

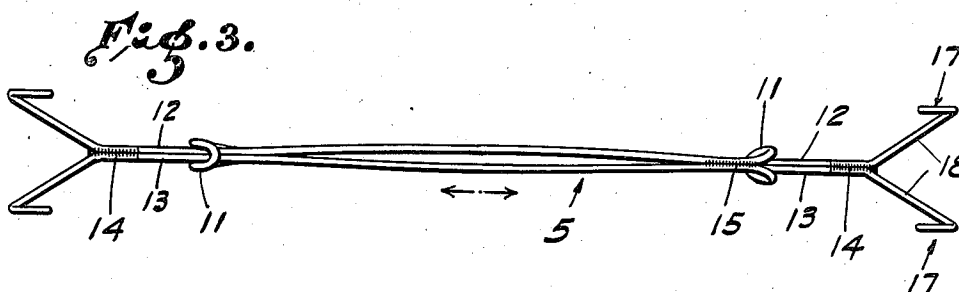
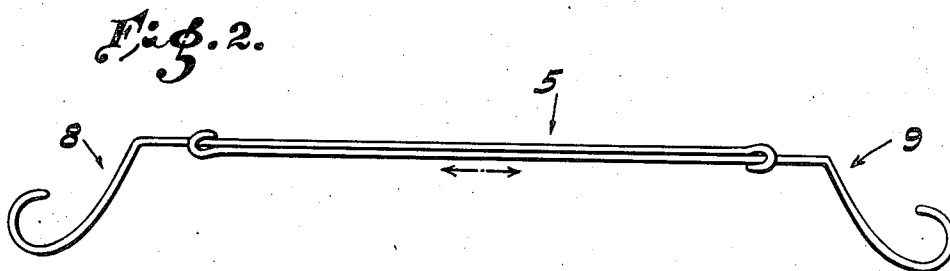
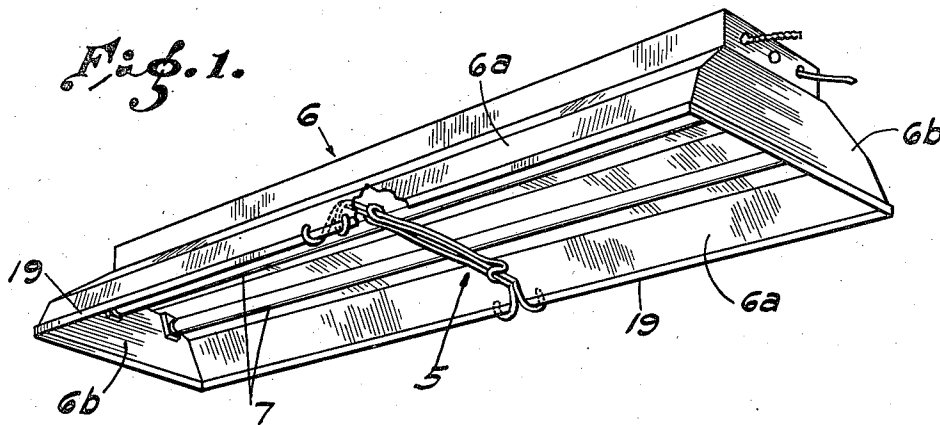
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SAFETY FLUORESCENT LAMP GUARD FOR CLOSED END REFLECTORS

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SAFETY FLUORESCENT LAMP GUARD FOR
CLOSED END REFLECTORS

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4 Claims. (Cl. 240-102)

The present invention relates to improvements in guards for safely retaining lamps in their supporting reflectors, having particular reference to fluorescent lamps the reflectors of which are quite frequently provided with closed ends.

Among the objects of the invention are to provide:

1. A device capable of performing the intended function as expressed above with regard to closed end reflectors in a more satisfactory and dependable manner than has ever been heretofore accomplished.

2. An elongated adjustable guard adapted for mounting upon a reflector containing one or a plurality of fluorescent lamp tubes wherein the ends of the reflector are closed; said guard including two longitudinally overlapping strips each of which has a hooked end portion and at its opposite end a keeper portion which surrounds the other strip, thereby producing a two-part longitudinally extensible clip which maintains itself in the selected position, the hooked end portion being constructed and arranged to engage the beads of the reflector not only to support the guard in a position to arrest the fall of superjacent lamp tubes supported by the ends of the reflector but also to in cooperation with the ends of the reflectors to maintain the arrested fallen tube within the confines of the reflector without being subject to still further fall.

The invention includes, not only the combination of the guard with the lamp reflector structure, but also the guard itself as a new article of manufacture.

It is a still further object to continue in certain respects to carry forth the objects and features outlined in my co-pending application for Safety fluorescent lamp clip, Serial Number 503,245; filed September 23, 1943, and which resulted in Patent #2,350,600, dated June 6, 1944.

Other objects, advantages and features of invention will hereinafter appear.

In the accompanying drawing wherein is shown a preferred embodiment of the invention as now reduced to practice,

Fig. 1 is a perspective view of the device as applied in actual practice to a fluorescent lamp tube reflector having closed ends.

Fig. 2 is a side elevation of the device per se, and Fig. 3 is a top plan view.

Referring in detail to the drawing, the invention is shown embodied in an adjustable, two-part wire guard 5 which in Fig. 1 is shown applied to a conventional fluorescent lamp reflector 6 of the closed end type to safeguard the lamp

tubes 7 by preventing said tubes from falling and breaking in case either end portion of either tube becomes disengaged from its supporting socket. Said reflector 6 has downwardly directed closed end walls 6b and downwardly directed side walls 6a.

Said guard or clip 5 is shown as consisting of twin, resilient wires 8 and 9. After being cut to the correct length while in a straight condition each of these wires is bent back upon itself at its midlength, then the doubled back midlength portion of the wire is formed into the round-nosed hook or laterally deflected loop 11, the two sides or runs of the hook thus formed being spaced apart the right distance to form a suitable keeper and to admit between them, with a working fit, the two wire runs of the other clip. Next each of the two partly formed clips has its wire runs 12 and 13 welded together at 14 at a properly spaced distance from the end thereof opposite to its aforesaid hooked or looped end, it being understood that at this time the two free end portions of each wire are straight throughout their terminal portions. Next the welds 15 (one of which is shown in Fig. 3) are applied to weld the two runs of each wire together adjacent to its hooked part 11. As a result of these welding operations the two runs of each of the doubled over wires will bow slightly away from the other, as shown in Fig. 3. The two wire units of the clip are then fitted together and appear as shown in Figs. 2 and 3 except that the hooks, next described, have not as yet been formed in the free end portions of each wire.

The final operation in constructing the guard consists in making the spaced apart hooks 17 with which each wire unit is provided, the hooks having diverging shank portions 18. In this last step of the guard-forming operation, the free wire ends are simultaneously spread apart a sufficient distance to create the desired span, this being done at the same time that the hooks proper, which grip the reflector beads 19, are directed toward the produced axis of the two assembled wire units.

It is to be understood that other longitudinally overlapping strips than wires may be extensibly fastened to each other to form the guard, without departing from the spirit of the claimed invention.

In applying the device to the reflector 6 the twin wire units are extended in the directions indicated by the arrows in Figs. 2 and 3 till the hooks at the opposite ends of the device are sufficiently far apart to enable the operator to ap-

proximately apply them to the beads 19 of the reflector, and by contracting the length of the device bring said hooks back into a firm gripping relation to said beads. When said hooks are in such applied positions, owing to the bowed character of the wire runs of each wire unit (8 or 9) a frictional resistance is produced against any elongation of the device that might cause it to become detached.

The shank portion 18 of the hooks 17 should be of the proper length and degree of downward inclination to support the intervening bridge portion of the applied device about an inch below the superjacent lamp tubes 7.

In the operation of the device as a lamp tube guard, in case either of the tubes 7 becomes detached at one end from its supporting socket, such end portion of the tube will drop down a short distance only until the midlength portion of the tube engages the guard 5 and the tube is thereby arrested against falling farther because the closed end wall 6b of the reflector at the detached end of the tube will arrest its sliding longitudinally.

If a lamp tube becomes dislodged and drops upon the bridge portion of the applied guard, if the weight thus applied to the intermediate portion of the device bows it slightly downwardly, a compensating upward deflection of the hooked end portions of the device will result which will cause the hooks 17 more firmly to grip the beads 19.

What is claimed is:

1. In a device of the kind described, the combination with a lamp reflector having downwardly directed side and end walls with lamp tube holders carried by said end walls and beads formed along the lower edges of said side walls; of an elongated guard consisting of a pair of connected resilient strips which overlap each other and are longitudinally extensible in relation to each other, each of said strips consisting of two wire runs in a side-by-side adjacent relation to each other throughout the length of the strip except that at the end portions thereof said wire runs diverge from each other and each terminate in a hook, the device thus being furnished with four hooks all of which open or are directed toward the same side thereof to engage said beads and thereby support said guard in a position to arrest the fall of superjacent lamp tubes supported by said reflector, each of said strips carrying at the end thereof which overlaps the other strip a

keeper within which the other strip has a working fit, the two runs of each wire being welded together adjacent to the keeper formed therein and also adjacent the point where said wire runs diverge, said wires between the first said welds being bowed outwardly.

2. The subject matter of claim 1 and, said hooks being constructed and arranged to engage said beads and thereby support said guard with the aforesaid overlapping portion of the wires thereof at a higher level than the hooks carried by them.

3. As an article of manufacture, a pair of connected resilient strips which overlap each other and which are longitudinally extensible in relation to each other, each of said strips carrying at the end thereof which overlaps the other strip a keeper within which the other strip has a working fit, each of said strips consisting of a wire the midlength portion of which is doubled back upon itself, the keeper portion of each strip being formed by laterally deflecting and looping the wire thereof so that it surrounds, at the place where it is bent back, the two runs of the other wire, said two runs of each wire between keepers being bowed outwardly, that end of each strip which is opposite to its said keeper being furnished with means to connect it with a support, said connecting means being constructed and arranged to engage said support and thereby maintain said strips which overlap each other at a higher level than the means which connect them to the support.

4. As an article of manufacture, an elongated guard consisting of a pair of connected resilient strips which overlap each other and are longitudinally extensible in relation to each other, each of said strips consisting of two wire runs in a side-by-side adjacent relation to each other throughout the length of the strip except that at the end portions thereof said wire runs diverge from each other and each terminate in a hook, the device thus being furnished with four hooks all of which open or are directed toward the same side thereof, each of said strips carrying at the end thereof which overlaps the other strip a keeper within which the other strip has a working fit, the two runs of each wire being welded together adjacent to the keeper formed therein and at the point where said wire runs diverge, said wires between welds being bowed outwardly.

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