Oct. 20, 1970 A. G. THORNTON 3,535,509

UNIVERSAL UTILITY LAMP

Filed April 12, 1968

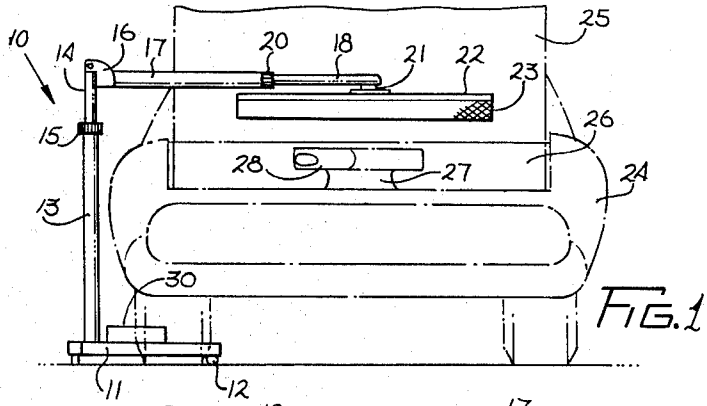


FIG. 1

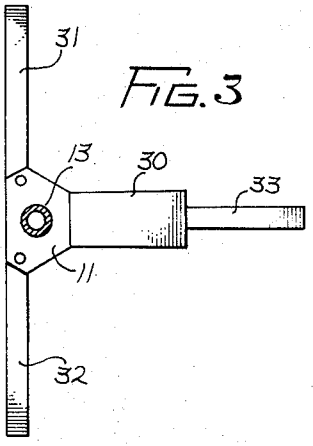


FIG. 3

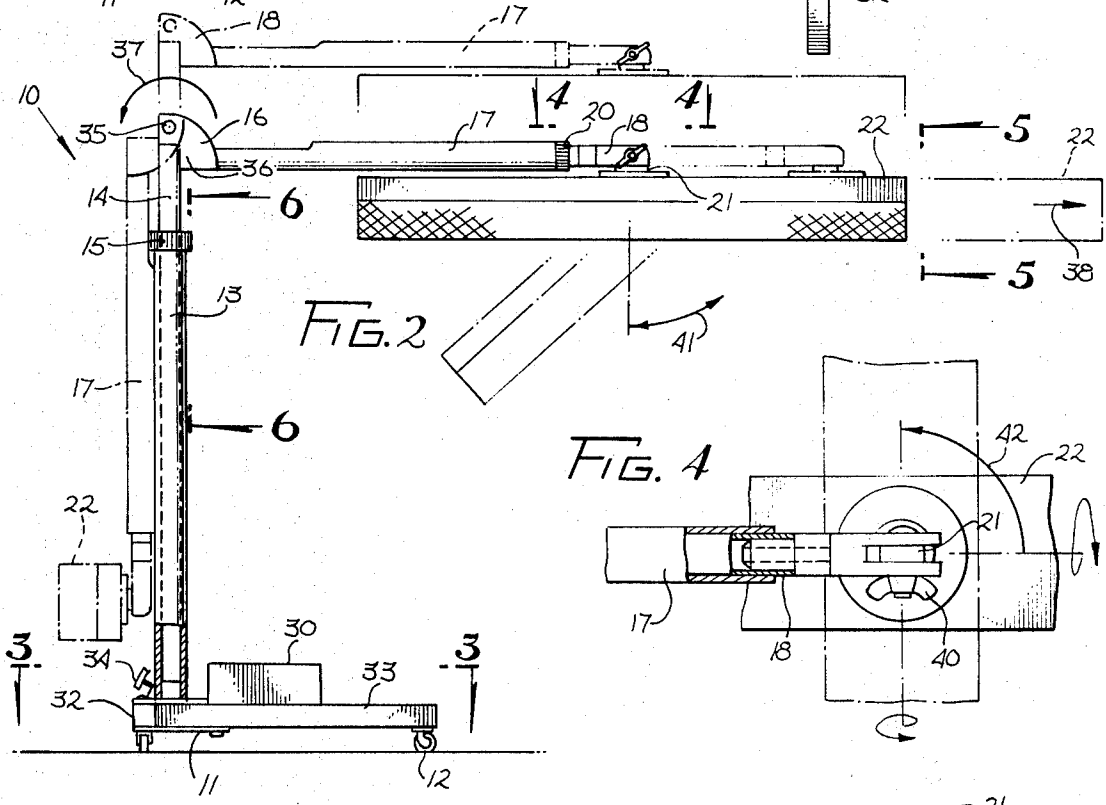


FIG. 2

FIG. 4

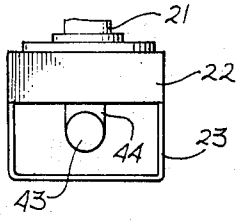


FIG. 5

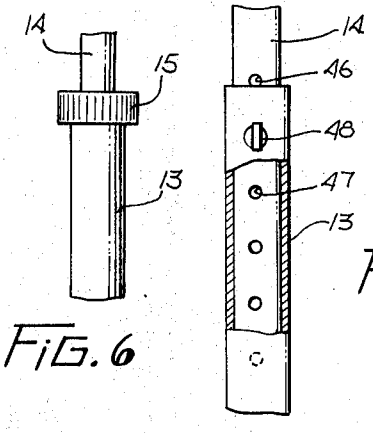


FIG. 6

FIG. 7

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UNIVERSAL UTILITY LAMP

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U.S. Cl. 240—81 6 Claims

ABSTRACT OF THE DISCLOSURE

The universal utility lamp disclosed herein includes a base having an extendable upright stanchion for laterally supporting an extendable boom. The extreme end of the boom includes a universal mounting for supporting a lamp housing enclosing a fluorescent lamp. The housing includes a protective grid or screen for the enclosed lamp. The end of the boom opposite to its end mounting the lamp is pivotally secured to the extreme end of the stanchion by a bracket permitting rotation of the boom from one side of the stanchion to its opposite side. Therefore, by means of the extendable stanchion, extendable boom, universal mounting of the lamp on the boom and the pivotal mounting of the boom on the stanchion, various orientations and attitudes of the lamp can be attained to distribute illumination to suit the convenience of the user.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates to utility lamps and, more particularly, to a novel universal utility lamp adapted to assume various orientations by means of adjustable brackets, stanchions and boom as well as incorporating pivotal mounting and universal connections at critical locations so as to provide universal disposition of the lamp with respect to the base.

Description of the prior art

A long-standing problem in the illumination field resides in providing a lamp construction adaptable to be employed in relatively close quarters where access to portions of structure to be illuminated is difficult to attain. For example, in the instance of mechanics performing maintenance and repair on automobile engines, it is difficult to produce sufficient illumination in portions of the engine compartment so that the part of the engine being worked upon by the mechanic is fully lit. Modern day engines are extremely compact and many of the parts are relatively hidden from view as the engine compartment is defined by the body of the automobile which makes access thereto extremely difficult. Normally, mechanics will raise the hood of the engine compartment and perform work on the engine from above or the automobile is placed on a hoist and lifted vertically so that the mechanic can work from underneath the engine

One means for providing sufficient illumination for the mechanic resides in a light socket for carrying a conventional incandescent of filament bulb which is carried on the terminating end of an electrical extension cord. The bulb of the incandescent lamp is protected by means of a metal shell having a hook attached thereto for detachably connecting the light to a convenient portion of the vehicle such as from a bracket underneath the hood of the automobile. In some instances, a wide mesh wire screen is carried on the shell about the incandescent lamp bulb to not only protect the bulb from inadvertent damage but to guard against a portion of the mechanic's body from coming into contact therewith. Since an incandescent bulb becomes extremely hot and the mechanic can be burned, erratic movements are produced should the mechanic's hand or arm come into contact with the hot bulb.

Aside from the dangers of coming into contact with the hot incandescent bulb, a suitable bracket or mounting for the light cannot be had for all situations which will ensure proper illumination of the portion of the engine being worked upon by the mechanic. Also, the illumination radiating from the bulb is greatly restricted by the provisions of the half shell partially surrounding the bulb which again adds to the difficulties of properly illuminating a selected portion of the engine to be worked upon. Furthermore, another problem using the conventional incandescent bulb resides in the fact that the cord is relatively loose and may inadvertently become entangled with objects or with the mechanic's feet such that the lamp may be readily jerked or pulled from its mounting.

In other instances, utility lamps have been provided which are supported on a movable base so that the lamp may be moved from one location to another on opposite sides of the vehicle. However, none of the conventional base type lamps include sufficient means for orienting the illuminating means so that the illuminating means can be readily disposed to the most effective area of the engine compartment for fully illuminating any portion thereof. Therefore, such conventional base type lamps are not truly universal since the orientation of the illumination means on the lamp base is restricted.

SUMMARY OF THE INVENTION

Accordingly, the problems and difficulties encountered with the prior art are obviated by the present invention which includes a mobile base having an extendable upright stanchion carried thereon by means of a pivot mounting. The opposite end of the stanchion terminates in a pivoting bracket for interconetcing with one end of an extendable boom whereby the boom may be disposed laterally from either side of the stanchion. The extendable portion of the boom mounts a universal joint for holding a lamp housing that encloses a fluorescent lighting means. The fluorescent lighting means is protected by means of a small wire mesh screen which permits light rays to pass therethrough for illuminating a work area. The extendable portion of the boom may be rotated about a horizontal axis to selectively locate the fluorescent lamp so that the emanating illumination extends in a selected direction outwardly from the boom. By coupling the lamp housing to the boom with a universal mount, the lamp can be adjusted both horizontally an vertically. The mobile base includes a supporting area for a power pack operably connected to the fluoresecent lamp.

By this means, a universal utility lamp is provided which obviatess heating probelms and which is not restricted in its orientation so that proper and adequate illumination is provided in any desired critical working area. Furthermore, by means of the pivoting bracket, the lamp may be readily moved out of position to permit additional access to the working area without the necessity of relocating the entire lamp structure.

Therefore, it it among the primary objects of the present invention to provide a novel universal utility lamp adapted to be selectively located so as to provide adequate illumination to a working area.

Another object of the present invention is to provide a novel universal utility lamp incorporating a fluorescent lighting means that is carried on a mobile base and which incorporates a plurality of universal and pivoting mountings so that illumination from the fluorescent lamp may be selectively located with respect to critical working areas.

A further object of the present invention is to provide a universal utility lamp that may be readily folded and

unfolded for storage and work purposes and which incorporates a fluoresecent tube as its illumination means.

BRIEF DESCRIPTION OF THE DRAWINGS

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The present invention, both as to its organization and manner of operation, together with further objects and advantages thereof, may best be understood by reference to the following description, taken in conection with the accompanying drawings, in which:

FIG. 1 is a side elevational view of the universal utility lamp of the present invention illustrated in a typical orientation for illuminating critical working areas about an engine of an automobile;

FIG. 2 is an enlarged side elevational view of the utility lamp showing its adaptability to be laterally extended from its supporting stanchion or post as well as angularly positioned thereto;

FIG. 3 is a cross-sectional view of the utility lamp as taken in the direction of arrows 3—3 of FIG. 2;

FIG. 4 is an enlarged fragmentary view of the universal mounting securing the lamp housing to the end of the boom as taken in the direction of arrows 4—4 of FIG. 2;

FIG. 5 is an end elevational view of the lamp housing showing the fluorescent lamp carried thereon as taken in the direction of arrows 5—5 of FIG. 2;

FIG. 6 is a fragmentary elevational view of the releasable joint interconecting co-extending portions of the main support stanchion; and

FIG. 7 is another embodiment of an interconnecting joint which may be employed in place of the embodiment shown in FIG. 6.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1, the novel universal utility lamp of the present invention is indicated in the general direction of arrow **10** which includes a mobile base **11** carried by a plurality of caster wheels **12** for supporting an upright post or stanchion **13**. Post **13** includes a lower portion carried on one end by the base **11** and incorporating an extendable portion **14** is telescoping coextensive relationship from its opposite end. A coupling collar **15** is employed for securing the portion **14** to the lower portion after the upper portion **14** has been extended to a desired height.

The extreme end of upper portion **14** is pivotally mounted to a bracket **16** which in turn is secured to a boom **17** adapted to laterally extend outwardly from the post **13**. The boom **17** includes an extendable portion **18** adapted to move outwardly from the inner portion of the boom **17** and includes a securement collar **20** similar to the securement collar or coupler **15**. The end of the extendable portion **18** includes a universal mounting **21** to which is secured a lamp housing **22**. The lamp housing incorporates an elongated fluorescent lamp fixedly secured to the housing and enclosed by a narrow mesh screen **23**.

As illustrated in FIG. 1, the utility lamp is employed in connection with servicing an automobile **24** shown in broken lines. The automobile includes a hood **25** which has been raised to expose an engine compartment **26** for housing the vehicle engine. A portion of the engine is illustrated by numeral **27** which includes a conventional carburetor and air filter **28** mounted thereon. The fluorescent lamp carried by the housing **22** is operably connected to a suitable power pack **30** mounted on the base **11**.

It can be seen that the lamp may be positioned directly over the engine if desired or the lamp may be positioned on its universal mounting **21** so as to project into the side wells of the compartment on opposite sides of the engine. The lamp may be placed in position as shown beneath the hood **25** of the automobile **24** and when not in use, the lamp may be rolled on casters **12**

away from the automobile. The height of the lamp above the engine as representative of a working area may be elevated by loosening the construction of collar **15** so that upper portion **14** can be slid therein to the proper elevation. The lamp may be moved or extended laterally by releasing a collar **20** to permit extension **18** to be moved to and from the lower portion of the boom as desired. It is also to be understood that when the collar **15** has been loosened, the lamp may be pivoted by means of the telescoping relationship between the upper portion **14** and the lower portion of the post **13** for even greater flexibility of orientation.

Referring now to FIG. 3, it is noted that the mobile base **11** includes outwardly radiating legs **31**, **32** and **33**, respectively. The power pack, including transformers, is supported on a portion of the base **11** and a portion of the leg **33**. One end of the power pack is adjacent the vertical post **13**. Legs **31** and **32** are aligned so as to be coextensive in the same place whereas the leg **33** is arranged perpendicularly thereto. This arrangement provides for ready and convenient packaging when the stand is disassembled such as for shipping or storage purposes.

Referring now to FIG. 2, the lower end of post **13** is releasably connected to the base **11** by means of a disconnect device **34**. Preferably, the device **34** includes a pivot mounting so that the post may be rotated on the pivot to a position in alignment and flush with either of the legs **31** or **32**. The post **13** would assume this orientation for storage or shipping purposes.

The end of upper portion **14** of the post **13** is pivotally connected to bracket **16** by means of a pivot **35**. Bracket **16** is suitably fixedly secured to the end of boom **17** and is further provided with a shoulder **36** adapted to abut with the upper portion **14** when the boom **17** is laterally disposed such as is shown in solid lines. However, the boom **17** may be rotated in the direction of arrow **37** where the boom will assume the position shown in broken lines. When the shoulder **36** engages with the upper portion **14**, the lamp and lamp housing **22** are cantilevered outwardly and are adequately supported by the base **11** including the legs **31–33** inclusive.

By loosening the securement collar **15**, the boom including the lamp and lamp housing may be elevated by withdrawing the upper portion **14** from the lower portion of the post **13**. The elevation of the lamp is indicated in broken lines.

The adaptability of the utility lamp is further evidenced by loosening collar **20** to permit the extension **18** to be withdrawn from the major body of the boom **17** so that the lamp housing and lamp may be extended laterally to the position shown in broken lines in the direction of arrow **38**. Although the lamp and lamp housing are shown as downwardly depending from the boom **17**, it is to be understood that when the collar **20** has been loosened, the lamp and lamp housing may be rotated by rotating extension **18** so that the lamp and lamp housing are on top or on the sides of the boom **17**. When the lamp and lamp housing have been located to a desired position, the collar **20** may be rotated to secure extension **18** to the boom. Once secured, the lamp and lamp housing will remain in its selected position.

Referring now to FIG. 4, the telescoping relationship between boom **17** and extension **18** is shown as well as the universal mounting **21**. By loosening the wing nut **40**, the lamp and lamp housing **22** can be angularly oriented with respect to the vertical plane which permits the lamp and lamp housing to be rotated in the direction of arrow **41** in FIG. 2 so as to assume the position shown in broken lines associated therewith. On the other hand, the housing **22** may be rotated in a horizontal plane in the direction of arrow **42** by means of the universal mounting **40** when it is loosened.

Referring now to FIG. 5, the housing **22** is illustrated to show that a fluorescent lamp **43** is protected by the

open-ended cage or screen mesh **23**. The lamp **43** is suitably carried between end brackets **44** which are downwardly depending from the undersurface of the housing **22**. The opposite or upper surface of the housing operably connects with universal mounting **21** so that the housing may be rotated and repositioned to desired locations as previously described.

With respect to FIG. 6, the collar **15** is illustrated for releasably securing upper portion **14** to the main body of the post **13**. However, in FIG. 7, an alternate embodiment is shown wherein portion **14** includes a plurality of holes **46** which are adapted to register with a plurality of holes **47** in the post **13**. When selected ones of holes **46** have been so aligned with aperture **47**, a securement pin **48** is inserted through the mated holes so that the portion **14** is releasably secured to the post. Furthermore, it is to be understood that the post **13** may be of tubular construction or may be of square cross-section as desired. When tubular construction is employed, rotation of the boom via portion **14** is attained with respect to the lower portion of post **13**. When a square cross-section post is used, rotation is prohibited.

In view of the foregoing, it can be seen that the universal utility lamp of the present invention provides an illumination means which is readily locatable in a variety of positions so as to illuminate a desired working area. Initially, the lamp is moved on casters **12** in close proximity to the work area. Next, the elevation of the boom is determined and collar **15** is loosened so that upper portion **14** may be raised to the proper elevation. Next, the boom may be located on either one side or the other of the post **13** at a desired angle by tightening pivot **35** such as with a wing nut and extension **18** is adjusted by means of collar **20** to properly locate the lamp in close proximity to the working area. Next, universal mount **21** is loosened to permit the housing **22** to be angularly disposed with respect to a vertical axis, if desired. Housing **22** may also be rotated on a horizontal axis, if required. Inasmuch as the source of illumination is a fluorescent lamp, no heating problems are involved which would normally present discomfort or danger to workmen in close proximity thereto. The power pack **30** is not only conveniently mounted so as to supply the fluorescent lamp with suitable power, but the weight of the power pack anchors the base **11** to the supporting floor. This permits the lamp housing **22** to be cantilevered outwardly from the post **13** without unbalancing the unit.

While particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from this invention in its broader aspects, and, therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of this invention.

What is claimed is:

1. A universal utility lamp adapted to be
selectively positionable to illuminate a relatively confined and obstructed working area comprising:
a movable base;
an upright stanchion supported at one end on said base;
a boom pivotally connected to the end of said stanchion opposite to its end supported on said base;

a universal mounting interconnecting said boom with said housing whereby said housing may be selectively rotated about a vertical and a horizontal axis;
an elongated lamp housing rotatably carried on said boom;
an elongated fluorescent illumination means carried by said housing along one side thereof and being adapted to cast illuminating light therefrom;
said pivot connection between said stanchion and said boom includes a bracket rotatably coupled to said stanchion at one end of said bracket and fixedly secured to said boom at its other end;
said bracket includes a shoulder adapted to engage said stanchion and to support said boom so as to cantilever said housing outwardly and laterally of said stanchion;
said stanchion includes an upper portion carrying said boom and a lower portion secured to said base in which said upper portion is in telescoping coextensive relationship with respect to said lower portion; and
coupling means for releasably coupling said upper portion to said lower portion whereby the height of said housing may be selectively adjusted with respect to a support surface.

2. The invention as defined in claim **1** wherein
said housing includes an open-ended close mesh wire screen substantially surrounding said illuminating means in fixed spaced apart relationship.

3. The invention as defined in claim **2** wherein
said illuminating means comprises an elongated glass tube filled with a gaseous fluid adapted to illuminate upon energization.

4. The invention as defined in claim **3** including
a power supply for said illuminating means fixedly carried on said base and constituting an anchor weight to maintain balance of the lamp.

5. The invention as defined in claim **4** wherein
said base includes at least three legs outwardly extending from said stanchion in which two of said legs are in alignment along a common axis and said third leg is perpendicularly disposed thereto.

6. The invention as defined in claim **5** including
a releasable pivot connection operably connecting said base to said stanchion whereby said stanchion may be folded in alignment with said aligned pair of base legs to assume a storage position.

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U.S. Cl. X.R.

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