Nov. 26, 1968 R. SONNEMAN 3,413,459

COUNTERPOISE LAMP

Filed May 31, 1967

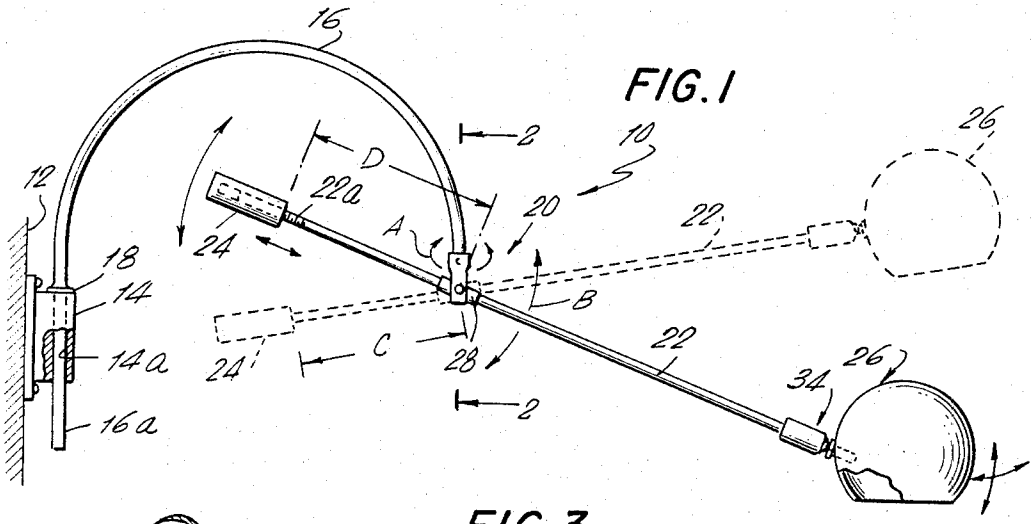


FIG. 1

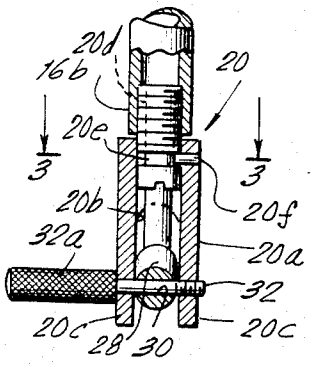


FIG. 2

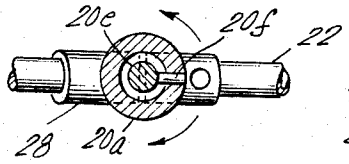


FIG. 3

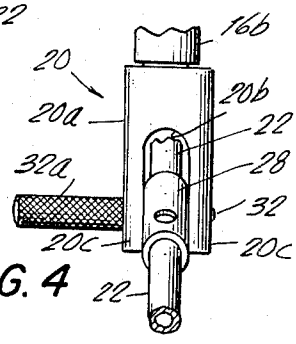


FIG. 4

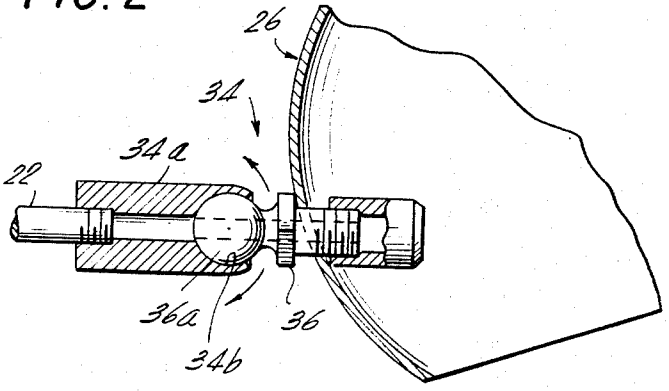


FIG. 5

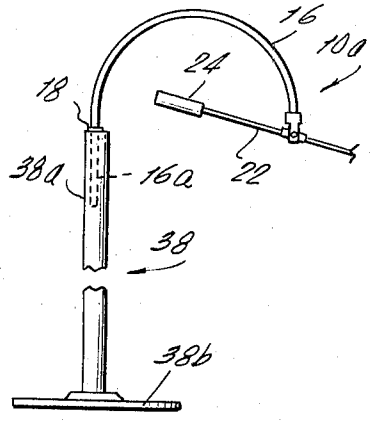


FIG. 6

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COUNTERPOISE LAMP

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ABSTRACT OF THE DISCLOSURE

A lamp having an arcuate body member which is mounted for rotative movement and, in turn, rotatably and pivotally mounts a counterpoise boom having a light means thereon, so that the light means is movable into a wide range of positions.

The present invention relates generally to lamps, and more particularly to an improved lamp in which the light means thereof is readily adjustable in position.

It is highly desirable to be able to readily adjust the position of the light means of a lamp, but in achieving this use cannot be indiscriminately made of connections which allow pivotal, rotative and other degrees of movement between the lamp parts. Care must be exercized, for example, to avoid a construction in which inadvertent movements occur which prevent the user from setting the lamp and its light means in one desired position. Additionally, the mechanical aspects embodied by the lamp to achieve positioning of the light means cannot be permitted to adversely effect the asthetic appearance of the lamp or render the manufacturing cost prohibitive.

Broadly it is an object of the present invention to provide a lamp having a readily adjustable light means which also is of extremely simple construction, has a correspondingly simple mode of operation, and is noteworthy in appearance. Specifically, it is an object to provide a light means in a lamp which is movable through movement traverses with its supporting structure and also independently thereof, and which, despite these many degrees of movement, is not prone to inadvertent movements.

A lamp demonstrating objects and advantages of the present invention includes an arcuate shaped body rotatably mounted at one end and, at its other end, movably mounting a counterpoise boom having a light means. The boom movements, more particularly, consistent with maintaining a simplified construction are only pivotal and rotative but, supplemented by the previously noted rotative movement of the supporting body, render it readily possible to provide a wide range of positions to the light means.

The above brief description, as well as further objects, features and advantages of the present invention, will be more fully appreciated by reference to the following detailed description of presently preferred, but nonetheless illustrative embodiments in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is an elevational view, with portions broken away and in section, of a first embodiment of a counterpoise lamp in accordance with the present invention, in which positions of the counterpoise boom of the lamp are illustrated in full line and in phantom line perspective;

FIG. 2 is an elevational view, on an enlarged scale and in section taken on line 2—2 of FIG. 1, illustrating details of the mounting between a lamp support member and the counterpoise boom;

FIG. 3 is a plan view, in section taken on line 3—3 of FIG. 2, illustrating further structural details of the mounting;

FIG. 4 is a front elevational view of the mounting illustrating further structural details thereof;

FIG. 5 is a sectional view showing details of the universal mounting of the light means of the counterpoise boom; and

FIG. 6 is an elevational view of a second embodiment of a lamp according to the present invention.

Reference is now made to the drawings and in particular to the first embodiment of a counterpoise lamp illustrated in FIGS. 1–5 and generally designated **10**. A second embodiment of the lamp, illustrated in FIG. 6 and generally designated **10***a*, is identical to the first embodiment in all major respects except that it is a floor standing model whereas the first lamp embodiment **10** is adapted, in practice, to be supported in an elevated position on a wall **12** by a wall bracket **14**. An essential feature of the lamp **10**. as will be more fully described herein, resides in the large number of positions it can assume due to the relative movements between its parts.

More particularly, the lamp **10** includes an arcuate shaped tubular body **16** having one end **16***a* rotatably disposed in a bore **14***a* in the wall bracket **14** so that the lamp body **16** is movable through a rotatable traverse about the longitudinal axis of the bore **14***a*. A lock washer **18** or similar element is appropriately fixedly mounted on the end **16***a* and serves as a stop limiting the extent to which this body end is projected through the wall bracket **14**. At its opposite end, the body **16** has appropriately mounted thereon a mounting means **20** which connects a counterpoise boom **22** to the body **16** while permitting rotational and pivotal movements A and B, respectively, in the counterpoise boom **22** with respect to the body **16**.

The counterpoise boom **22** includes a counterweight **24** which is threadably engaged to a threaded end **22***a* of the boom and also a light means **26** carried on its opposite end. For simplicity sake, the electric bulb, electrical wiring and similar elements which will be understood to be a part of the light means **26** have been omitted as not being necessary for a complete understanding of the present invention. The present invention relates more to the mechanical aspects of the lamp **10** by which the individual parts thereof are movable relative to each other, and thus the drawings and description are confined to these mechanical aspects.

One of the more significant of these mechanical aspects is the provision for rotative and pivotal movement of the counterpoise boom **22** relative to the body **16** which, in the preferred embodiment as illustrated herein, is achieved by the previously noted mounting **20**. Mounting **20**, as best shown in FIGS. 2, 3, and 4, is formed from a comparatively short length of tubular stock **20***a* which, at its lower end, has a machined groove **20***b* providing bifurcated legs **20***c*. The boom **22** has a reinforcing sleeve **28** thereon through which there is machined a through bore **30**, as best shown in FIG. 2. A pivot pin **32** is projected through the bore **30** and the legs **20***c* and is threadably engaged with threads in the opening in one of the legs **20***c*. A knurled body **32***a* on the pin **32** is conveniently gripped and turned to provide threaded engagement of the pivot pin **32** with the one leg **20***c* until the body **32***a* is firmly seated against the other leg **20***c*. This holds the pivot pin **32** firmly in place. As a consequence, the boom **22** is free to partake of pivotal movements B about the axis of the pivot pin **32** to the full extent of the clearance of the machined slot **20***b*. In this regard, it will be understood that the counterweight **24**, the lamp means **26** and the distances of each from the pivot are selected so that a counterbalance of weights is effected with the result that the light means **26** will normally remain in any pivoted position in which it is placed. Should any adjustment be required to strike a better weight balance, this is readily achieved by

threaded adjustment of the counterweight **24** on the threaded boom **22***a* which varies the distance of the counterweight **24** from the pivot axis **32**. Exemplary distances of C and D, where D is greater than C, are illustrated in FIG. 1.

Mounting **20** also includes appropriate structure for allowing rotative movement of the boom **22** relative to the body **16**. To this end, there is included an internal cylindrical plug **20***d* threadably engaged in the body end **16***b* and extending slightly beyond this body end. The extending portion of the plug **20***d* is machined so as to have a reduced cross section **20***e* and is inserted into the upper opening of the mounting body **20***a*. A stop pin **20***f* disposed through a bore in the mounting body **20***a* extends into the shoulder formed by the reduced section **20***e* and is effective to hold the mounting body **20***a* on to the end of the lamp body **16** while permitting rotative movement A in the boom **22** relative to the lamp body **16**. The normal degree of frictional binding of the stop pin **20***f* against the reduced section **20***e* is sufficient to maintain or hold the counterpoise boom **22** in any rotative position in which it is placed by the user and thus minimizes inadvertant rotative movement of the boom **22**.

Completing the construction of the lamp **10** is a universal mounting means **34** connecting the light means **26** to the end of the boom **22**. The mounting means **34** is conventionally constructed and includes a body **34***a* threadably engaged to the boom **22** and having a spherically-shaped aperture **34***b* accommodating a spherical element **36***a* of a lamp-mounting fixture **36**.

Referring now to the second lamp embodiment **10***a*, it will be understood that it is identical in all major respects to the already described lamp **10** and, as such, the same parts are designated by the same reference numerals. The major difference is that the embodiment **10***a* has a floor stand formed by an upstanding tubular member **38***a* rotatably receiving at its upper end the lamp body **16***a* and having at its opposite end a laterally extending base **38***b* of sufficient extent to prevent tipping of the lamp **10***a*.

A latitude of modification, change, and substitution is intended in the foregoing disclosure, and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly

and in a manner consistant with the spirit and scope of the invention herein.

What is claimed is:

1. A lamp comprising a support member having an arcuate shape bounding a semicircular clearance space operatively arranged in a vertical orientation with said clearance space situated below said support member, support means operatively arranged to rotatably mount one end of said support member, a counterpoise boom including a counterweight and a light means supported on opposite ends of said counterpoise boom, and mounting means at the opposite end of said support member operatively effective to rotatably and pivotally mount said counterpoise boom in a depending relation on said support member so as to be movable through rotatable and pivotal traverses relative to said support member within said clearance space beneath said support member.

2. A lamp as defined in claim **1** wherein said counterpoise boom and said counterweight are threadably engaged with each other such that the balance of said counterpoise boom is adjustable by threadably adjusting said counterweight on said counterpoise boom.

3. A lamp as defined in claim **1** wherein said support means includes an upstanding tubular member adapted to rotatably accommodate an end of said support member therein and having a laterally extending base at its opposite end.

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