

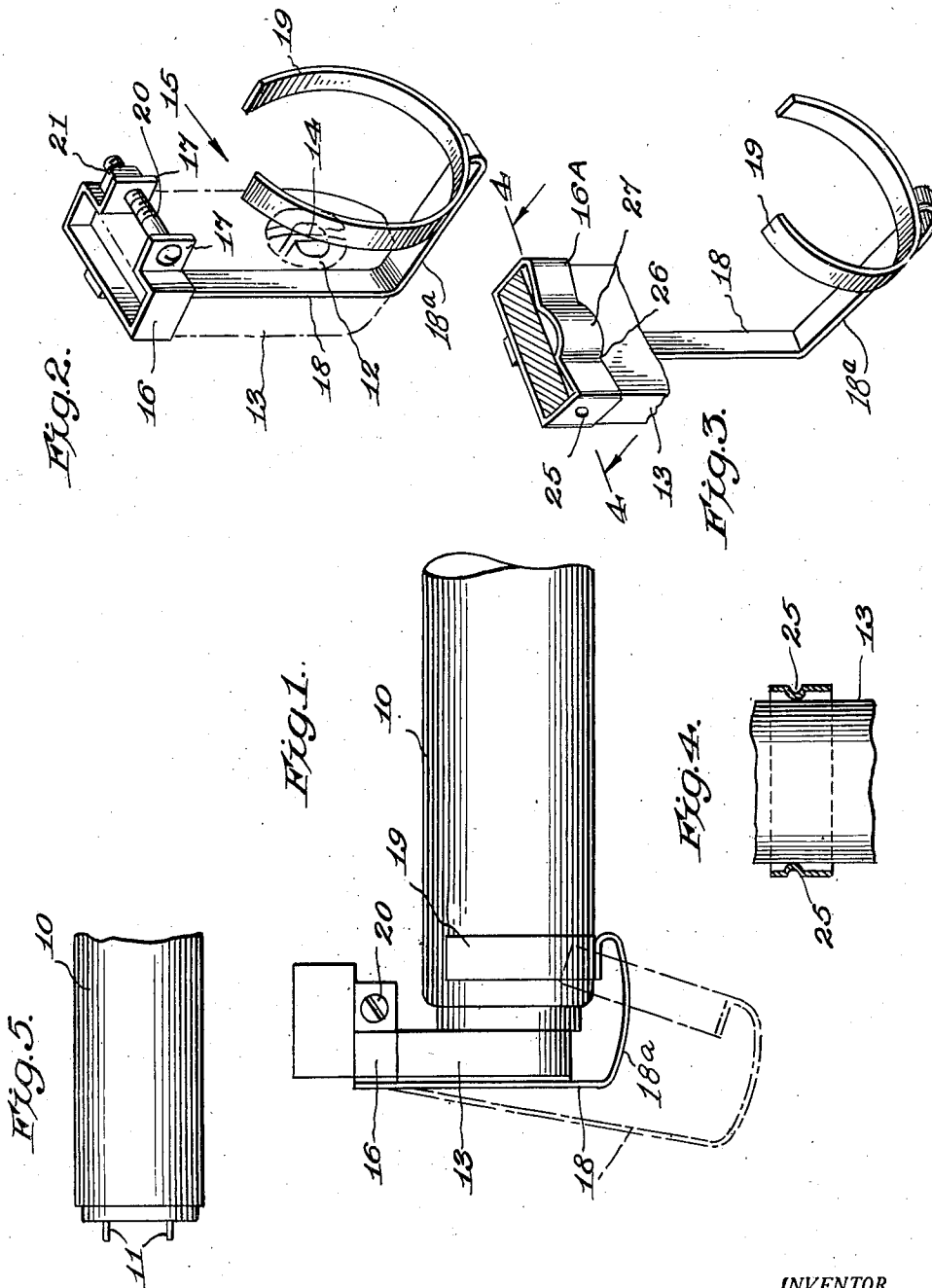
Aug. 31, 1948.

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2,448,236

GUARD MEANS FOR FLUORESCENT LIGHTS

Filed July 21, 1945



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UNITED STATES PATENT OFFICE

2,448,236

GUARD MEANS FOR FLUORESCENT LIGHTS

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Application July 21, 1945, Serial No. 606,424

6 Claims. (Cl. 173—328)

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This invention relates to fluorescent lights and, more particularly, to guard means to prevent such lights or tubes from falling out of their fixtures or sockets.

The fluorescent lights now commonly used comprise cylindrical tubes provided with a pair of contact pins on each end thereof, said pins being inserted into sockets or brackets and then rotated to a position where they snap into place. Very often, and especially in factories where heavy machinery is continuously running, a great deal of vibration is set up causing the pins to be jarred out of place with the resultant consequence that the tubes fall out of their sockets, become broken and often cause injury to anyone in the vicinity of such falling tubes.

It is, therefore, an object of the present invention to provide means to prevent the falling or dropping out of such tubes.

Another object of the invention is the provision of guard means adapted to be suitably supported on the tube fixtures or sockets, which will hold the tube and prevent same from falling to the ground.

A further object of the invention is to provide such guard means which is resilient and may be sprung out of the way when inserting or removing the tube from its sockets.

Another object is to produce a device of the character described in which the maximum simplicity of construction and operation is secured.

Other objects and advantages will appear as the nature of the invention is better understood, the invention consisting in the novel arrangement and co-relation of parts herein fully described, and illustrated in the accompanying drawings, wherein similar reference characters are used to describe corresponding parts throughout the several views, and then finally pointed out and specifically defined and indicated in the appended claims.

In carrying out the embodiments of the present invention, it has been found advantageous to employ a pair of guards, one of which being attached to each of the light or tube sockets, each of the said guards comprising a strap clamped or otherwise secured to the upright portion of the sockets and having an open band secured to a flexible or resilient strip carried by the strap.

The disclosure made the basis of exemplifying the present inventive concept suggests a practical embodiment thereof, but the invention is not to be restricted to the exact details of this disclosure, and the latter, therefore, is to be understood from an illustrative, rather than a restrictive standpoint.

In the drawings:

Figure 1 is a fragmental front view showing one end of a fluorescent light tube in place in its socket having a guard attached thereto and

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showing the guard being sprung out of the way, in dot and dash lines;

Figure 2 is a perspective view of a preferred form of the guard, a portion of the socket being shown in dot and dash lines;

Figure 3 is a perspective view of a modified form of the invention;

Figure 4 is a fragmental sectional view taken along line 4—4, Figure 3; and

Figure 5 is a fragmental elevational view of one end of the fluorescent light tube.

Referring now to Figures 1, 2 and 5 of the drawings, 10 indicates a fluorescent light tube. Inasmuch as both ends of the tube and the sockets in which the said ends engage are alike, only one end of the tube and one socket is shown. The said tube is provided with the usual contact pins 11 which are adapted to engage the complementary electrical contacts 12 in the socket B in the usual manner.

As is well known, the pins 11 enter the socket 13 through a slot 14 and the tube 10 is then rotated until the said pins snap into position and make electrical contact with the contacts 12.

It often happens when such fluorescent lights are used in buildings where heavy machinery is used, or where the buildings are located on streets where there is heavy traffic, the pins become jarred out of place and when they become aligned with the slot 14 the tube falls out of the sockets to the ground and becomes broken and in so doing may cause injury to those in the immediate vicinity.

To prevent the falling of such loosened or displaced tubes a guard 15 may be affixed to the body portion of the socket 13. The said guard may preferably comprise a strap 16 provided with ears or extensions 17. Suitably secured to said strap 16, as by soldering or welding, is a bent strip 18 made of flexible or resilient metal and whose horizontal arm or extension 18a carries at the forward end thereof a substantially U-shaped band 19 adapted to encompass the lower side of the tube 10. The strap is clamped about the socket 13 by means of a screw 20 which passes through the ears 17 and is tightened by a nut 21.

It will readily be seen that, should the pins 11 become aligned with the slot 14 in the socket due to vibration, the tube cannot fall out, but it will rest in the guard bands 19. To facilitate the insertion and/or removal of the tube 10, the guard may be sprung into the dot and dash line position shown in Figure 1.

In the modified form of the invention shown in Figures 3 and 4, the band 19 and strip 18 are identical with the corresponding parts of the form just above described, the modification consisting in the strap 16A. The said strap entirely surrounds the socket body 13 and is held in place by means of substantially semi-spherical pro-

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tuberances 25 disposed at opposite ends of the said strap. These protuberances may be punched or pushed out of the strap by a suitable tool after the guard is positioned in place. If desirable, the front wall of the strap 16A may be bent, as shown, to provide wall frictional contacting ridges 26 and 27. However, this latter feature is not essential and may be omitted if so desired.

From the foregoing it will be seen that although the device is simple and inexpensive, it is highly efficient for the purpose intended.

It is apparent that the illustration shown above has been given by way of illustration and not by way of limitation and that the above described illustration is subject to wide variations and modifications, without departing from the scope or intent of the present invention. All of such variations and modifications are to be included within the scope of the present invention.

What is claimed is:

1. A guard for use with a fluorescent light tube socket comprising a resilient L-shaped strip, means attaching the vertical member of the L-shaped strip to the back of the socket with the horizontal member turned inwardly under the base of the socket and extending forwardly thereof; the guard further comprising a resilient tube guard band substantially in the form of a segment of a circle with open top and adapted for insertion of the light tube, and means securing the guard band upright on the horizontal member of the L-shaped strip with the axis thereof substantially coinciding with the longitudinal center line of the tube when inserted in the socket and guard.

2. A guard for use with a fluorescent light tube socket according to claim 1 in which said means attaching the vertical member of the L-shaped strip to the back of the socket with the horizontal member turned inwardly under the base of the socket and extending forwardly thereof comprises a resilient strap bent to partially surround the socket, a pair of oppositely disposed perforated ears, one on each of a pair of adjacent bent strap portions, a fastener through the perforated ears, and means securing the strap substantially at the top of the vertical member of the L-shaped strip on the side of the horizontal member.

3. A guard for use with a fluorescent light tube socket according to claim 1 in which said means attaching the vertical member of the L-shaped strip to the back of the socket with the horizontal member turned inwardly under the base of the socket and extending forwardly thereof comprises a resilient strap bent to surround the socket when slipped over the free end thereof, at least one wall friction contact ridge disposed along the inside surface portion of said resilient strap, at least one protuberance disposed along the inside surface portion of the strap, and means securing the strap substantially at the top of the vertical member of the L-shaped strip on the side of the horizontal member.

4. A fluorescent light tube guard in combination with the socket comprising a resilient L-

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shaped strip, means attaching the top of the vertical member of the L-shaped strip substantially along the longitudinal center line of the back surface portion of the socket with the horizontal member turned inwardly under the base of the socket and extending forwardly thereof; the guard further comprising a resilient tube guard band with open top substantially in the form of a segment of a circle and adapted for insertion of the light tube, means securing the tube guard band with open top upright substantially at the end of the horizontal member of the L-shaped strip with axis substantially parallel to the longitudinal center line of the horizontal member of the L-shaped strip and substantially coinciding with the longitudinal center line of the tube when inserted in the socket and tube guard band.

5. A fluorescent light tube guard in combination with the socket according to claim 4 in which said means attaching the top of the vertical member of the L-shaped strip substantially along the longitudinal center line of the back surface portion of the socket with the horizontal member turned inwardly under the base of the socket and extending forwardly thereof comprises a resilient strap bent to surround the socket along the back and opposing ends and partially around the front, ends of the strap partially around the front turned outwardly, apertures through said ends, adjustable fastener through said apertures, and means securing the center of the strap along the back substantially at the top of the vertical member of the L-shaped strip on the side of the horizontal member.

6. A fluorescent light tube guard in combination with the socket according to claim 4 in which said means attaching the top of the vertical member of the L-shaped strip substantially along the longitudinal center line of the back surface portion of the socket with the horizontal member turned inwardly under the base of the socket and extending forwardly thereof comprises a resilient strap bent to surround the socket when slipped over the free end, at least one upright wall friction contact ridge disposed along the inside surface portion of said resilient strap, at least one protuberance disposed along the inside surface portion of the resilient strap, and means securing the center of the strap along the back substantially at the top of the vertical member of the L-shaped strip on the side of the horizontal member.

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