June 6, 1944. C. E. FOSTER 2,350,600

SAFETY FLUORESCENT LAMP CLIP

Filed Sept. 21, 1943

Fig. 1.

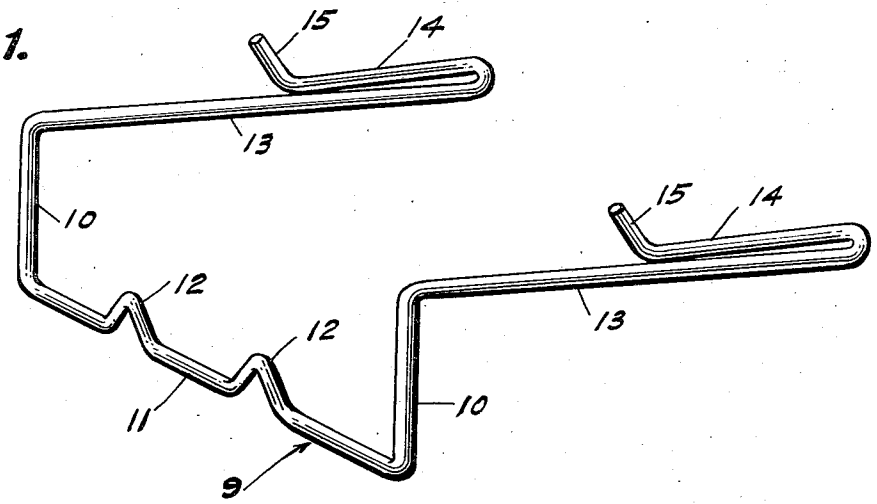
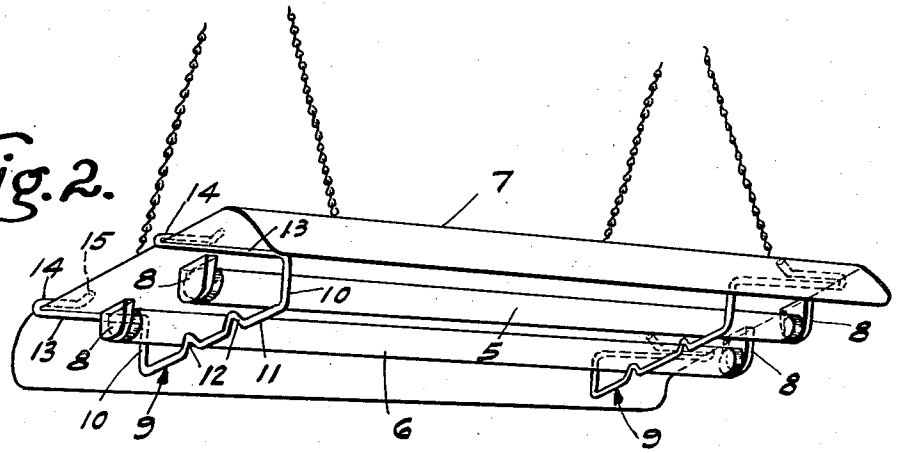


Fig. 2.



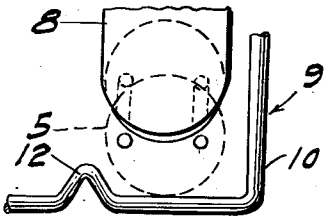


Fig. 3.

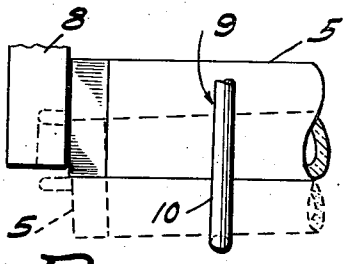


Fig. 4.

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SAFETY FLUORESCENT LAMP CLIP

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Application September 21, 1943, Serial No. 503,245

3 Claims. (Cl. 240—78)

This invention relates to a safety fluorescent lamp clip.

The mounting means for the tubes of fluorescent lamps, as at present constructed, fail to insure safe support of said tubes, with the result that they ofen fall from their sockets, and at times injure employees and in other instances do damage to valuable war materials. Also, when a lamp tube falls, it usually breaks causing the expense incident to furnishing a new tube.

Heretofore no satisfactory means has been provided to prevent the above mentioned accidents or to offset the consequences of their occurrence, which may be caused by faulty construction of the lamp fixtures, by the spreading apart of lamp sockets due to repeated lamp changing, by negligence of workmen attending to the lamps and in some instances by vibrations produced by the operation of heavy machinery, by earthquakes, or bombing or other enemy activities in time of war.

With a view to overcoming the above stated danger of accidents together with their unfortunate consequences, the invention has among its objects: to provide a lamp tube guarding clip that is easy to apply in a secure manner to the open end of any industrial fluorescent lamp fixture regardless of make and in a position to safeguard either two or more tubes against falling beyond so slight a space that there will be no danger of the tubes being injured, and so that they may be replaced from their fallen positions without the operator having to reach to both ends of the fixture at the same time; to provide a safety clip for the above stated purpose which may be made in a single size and pattern that will accommodate itself to fluorescent fixtures of different makes and sizes; to provide a clip which is usable interchangeably upon the opposite end portions of the fixture and which, for this reason, as well as for other reasons is of a "fool-proof" character and can be installed by unskilled persons; and to provide a clip for the above stated purposes which can be manufactured out of a minimum amount of critical war material.

It is also an object of the invention to safeguard employees from injuries caused by falling lamps, thereby reducing accident insurance costs.

The invention comprises both the clip per se and the combination thereof with that part of the fixture structure with which it cooperates.

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

Referring to the accompanying drawing, which illustrates what is at present deemed to be a preferred embodiment of the invention,

Fig. 1 is a perspective view of the clip, separately shown.

Fig. 2 is a perspective view looking at an upward inclination toward a dual fluorescent fixture structure equipped with the invention.

Fig. 3 is a fragmental end elevation showing, on a larger scale, one of the lower corner portions of the structure seen in Fig. 2, and illustrating the extent to which a lamp tube may drop before its fall is arrested by the clip.

Fig. 4 is a side elevation of the structure shown in Fig. 3.

Referring in detail to the drawing, the main parts of the fluorescent lamp and their supporting fixture shown are the lamp tubes 5 and 6 shown in an underlying relation to the reflector 7 from which they are supported by means of depending holders 8 which are furnished with sockets to receive and support in a well known manner, the end portions of said tubes 5 and 6.

The safety clip 9 provided by this invention, consists of a stiff piece of somewhat resilient wire or other rod material constructed of plastic and the like the midlength portion of which is shaped, in general, as a broad, rectangular U, said U having the arm portions 10 which are united by the cross run 11 having a plurality of properly spaced apart bends 12 which are directed upwardly and are located interiorly in relation to the U, the purpose of said bends being to prevent sidewise movement of the tubes after dropping to the position indicated by the lower dotted circle in Fig. 3.

Each arm portion 10 of the U is continued in a direction at a right angle thereto to form a mounting arm 13, the mounting arms thus provided being shown parallel with each other, both of them extending from the same side of the U.

The outer end portion of each of said arms 13 is rebent upon itself by being swung over toward the body portion of the U to a superjacent relation to the arm 13, thereby providing the clamping runs or fingers 14. Adjacent to its upwardly directed terminal portion 15 each finger 14 normally contacts with the upper side of the arm 13 of which it forms a continuation. This feature adds to the gripping power of the resilient arms 14 when the clip is in its mounted position. The terminal end portion 15 of each finger 14 is directed upwardly at an obtuse angle, as shown, in order to facilitate placing the clip in its operative position upon the edge portion of a plate-like supporting member.

Owing to the fact that the extensions 13 of the clip are considerably longer than their reversely directed fingers 14, when the loop portions formed by said arms and fingers are slipped back over the edge portion of the reflector 7 to the extent shown in Fig. 2, the lamp-supporting run 11 of the clip is brought back to a point located well behind the lamp holders 8, thereby insuring that if the adjacent ends of the lamps become detached from the holders the clip will arrest their fall in the manner clearly illustrated in Fig. 4.

Although the clip is made of resilient material, so as properly to grip the support, yet it need not be of so rigid a character as to interfere with being manually bent to a somewhat different shape whenever that is found desirable. For example, its arms 10 may be bent to an outward inclination in relation to each other, thus bringing the loop portions of the clip farther apart, and the portions 13 and their fingers 14 may also be bent as may be required to cause them to conform to or avoid any projecting parts of the reflector 7.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the subject matter claimed.

What is claimed is:

1. In a device of the kind described, the combination, with a reflector having plate-like horizontally extending end portions with tube holders depending therefrom spaced inwardly from the extremities of said end portions and with tubes supported by and between said holders; of two clips each consisting of a wire having a central portion bent to the approximate shape of a broad U, each arm of said U having a right angular extension, both of said extensions being directed toward the same side of the U and each having an extended rebent superjacent end portion thereby providing each clip with loop portions for gripping between them one or the other of the end portions of said reflector, one of said clips having its said loop portion applied to one end portion of said reflector, and the other of said clips being likewise applied to the opposite end portion thereof, said right angular extensions of the clips between each arm of the U and said extended rebent superjacent end portions each being of a sufficient length to position the central part of the U back to a point located inwardly of the aforesaid tube holders and in a position to arrest the fall of the superjacent end portion of tubes supported by said holders as aforesaid.

2. The subject matter of claim 1, and the portion of said U which intervenes between its arms having a plurality of spaced apart upwardly directed bent portions to act as stops to prevent lateral movement of tube end portions resting upon the part of the U between its arms.

3. The subject matter of claim 1, and the loops which comprise said superjacent end portions of said extensions being resilient, the two side portions of each loop normally contacting with each other at the outer end of the loop to form a resilient bight, the terminal portion of the loop forming the bight being directed upwardly at an obtuse angle.

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