Aug. 5, 1969 J. M. R. BRUNER 3,459,935

LIGHTING

Filed April 6, 1967

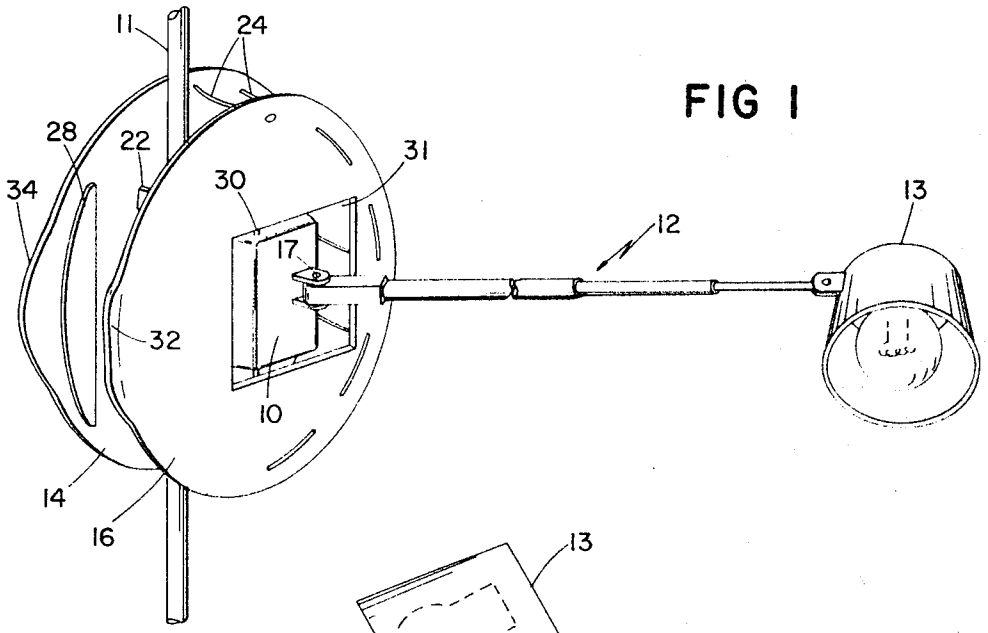


FIG 1

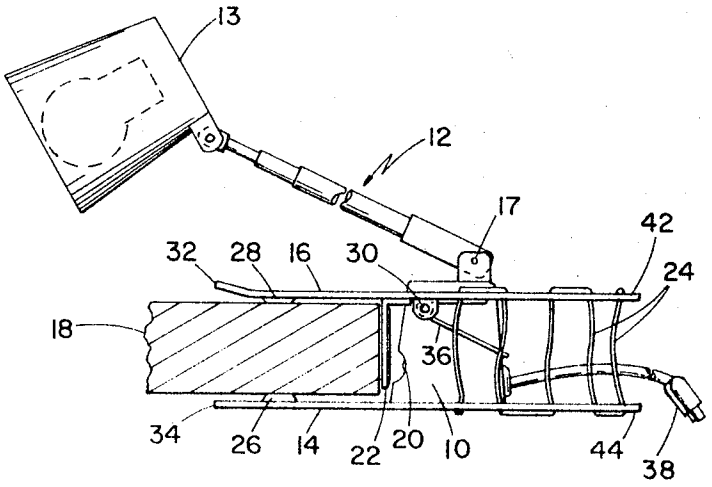


FIG 2

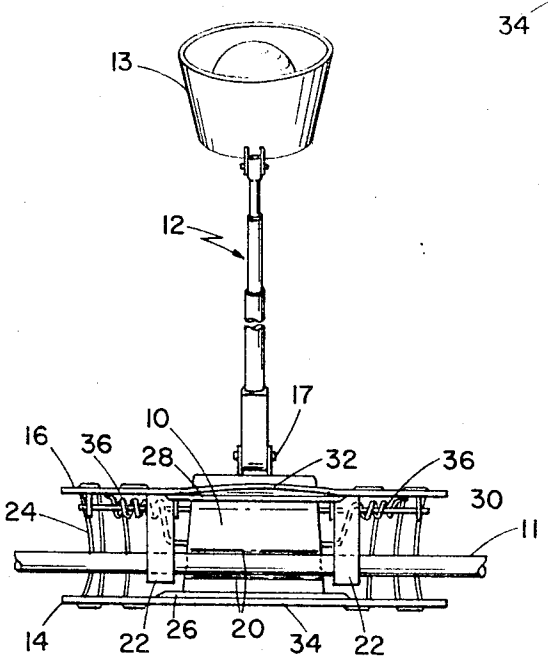


FIG 3

United States Patent Office

3,459,935

Patented Aug. 5, 1969

3,459,935

LIGHTING

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Filed Apr. 6, 1967, Ser. No. 629,017
Int. Cl. F21v 21/02, 21/06
U.S. Cl. 240—52 3 Claims

ABSTRACT OF THE DISCLOSURE

A portable light comprising a lamp, a base and three clamping members. One clamping member is firmly secured to the base and another is pivotally mounted above it. A third member extends from this second member toward the first and cooperates with the base to provide a second clamp. The base houses a step-down transformer and the fulcrum of the second clamping member is directly above the center of gravity of this base. Laces between the clamping members serve as portions of a cord spool.

This invention relates to lighting.

It is the primary object of the invention to provide a light source that can be securely clamped to supports ranging from thick objects to thin rods. Other objects are to provide such a light source that is portable, compact, inexpensive, that permits easy storage of a long electrical cord, and that offers decreased risk of electrical shock.

The invention features a lamp with a first clamping member fixedly secured to its base and a second clamping member pivotally secured in vertical alignment with the first clamping member to clamp between clamping surfaces thereof the lamp onto thick objects, the second clamping member including also at least one gripping member extending at an angle to the second clamping member clamping surface. In preferred embodiments there is featured a step-down transformer in the lamp base, the second clamping member is pivotally mounted on the base with its fulcrum vertically aligned with the center of gravity of the base, and laces are interconnected between portions of the peripheries of the first and second clamping members to serve as part of a spool for winding and storing the lamp cord.

Other objects, features, and advantages will appear from the following description of the preferred embodiment of the invention, taken together with the attached drawings, in which:

FIG. 1 is a perspective view of said embodiment clamped to a thin vertical support.

FIG. 2 is a side elevation thereof, showing it clamped to a thick horizontal object.

FIG. 3 is a front end elevation thereof in the open position of FIG. 2.

In FIG. 1 the lamp is shown clamped to supporting rod **11**. The lamp bulb and shade **13** are pivotally and rotatably mounted at the end of telescoping extension arm **12**, which is pivotally mounted on the base **10** (which includes an enclosed transformer) at gudgeons **17**. Most of the lamp weight is in base **10**. The clamp details are best seen in FIG. 2 and FIG. 3. Fixed clamp member **14** is round except for projecting lip **34**, is of non-conducting high-impact-strength polycarbonate resin, and is secured to the bottom of base **10** with its center just below the center of the base. Base **10** is of nonconducting polycarbonate resin and has a horizontal groove **20** of semi-cylindrical cross-section extending laterally across its entire width. Movable clamp member **16** is round except for projecting lip **32**, is of non-conducting polycarbonate resin, and is pivotally mounted about axis **30** directly over the center of gravity of base **10**. In movable clamp member **16** is an aperture (shown in FIG. 1 at 31) of

width and length to receive the base and permit movable clamp member **16** to be mounted with axis **30** vertically as well as horizontally near the center of gravity of base **10**, and to rotate freely about axis **30** without interference with base **10**.

Gripping members **22** project perpendicularly downward from movable clamp member **16**, are spaced laterally outward from base **10** equidistant from the center of axis **30**, and are spaced transversely from transformer **10** on the same side of axis **30** as is groove **20**. Spring **36** biases movable clamp member **16** counterclockwise about axis **30**. Flexible laces **24** are interconnected between edges **42** and **44** throughout about 120 degrees of the rear periphery of clamp members **16** and **14** respectively. Projecting lip **32** is outwardly rolled outside clamp jaws **28** and **26** as shown in FIG. 2.

Use of non-conducting polycarbonate resin in clamp members **14** and **16** and base **10** greatly reduces the danger of a short circuit or other electrical failure charging supporting object **18** or **11** with hazardous line voltages. The use of stepped-down voltage at the bulb and shade assembly **13** provides further safety, particularly for medical use.

In operation, the lamp can stand alone on any relatively flat surface with fixed clamp member **14** serving as a base, can be clamped to objects up to several inches thick with clamping surfaces **26** and **28**, or can be clamped to objects very small in all cross-sectional dimensions with gripping members **22** and groove **20**. For either mode of clamping, the clamping surfaces are separated by compressing edge **42** toward edge **44**. When edge **42** is released, the torque of spring **36** acting on movable clamp member **16** causes the clamp to grip the supporting object. When the lamp stands alone, the round shape and generous size of fixed clamp member **14** together with the fact that the center of gravity of base **10** is in vertical alignment with the geometrical center of fixed clamp member **14** ensures good stability even when arm **12** is so extended and positioned as to locate the shade and bulb assembly **13** at maximum radial distance from base **10**. When the lamp is clamped to a supporting object, the short moment between the center of gravity of base **10** and the clamping surfaces makes for stability. When the lamp is to be moved or stored, electrical cord **38** may be conveniently wound around the spool formed by projecting lips **32** and **34** and laces **24**.

Other embodiments will occur to those skilled in the art and are within the following claims:

What is claimed is:

1. A lamp comprising

a base,

a first clamping member fixedly secured to said base, said first clamping member including a first clamping surface,

a second clamping member mounted for pivotal movement about an axis parallel to said first clamping surface,

said second clamping member including a second clamping surface for cooperatively holding objects therebetween, a

third member for gripping objects,

said third member extending from said second member and including a gripping surface angularly related to said second clamping surface, and

flexible laces interconnected between portions of the peripheries of said first and said second clamping members,

said clamping members being at other portions thereof shaped to provide in combination with said flexible laces a winding spool for the cord of said lamp.

2. A lamp comprising
a base,
said base being of electrically non-conducting material and having a horizontal groove extending laterally across its entire width,
a step-down transformer within said base,
an electric cord attached to said step-down transformer
an extension arm pivotally mounted on the top of said base,
a shade and bulb pivotally and rotatably mounted at the end of said extension arm
a round first clamping member of electrically non-conducting material fixedly secured to the bottom of said base with the center of said clamping member and the center of said base in vertical alignment,
said first clamping member including a first clamping surface,
a second round clamping member of electrically non-conducting material mounted for pivotal movement about an axis parallel to said first clamping surface and passing adjacent to the center of gravity of said base,
said second clamping member including a second clamping surface for cooperatively holding objects therebetween,
said second clamping member having an aperture through which the base of said lamp extends,
said second clamping member including two projecting gripping members extending downward perpendicularly from said second clamping member laterally spaced from the center of the axis of said second clamping member and transversely spaced from said axis in the direction of the clamping surfaces of said first and said second clamping members and including gripping surfaces adapted for clamping objects of small cross section against the horizontal groove in said base,
flexible laces interconnected between portions of the peripheries of said first and said second clamping members over a portion of the peripheries of said first and said second clamping members,
and other portions thereof projecting outwardly therefrom to provide in combination with said flexible laces a winding spool for the electrical cord of said lamp.

3. A lamp comprising
a base,
a first clamping member fixedly secured to said base,
said first clamping member including a first clamping surface,
a second clamping member mounted for pivotal movement about an axis parallel to said first clamping surface,
said second clamping member including a second clamping surface for cooperatively holding objects therebetween, and
two projecting gripping members extending from and perpendicularly to said second clamping member in a downward direction and transversely spaced from the axis of said second clamping member in the direction of the clamping surfaces of said first and said second clamping members.

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U.S. Cl. X.R.

248—228