preferred, be of sheet metal where wire connections to the center strip are desired. The center strip is additionally formed with laterally spaced pairs of openings 32 near its ends and where the strips are identical, as shown, similar openings may be provided in the strips 26 and 28.

The socket assembly is completed by a terminal strip which is angularly bent between its ends and which is formed at one end with spaced prongs 33 which are offset between their ends, as shown. The opposite end 34 of the terminal strip extends from the prongs 33 at an acute angle and is preferably punched out, as shown at 35, to define loops through which the wire 17 may be threaded.

The terminal strip is assembled to the center strip 27 by passing the ends of the prongs 33 through one set of openings 32, as shown in Figure 5. Due to the offset in the prongs, the end portions thereof will lie flat against

the opposite surfaces of the center strip 27 and when the three strips 26, 27 and 28 are assembled together the insulating strips 26 and 28 will press the end portions of the prongs against the center strip 27 to hold the terminal strip securely assembled. The strips are secured together and are secured to the flat bottom 11 of the base by means of rivets 36 extending through openings in the base and through the rivet openings 29 and 21 in the strips.

When so assembled, the collar defined by the flanges 23 will lie at an acute angle to the bottom 11 of the base sloping upward from one side thereof toward the center. The terminal strip 34 will extend upward into alignment with the lower end of the base to provide a center contact for engagement with the center terminal on a lamp. The wire 17 may be threaded through the loops 35 to make a circuit with the lamp, the other side of the circuit being completed to ground through the metal strip 19 and the rivets 36.

A conventional electric lamp is supported in the socket and, as shown, has a cylindrical base portion 37 carrying mounting pins 38 at diametrically opposite points and terminating in a center contact or terminal 39. The base carries a transparent bulb 41 containing a filament 42. To mount the lamp in the socket it is turned to a position in which the pins 38 are aligned with the upper and lower gaps between the flanges 23 and is pushed into the collar defined by the flanges until the pins 38 pass the rear edge of the flanges. The lamp is then turned through approximately 90° to bring the pins 38 into registry with the notches 24 which hold the lamp against accidentally turning in the socket. At this time, the end of the lamp base will engage the upturned lug 25 on the strip 19 so that the lamp base cannot be pressed too far into the socket to damage the terminal strip or to cause short circuiting of the base against the terminal strip. With the lamp in this position, the terminal strip will engage the center terminal 39 to complete a circuit through the lamp and the filament 42, as best seen in Figure 3, will lie above the center of the base and relatively close thereto.

The assembly is completed by a transparent lens or cover 43 which is preferably dome-shaped, as shown, and which rests on the flange 13 of the base with a sealing strip 44 preferably being interposed therebetween. The lens is held on the base by a cover ring 45 having an annular flange 46 to engage an outer bead on the lens and preferably having a skirt portion completely to enclose the base and to present a pleasing appearance. The cover is secured to the base by the screws 15, as shown.

In the completed assembly, the filament 42 will lie in a centered position with respect to the lens 43 so that when the lamp is lighted the light from the filament will be distributed substantially uniformly throughout the lens to produce a uniform and highly efficient light. At the same time due to the compactness and mounting of the socket assembly the overall size of the unit may be the same as that of conventional clearance lamps in which the electric lamp is mounted flat against the base with the filament adjacent to one side thereof.

While one embodiment of the invention has been shown and described herein, it will be understood that it is illustrative only and not to be taken as a definition of the scope of the invention, reference being had for this purpose to the appended claims.

What is claimed is:

1. A clearance lamp for mounting on walls of vehicles and the like comprising a base adapted to be mounted on a wall, a socket member secured to the base and including a socket to receive an electric lamp, the socket lying at one side of the center of the base with its axis at an acute angle to the base, a dome-shaped lens secured to the base overlying the socket, and an electric

lamp mounted in the socket with its filament centered relative to the lens, said socket comprising a strip of sheet metal secured to the base and formed adjacent to one end with bent up curved flanges defining a collar to receive the base of the lamp, an upturned lug at said one end of the strip to engage the end of the lamp base, and a terminal strip in insulated relation to the first named strip extending beyond said one end thereof to engage a center contact on the lamp base.

2. A clearance lamp for mounting on walls of vehicles and the like comprising a base adapted to be mounted on a wall, a socket member secured to the base and including a socket to receive an electric lamp, the socket lying at one side of the center of the base with its axis at an acute angle to the base, a dome-shaped lens secured to the base overlying the socket, and an electric lamp mounted in the socket with its filament centered relative to the lens, said socket comprising a sandwich formed of a lower insulating strip engaging the base, a second strip formed with a pair of spaced openings adjacent one end thereof, a third insulating strip and an upper metal strip having means thereon forming a collar in which the base of the lamp is received, and a terminal strip having spaced offset prongs at one end extending through the openings in the second strip and held against the second strip by the insulating strips and extending upward at its other end into alignment with the collar to engage a center contact on the lamp base.

3. A clearance lamp for mounting on walls of vehicles and the like comprising a base adapted to be mounted on a wall, a socket member secured to the base and including a socket to receive an electric lamp, the socket lying at one side of the center of the base with its axis at an acute angle to the base, a dome-shaped lens secured to the base overlying the socket, and an electric lamp mounted in the socket with its filament centered relative to the lens, said socket comprising a sandwich formed of a lower insulating strip engaging the base, a second strip formed with a pair of spaced openings adjacent one end thereof, a third insulating strip and an upper metal strip having bent up curved flanges adjacent one end defining a collar to receive the base of the lamp and an upturned lug at said one end to engage the end of the lamp base, and a terminal strip having spaced offset prongs at one end extending through the openings in the second strip and held against the second strip by the insulating strips and extending upward at its other end into alignment with the collar to engage a center contact on the lamp base.

4. In a clearance lamp, a socket unit comprising a strip of sheet metal having upstanding curved side flanges defining a collar to receive the base of an electric lamp, the collar lying at an acute angle to the strip with its lower end adjacent to one end of the strip, an upturned lug at said one end of the strip to engage the end of a lamp base in the collar, and a terminal strip secured to the first named strip in insulated relation thereto and extending beyond said one end of the first named strip in alignment with the collar to engage a center terminal on a lamp base in the collar.

5. In a clearance lamp, a socket unit comprising a strip of sheet metal having upstanding curved side flanges defining a collar to receive the base of an electric lamp, the collar lying at an acute angle to the strip with its lower end adjacent to one end of the strip, an upturned lug at said one end of the strip to engage the end of a lamp base in the collar, a pair of insulating strips sandwiching a second strip secured to the lower surface of the first named strip, the second strip having a pair of laterally spaced openings therethrough intermediate its ends, and a terminal strip having a pair of offset prongs at one end extending through the openings and held against the second strip by the insulating strips and extending upward beyond said one end of the first named

strip in alignment with the collar to engage a center terminal on a lamp base in the collar.

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