

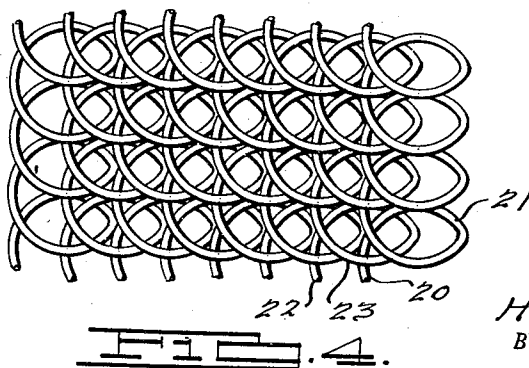
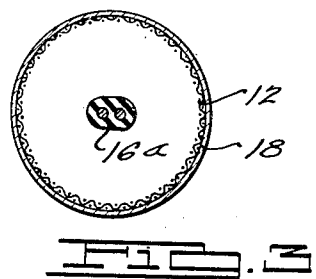
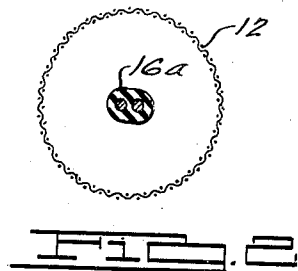
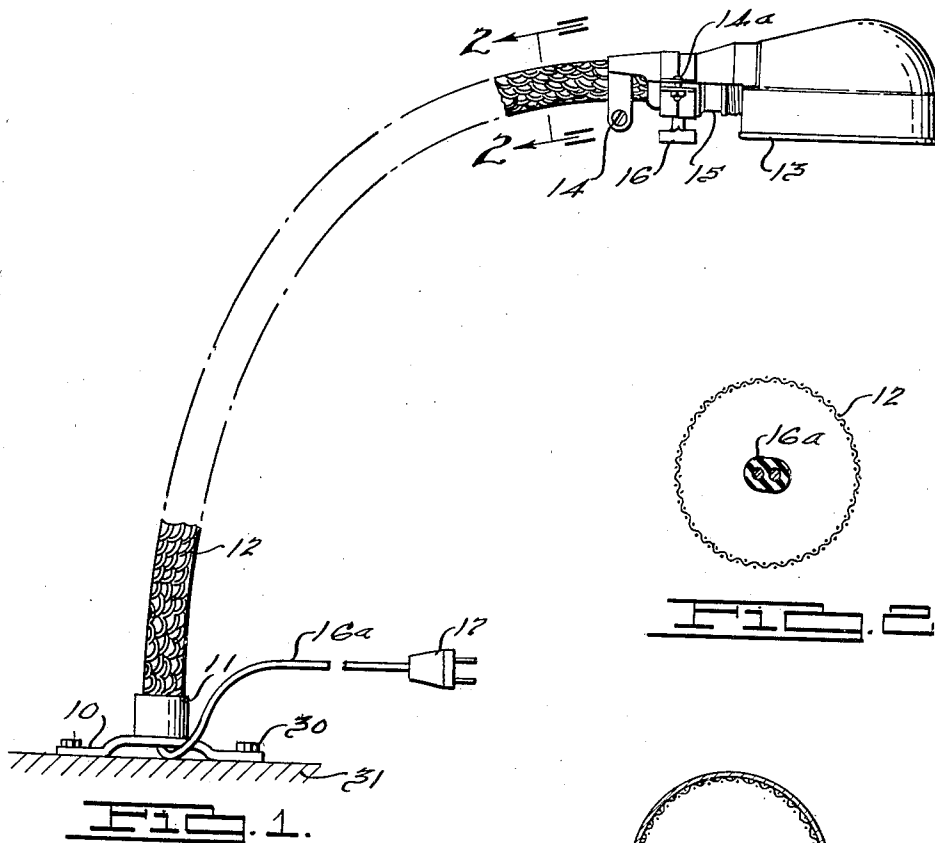
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LIGHTING FIXTURE

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LIGHTING FIXTURE

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The present invention relates to a lighting fixture, and more particularly to a novel type of local lighting fixture, particularly adapted for use in industrial applications.

Among the principal objects of the present invention are:

1. To provide a lighting fixture which is readily adjustable to provide light at a plurality of different positions without changing the base or the attachment of the fixture, the said fixture being particularly adapted for use as a local lighting fixture in industrial applications.

2. To provide a lighting fixture adapted for local lighting in which the entire body portion is flexible and may be moved to a plurality of adjusted positions to provide application of light to localized areas.

3. To provide a novel type of local lighting fixture which is particularly but not exclusively adapted for industrial applications and in which the adjustable body or goose-neck portion is readily adjustable in any desired position and possesses sufficient resiliency to absorb the vibrations which may be transmitted through the base of the fixture, as for example when the fixture is used and secured to a machine such as a lathe, milling cutter and the like in the transmission of vibrations from the machine to the fixture is particularly objectionable.

4. To provide a lighting fixture particularly adapted for ready adjustment to light a localized area and in which the body portion is formed of light weight, flexible and readily adjustable materials having sufficient resistance to flexing to hold the fixture in a desired adjusted position, the body portion thereof at the same time being sufficiently resilient to absorb throughout its length the vibrations which may be transmitted either to the base portion or to the lamp portion of the said fixture.

Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawing forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

In the drawing:

Fig. 1 is a view in side elevation of a lighting fixture embodying the present invention, which is particularly adapted to provide a local lighting fixture for use in industrial applications.

Fig. 2 is a cross-section taken through the adjustable goose-neck portion of the light substantially along the line 2-2 in the direction of the arrows in Fig. 1.

Fig. 3 is a view similar to Fig. 2 but showing a modified embodiment of the present invention.

Fig. 4 is an enlarged elevation showing the construction of the material used in forming the goose-neck or body portion of the lamp.

Before explaining in detail the present invention it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawing, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

Referring to the drawing, and particularly to Fig. 1, 10 designates a base portion which may be of any particular desired type which may be secured as by lag screws or similar securing elements 30 to a supporting member 31. If desired the supporting member 31 may be a bracket or portion of a machine or other device to which it is desired to attach a fixture of the present invention. The base portion 10 is provided with an annular collar portion 11 to which is secured one end of the body or goose-neck portion 12. The body or goose-neck portion 12 is formed of a hollow hose formed of knitted wire having a sufficient resistance to movement to hold the lamp in a desired adjusted position until such time as it is manually moved to another position. The material is sufficiently flexible so that the lamp portion may be readily turned by the application of force thereto to any other desired adjusted position.

A reflector portion 13 is provided with an adjustable clamp 14, which extends over the free end of the body portion 12 and is clamped as at 14a to a lamp socket 15, which is electrically connected through a switch 16 and an electric conductor 16a with the plug element 17 of an electrical receptacle.

The body member 12 is formed of a loosely woven wire hose which as shown in the large view of Fig. 4 comprises a plurality of looped and interwoven members such for example as the members 20 and 22 having the looped portions 21 and 23 respectively. As here shown, the member 22 and the looped portion 23 have a plurality of points of frictional engagement both with the member 20 and with the looped portion 21 thereof. Due to the frictional contact between the adjacent strands of the looped and interwoven or knitted material and the resiliency of the wire from which the hose is formed, it will be understood

that there is a considerable resistance to flexing of the material since the flexibility of the material is due to changes in the shape of the looped portions in response to forces exerted upon the hose. The changes in the shape of the looped portion can be made only by movement of one looped portion relative to the interwoven looped portions of adjacent strands and this frictional contact thus provides a sufficient resistance to movement of the member to hold the lamp in the desired adjusted position. By varying the resilient properties of the wire used in forming the knitted metallic hose, either by changes in the material, the surface treatment thereof, changes in sizes either of wire or of interwoven hose by changes in the pattern of the knitting, or the like, it is possible to vary the resistance of the looped portions to movement in response to torsional forces exerted thereon, such changes will thus vary the flexibility of the body portion of the fixture.

In certain installations and uses, it is desirable to provide a closely woven mesh and in other instances it is desirable to provide a fixture in which the body portion is formed of a more open woven mesh. In either instance, the body portion may be covered with a suitable material extending over the opened mesh body portion which would result from the construction heretofore described. In such instances the modified form of construction shown in Fig. 3 will be found to be suitable. In this construction a sleeve 18, preferably formed of a flexible plastic material is placed over the exterior of the body portion 12, which is formed of the knitted wire hose section previously described. In this instance it will be found that the plastic sleeve 18 increases the resistance of the body member 12 to movement or flexing in response to torsional loads placed upon it, and in certain instances where the flexibility of the body portion 12 is so high that it will not support without distortion the lamp portion of the device, it will be found to provide a reinforcement which is sufficient to assist in maintaining the flexible body portion in the desired adjusted position.

In industrial applications adjustable lighting fixtures are frequently required to provide for a local light on a work piece, a part of the machine, or in some other place where it is desired to have a light. Such places frequently are inaccessible and thus require a lighting fixture which may be readily moved into the desired adjusted position and then maintained in such position without movement due to distortion of the body portion in response to vibrations transmitted from such machine. The construction herein disclosed has been found to be particularly adaptable for use under such conditions. The resiliency of the wire elements of the knitted or woven wire hose combined with the looped and interwoven shapes thereof provides a high degree of absorption of vibration and prevents movement of the entire lamp inasmuch as the forces which set up vibration in such a lamp are largely absorbed in and dissipated by the body portion of the lighting fixture. In addition the resiliency of the body portion permits it to absorb the vibrations transmitted to the base portion 10 without noise and without impairing the operative efficiency of the unit.

From the foregoing it will be seen that the present invention provides a novel lighting fixture particularly adapted for local lighting in in-

dustrial applications, the fixture being simple in its construction and readily adjustable to provide a local light at any point where such a light is required in various types of applications.

By using the modified form of the invention as shown in Fig. 3, the lighting fixture may also be used in other fields inasmuch as any desired color effect or ornamental appearance may be imparted thereto by the selection of the proper color and texture of the plastic sleeve 18. In such instances, it is desirable to provide a plastic shade or reflector element 13 which will harmonize with the plastic sleeve 18 on the outside of the body portion 12. Such a lighting fixture besides possessing features of great utility would also be very ornamental in its appearance and could be so formed as to harmonize with the surroundings in which it is to be installed and used.

Having thus described my invention, I claim:

1. A local lighting fixture comprising a base, a flexible tubular body portion having one end secured to said base and its opposite end connected with the lamp socket, said flexible body portion comprising a length of hollow knitted wire hose formed of looped knitted wire strands each having a resiliency sufficient to oppose vibration generated forces tending to change the shapes of the loops therein and having frictional forces developed between contacting looped portions thereof tending to maintain said wire hose in an adjusted position.

2. An adjustable local lighting fixture comprising a base, a lamp socket, a flexible body portion connecting said base and said socket, said body portion comprising a length of vibration absorbent knitted wire hose formed of a plurality of interwoven looped wires adapted to impart flexibility to the hose by distortion of said looped portions and movement of one looped portion relative to another and resisting flexure thereof by a plurality of frictional surface contacts between said interwoven looped wires.

3. An adjustable local lighting fixture comprising a base, a lamp socket, a flexible body portion connecting said base and said socket, said body portion comprising a length of vibration absorbent knitted wire hose formed of a plurality of interwoven strands of looped wires adapted to impart flexibility to the hose by distortion of said looped portions and movement of one looped portion relative to another, the flexure of said hose being resisted by frictional contacts between adjacent contacting surfaces of said strands.

4. A lighting fixture adjustable to provide a light over a predetermined area and comprising a base, an annular collar secured thereto, an adjustable body comprising a length of flexible knitted wire hose having one end secured within said annular collar, a lamp socket secured to the opposite end of said body, and an electric conduit connected with said socket and extending through said base and inside the said body, said knitted wire hose comprising a plurality of interlooped wire strands each having a resiliency sufficient to oppose changes in the shapes thereof by vibration generated forces transmitted through the base of said lamp and having frictional forces generated between contacting looped portions thereof tending to maintain said hose in an adjusted position.

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