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F. W. CHRISTY
LIGHTING APPARATUS
Filed Oct. 29, 1925

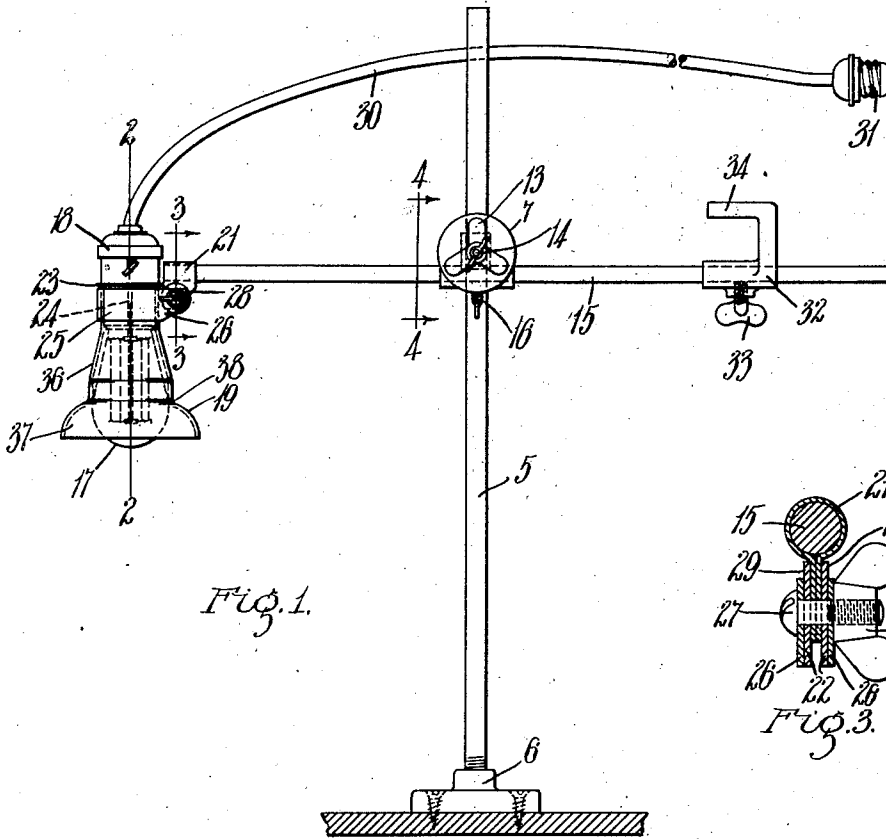


Fig. 1.

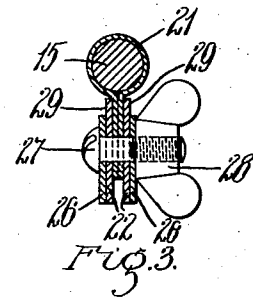


Fig. 3.

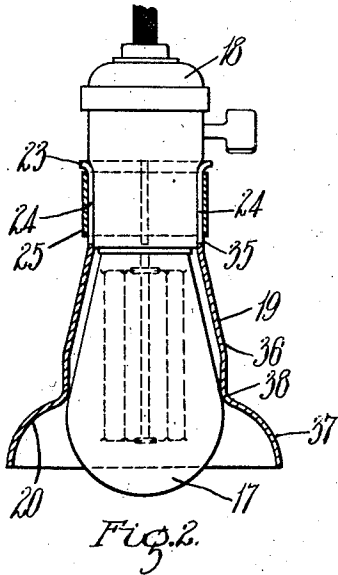


Fig. 2.

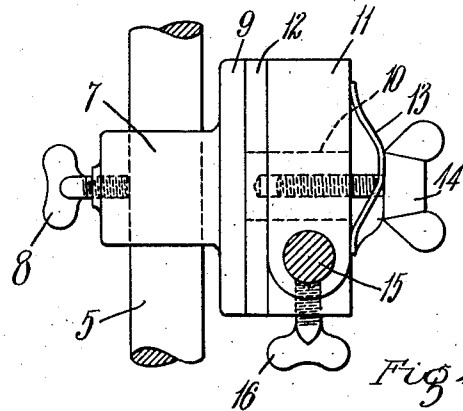


Fig. 4.

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LIGHTING APPARATUS.

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This invention relates to improvements in lighting apparatus.

The object of the invention is to provide a lighting apparatus or fixture of practical and inexpensive construction, and particularly adapted for use on benches of factories, machine shops and the like.

The apparatus of this invention is particularly intended for use in connection with sewing machines, or any kind of bench machines in which it is desirable for the light from an electric lamp bulb to be directed within a certain prescribed area upon the work which is being done, and further, it is the object of the invention to provide means for preventing the rays of light from the electric lamp from dazzling the eyes of the operator, while at the same time clearly illuminating that portion of the work upon which he is engaged.

It is further an object of the invention to provide means which can be readily operated to adjust the electric lamp at different heights and different angles so that the rays of light may be directed toward that portion of the work which is being operated upon.

It has been found in many cases that the workmen or operatives in factories, such as shoe factories, clothing factories and the like, have been in the habit of removing the electric light bulb which is supplied by the company for whom they are working and substituting therefor an electric light bulb of much greater power. For instance, where it is the custom for the company to supply bulbs not exceeding 25 watts, the workmen have substituted bulbs of 50 watts. This leads to a great deal of unnecessary expense, and where a proper shade is not used, the higher power lamp is less efficient on account of the glare in the eyes of the operator. To overcome this difficulty is one of the objects of this invention, and it is accomplished by providing a shade, preferably flaring at its outer end, and adapted to be clamped to the socket of an electric light bulb, the shade being of such shape and size as to prevent the insertion in the socket of any electric light bulb exceeding a predetermined size, and thus preventing the insertion in said socket of an electric lamp exceeding a predetermined power, such, for example, as 25 watts.

Another object of this invention is to provide an apparatus which may be placed upon a bench in a factory where there are several machines, such as sewing machines,

lacing hook setting machines, or eyelet setting machines, and an electric lamp positioned on said apparatus for each machine which is being operated to throw the light in a restricted area upon the work being done, and at the same time prevent rays of light from being directed into the eyes of the operators.

To these ends the invention consists in the improved lighting apparatus, and especially in the portions thereof which enable an electric lamp socket and bulb to be attached to a support in different positions, and in the improved shade whereby rays of light from the electric lamp may be directed upon that portion of the work which is being operated upon, the rays being prevented from being directed into the eyes of the operator, said shade being adapted to engage and prevent the insertion in the socket of a lamp exceeding a predetermined size. The invention furthermore consists in certain details of construction set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings:

Figure 1 represents a side elevation of a lighting apparatus embodying my invention.

Fig. 2 is an enlarged vertical sectional elevation taken on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged vertical sectional elevation taken on the line 3—3 of Fig. 1.

Fig. 4 is an enlarged vertical sectional elevation taken on the line 4—4 of Fig. 1.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 represents a vertical standard which is mounted at its lower end in a pedestal 6, the latter being adapted to be secured to a desk table or any other suitable supporting member. Mounted upon the standard 5 is a bracket 7, and said bracket may slide vertically on said standard 5 or may be rotated thereon as may be desired and be secured thereto by a thumb screw 8. The bracket 7 embodies therein a circular flanged portion 9 from which projects a shouldered portion 10, and rotatably mounted on said shouldered portion is a friction member 11. Also mounted upon the shouldered portion 10, and located between opposite surfaces of the flange 9 and friction member 11 is a friction washer 12. The friction member 11 is forced against the friction washer 12 and the latter against the flange 9 of the bracket 7 by a spring 13, the

pressure that is applied by said spring against said friction member being regulated by a thumb screw 14 which has screw-threaded engagement with the shouldered portion 10 of said bracket. Slidably mounted in the rotatable friction member 11 of the bracket 7 is a rod 15 which constitutes a supporting arm for the source of illumination, and said arm is secured within said member 11 by a suitable thumb screw 16.

A source of illumination, which is preferably an electric light bulb 17 and socket 18 of well known construction, together with a shade 19 having a reflecting surface 20 are adjustably mounted upon a hanger 21 which is located at one of the extremities of the arm 15. The hanger 21 is constructed in the form of a band which surrounds the arm 15, the opposite extremities of said band terminating in a pair of ears 22, see Fig. 3. The shade 19 has a cylindrical rear end portion 35 which terminates at one end thereof in an outwardly projecting flange 23, and formed in said cylindrical rear end portion are a plurality of slots 24 which extend longitudinally of the cylindrical portion from the flanged end thereof. The body portion 36 of the shade 19 is of frusto-conical form and terminates at its outer end in an outwardly flared portion 37. Surrounding the cylindrical rear end portion of the shade 19 and located directly beneath the flange 23 thereof is a gripping member 25, the latter being constructed in the form of a band and terminating at its opposite extremities in a pair of ears 26. The gripping member 25 is secured to the hanger 21 by a clamp screw 27 which projects through the ears of said gripping member and said hanger, and the gripping member is tightened against the cylindrical portion of the shade 18, causing the socket to be gripped therein, and the ears 22 of the hanger 21 are forced together, causing said hanger to be clamped against the arm 15 by a thumb screw 28 which has screw-threaded engagement with the clamping screw 27. A pair of friction washers 29 are interposed between the ears of the gripping member 25 and hanger 21 respectively, as illustrated in Fig. 3, and the various ears and friction washers are all clamped together sufficiently tight by the screw 27 and thumb nut 28 to permit the gripping member 25 to be rocked upon the hanger 21 and the latter to be rotated upon the arm 15, said members remaining in any position that they may be located in, relatively to each other and to the supporting arm 15. The electric lamp socket 18 is connected by a flexible electric connection 30 to a suitable switch plug 31.

An auxiliary bracket 32 is also slidably and rotatably mounted upon the arm 15 to which it is secured by a thumb screw 33.

The bracket 32 embodies therein an arm 34 to which the hanger 21 carrying the source of illumination and shade therefor may be clamped if it is so desired in exactly the same manner as said hanger is clamped to the extremity of the arm 15.

The lighting fixture of this invention is capable of being adjusted to position the source of illumination and shade therefor in a great variety of positions, it being possible to rock the hanger 21, carrying said source of illumination, laterally of the supporting arm 15, or to rock the gripping member 25 in which said source of illumination is mounted upon said hanger. The height of the source of illumination may be varied by adjusting the bracket 7 vertically upon the standard 5, and the supporting arm 15 may be slid longitudinally within the friction member 11 of said bracket 7, while said friction member may also be rotated upon said bracket. The hanger 21 may, furthermore, be detached from the extremity of the arm 15, and said hanger may be positioned upon the arm 34 of the auxiliary bracket 32, and the latter may be positioned as desired upon the arm 15. The clamp screw 27 and thumb nut 28 are utilized to secure the gripping member 25 to the hanger 21, to tighten said gripping member against the shade 19, thereby clamping the socket 18 within said shade and also to clamp the hanger 21 upon the arm 15.

It will be seen by reference to Fig. 2 that the electric light bulb 17 is of such a size as to allow the bulb to be screwed into the socket 18 and just clear the portion 38 of the shade 19 where the frusto-conical portion 37 merges into the outwardly flared portion 36 of the shade. It will be readily seen that any electric light bulb larger than the one shown in Fig. 2 could not be screwed into the socket 18 because it would be prevented by engaging the portion 38 of the shade 19.

I claim:

1. A lighting fixture comprising, in combination, an arm, a hanger mounted upon said arm, a socket for an electric light bulb, a shade for said socket embodying therein an outwardly projecting flange extending around the rear end thereof, said shade also being provided with a slot extending inwardly from said rear end, a band gripping member surrounding said shade adjacent to said flange, and means to simultaneously clamp said hanger to said arm, secure said shade to said hanger and contract the upper portion of said shade against said socket.

2. A lighting fixture comprising, in combination, an arm, a hanger mounted upon said arm, a socket for an electric light bulb, a shade for said socket embodying therein an outwardly projecting flange extending around the rear end thereof, said shade also

being provided with a slot extending inwardly from said rear end and embodying therein a frusto-conical portion adapted to engage and prevent the insertion in said
5 socket of an electric light bulb exceeding a predetermined size, a band gripping member surrounding said shade adjacent to said flange, and means to simultaneously clamp said hanger to said arm, secure said shade to said hanger and contract the upper portion of said shade against said socket.
10 In testimony whereof I have hereunto set my hand.

FRANK W. CHRISTY.