A fluorescent bulb changer comprises an elongated handle with a trough on one end. A resilient hook which is controlled from the other end of the handle, engages the bulb and holds it firmly in the trough.
FLUORESCENT BULB HANDLING APPARATUS

BACKGROUND OF THE INVENTION

1. Field of the Invention
   The present invention relates to an apparatus for handling fluorescent bulbs.

2. Description of the Prior Art
   Fluorescent lighting is widely employed in overhead lighting fixtures. Fluorescent bulbs generally comprise elongated cylindrical glass envelopes having either a single or double electrodes at each end, through which current is applied to ionize the fluorescent gas within the envelope. Single electrode fluorescent bulbs are more widely used in commercial and industrial facilities.

   While fluorescent bulbs tend to last longer than incandescent lamps, there is still a need to replace fluorescent bulbs from time to time. In a large industrial facility having many hundreds of such bulbs, the time and expense involved in replacing burnt-out bulbs can be considerable. This problem is aggravated because fluorescent bulbs are relatively fragile, and are easily broken during handling. Further, fluorescent lighting fixtures in industrial and commercial facilities are generally located at high ceiling levels, requiring the use of a ladder during replacement.

   Various apparatus have been developed for handling electronic vacuum tubes and tools. See, for example, U.S. Pat. No. 2,468,392 to Clark; U.S. Pat. No. 2,568,210 to Whitney; U.S. Pat. No. 2,124,039 to Mitchell, et al.; U.S. Pat. No. 1,729,276 to Oblsen; U.S. Pat. No. 2,691,908 to Lambert; and U.S. Pat. No. 3,032,649 to Wallace.

SUMMARY OF THE INVENTION

The present invention comprises apparatus for handling fluorescent bulbs. The apparatus has a handle with a bulb support member on one end and substantially normal thereto. The bulb support member is adapted to engage a fluorescent bulb. The apparatus further comprises means for holding a fluorescent bulb in close engagement with the support member, and means proximal to the other end of the handle for controlling the engaging means.

THE DRAWING

FIG. 1 is a perspective view of one embodiment of the invention;
FIG. 2 is a perspective view of another embodiment of the invention.

DETAILED DESCRIPTION

A first embodiment of a fluorescent bulb handling apparatus in accordance with the present invention is referred to generally as 10 in FIG. 1. The apparatus 10 comprises a cylindrical handle 12 having a hollow core 14. The material, size, shape and dimensions of the handle 12 are not critical to this invention. By way of example, the handle 12 may comprise a 6-foot length of 1 inch aluminum tubing.

A support member 18 is affixed to one end 16 of the handle, and substantially normal thereto. In FIG. 1 the support member 18 comprises a semi-cylindrical trough which has a sleeve 19 adapted to fit over the one end 16 of the handle 12. The sleeve 19 is removably fitted on the one end 16, and is held firmly in place by a screw (not numbered). The inner surface 20 of the support member 18 is lined with a layer 22 of a cushioning material, such as foam rubber.

   The support member 18 is adapted to engage a fluorescent bulb 24 having a single electrode at each end. In particular, the support member 18 engages the bulb 24 at least at two points on the outer surface 26 of the bulb 24, such that the handle 12 intersects the support member between the two points. For example, the trough-like support member 18 in FIG. 1 engages the bulb 24 along the outer surface 26 thereof, including the two points 28, 29, at each end of the trough. The purpose of this arrangement is described below in greater detail.

   The apparatus 10 further includes a resilient hook 30 extending substantially normal to the support member 18. For example, the hook 30 may comprise a curved piece of flat metal stock. The handle 12 includes two apertures 29, 31 at each end and aligned along the outer surface thereof, with a hook-control rod 32 extending between the two apertures 29, 31, through the hollow core 14 and coupled to the hook 30. The control rod 32 may also comprise a piece of metal rod, and may be formed integrally with the hook 30. The hook 30 and the control rod 32 are adapted such that an initial movement of the rod into the core 14, followed by a second movement away from the handle 12 (note arrow 33) causes the hook 30 to encircle the bulb 24 and thereafter engage the surface 26 of the bulb. When the bulb 24 is installed in a spring retaining overhead lighting fixture 34 (the spring-retaining portion of which is shown in FIG. 1), the rod 32 is held firmly away from the handle 12 so that the hook 30 remains in firm contact with the bulb surface 26. The handle 12 is then moved laterally against the spring-loaded retainer 34 in the fixture (note arrow 35), so that the bulb 24 can be removed from the fixture. The process is reversed when a new bulb is being installed in the fixture 34.

   As noted above, the support member 18 engages the bulb surface 26 at two points 28, 29, intersected by the handle 12. This arrangement reduces the likelihood of bulb breakage during bulb removal and replacement, which would otherwise be caused by the bending moment exerted on the bulb 24 during lateral movement of the handle 12.

   A second embodiment of a fluorescent bulb handling apparatus in accordance with the present invention is referred to generally as 40 in FIG. 2. The apparatus 40 comprises a handle 42, a hook 44 and a control rod 46 essentially identical to the respective handle 12, hook 30 and control rod 32 of the apparatus 10 in FIG. 1.

   Noting FIG. 2, the apparatus 40 includes a fluorescent bulb support member 48. In this embodiment the support member 48 comprises a rigid bar 50 of flat metal stock having two semicircular bulb engaging clasps 52, 54, each of which is affixed to one end of the bar 50. The clasps 52 and 54 are adapted to engage the outer surface of a single electrode fluorescent bulb (not shown). The hook 44 extends through an aperture 60 in the handle 42, and is controlled by the rod 46 in the manner previously described with reference to FIG. 1.

   The fluorescent bulb handling apparatus of the present invention provides for replacing fluorescent bulbs without the use of a ladder, and thus saves considerable time and expense in the replacement process.

I claim:
1. Apparatus for handling a fluorescent light bulb comprising:
an elongated handle, said handle having a hollow
core extending between the two ends thereof and
an aperture at each end and aligned along the outer
surface of said handle;
a bar extending substantially to and joined to one end
of said handle;
two semi-circular bulb-engaging troughs, one of said
troughs being joined at each end of said bar, said
troughs being adapted to engage said fluorescent
bulb along a side of said bulb, and to hold said bulb
away from said bar;
a resilient hook extending substantially normal to
said bar and adapted to encircle a portion of said
bulb and engage said bulb along a side opposite
said side engaged by said troughs;
a hook control rod extending through said aperture
at each end of said handle and through said core
and coupled to said hook; and wherein
said hook and said control rod are adapted such that
a first movement of said control rod into said core,
followed by a second movement away from said
handle causes said hook to encircle said bulb and
thereafter engage said bulb surface.

2. Apparatus as recited in claim 1 wherein said rod
and said hook comprise an integral part.

3. Apparatus as recited in claim 1 wherein said
troughs comprise semi-cylindrical members attached
to each end of said bar.

4. Apparatus as recited in claim 3 further comprising
a cushioning layer on the inner surface of said troughs.

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