Feb. 1, 1966 J. P. FOULDS 3,233,094

LUMINAIRE

Filed May 9, 1963

Fig. 1.

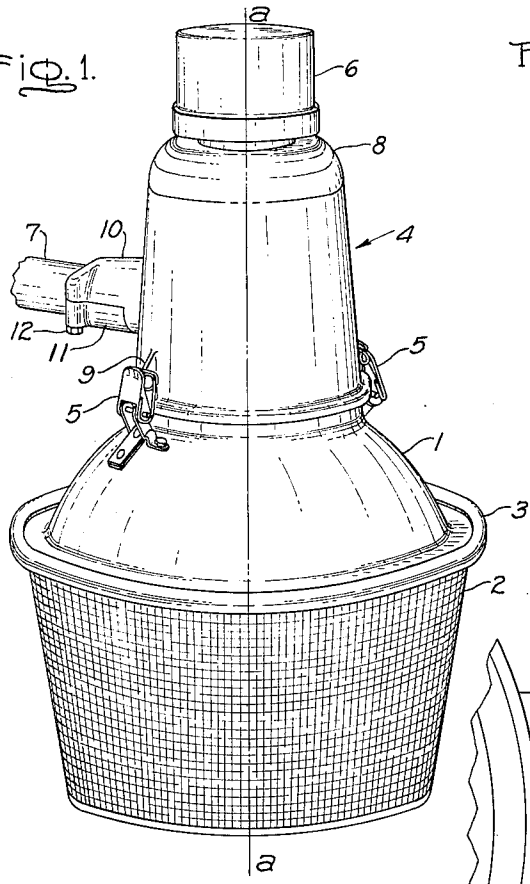


Fig. 3.

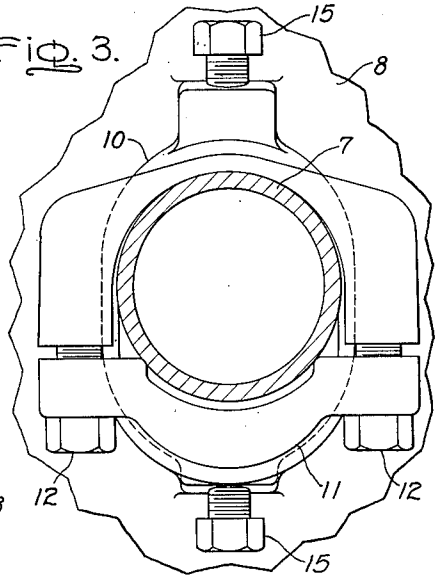


Fig. 4.

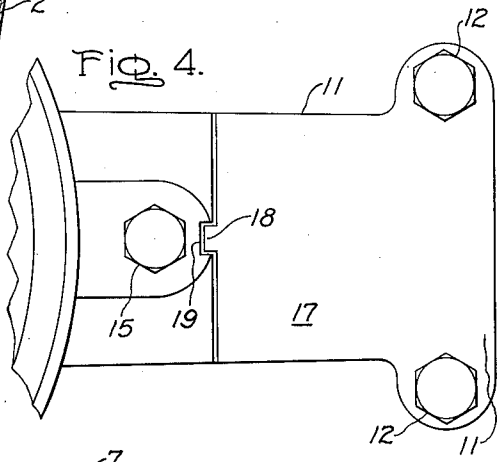
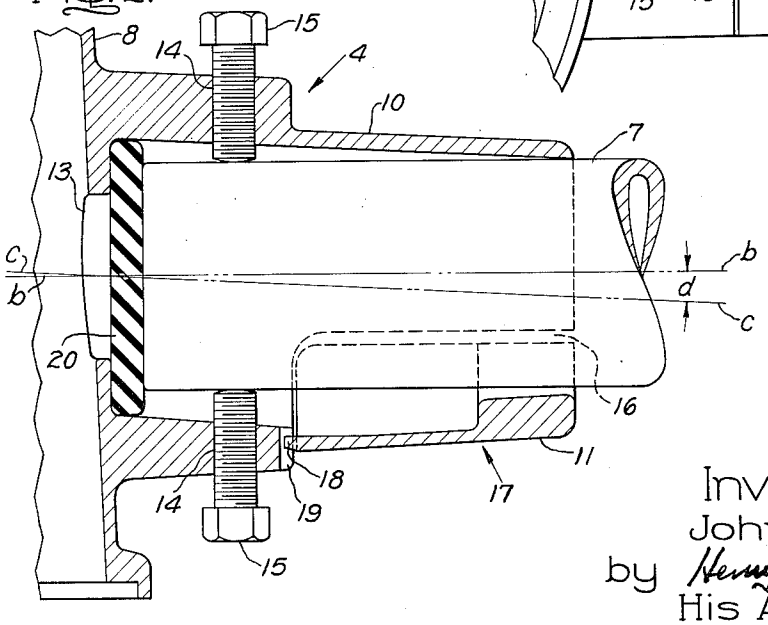


Fig. 2.



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3,233,094

LUMINAIRE

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2 Claims. (Cl. 240—25)

This invention relates to luminaires and more particularly to a novel hood for a pendant type luminaire.

Luminaires of the type to which this invention relates are well known and are of the type generally disclosed, for example, in U.S. Patent 2,489,075—Bjontegard. This type of luminaire consists of a refractor-reflector optical assembly dependent from a hood and slipfitter. The hood serves to cover at least a portion of the reflector and the slipfitter component is attained in the hood for the purpose of adjustably securing the luminaire on a suitable mounting bracket, normally a conduit. A disadvantage of prior known arrangements such as this was that the hood and slipfitter were necessarily manufactured as two separate parts which are secured together by suitable clasping means. This was required since the slipfitter must provide for adjustment of the hood with respect to the bracket, and therefore the interior of the slipfitter adjacent the hood must have a larger diameter than the interior of the slipfitter remote from the hood. It is an object of this invention to provide a novel hood for a pendant luminaire which has therewith a slipfitter portion made as an integral part thereof which still permits adjustment of the hood with respect to the pole bracket.

It is a further object of this invention to provide such a hood which is easily and economically produced.

Further objects and advantages of the invention shall be understood from the following complete description and the drawing wherein:

FIG. 1 is a perspective view showing a complete luminaire in which the invention is embodied;

FIG. 2 s a partial sectional view of a hood constructed in accordance with the invention;

FIG. 3 is a side view of the hood taken along the axis of the slipfitter portion; and

FIG. 4 is a bottom view of the portion of the hood shown in FIG. 2.

As shown in FIG. 1, a luminaire illustrative of the general combination to which the invention relates comprises a reflector **1** secured to a refractor **2** by suitable means, such as a clamp band **3**. The combination of the refractor **2** and reflector **1** are commonly referred to as the optical assembly of the luminaire. A hood **4** secured to the optical assembly by means of a pair of clasps **5** mounted on the reflector **1** houses and supports the electrical components of the luminaire. Thus, the hood **4** may contain, as is conventional, a lamp socket and if the luminaire is intended for use with discharge lamps, such as a mercury vapor lamp, suitable ballasting means may be provided. The hood **4** may have in its upper surface a socket for the reception of a photoelectric control **6**. As is well recognized, the luminaire as a whole will generally be supported on a pole by a suitable support bracket **7** which is usually a hollow conduit through which electrical conductors may be introduced into the interior of the hood **4** for completing the electrical circuit to the luminaire.

The hood **4** comprises an inverted open bottom bowl-shaped portion **8** which is generally symmetrical about a vertical axis *a—a* of the luminaire. The bowl-shaped portion **8** generally has on its outer surface a pair of hooks **9** to which the clasps **5** are secured for fastening the optical assembly of the luminaire to the hood. The hollow interior of the hood inverted bowl portion **8** is

provided with suitable embossments, not shown, on its surface for mounting the appropriate electrical components therein.

Extending outwardly from the inverted bowl-shaped portion **8** of the hood **4** is a generally tubular slipfitter portion **10** by which the hood may be secured in an adjustable relation upon the bracket **7**. This slipfitter portion **10** has an exterior wall surface which is generally symmetrical about a horizontal axis *b—b* (FIG. 2). The axis *b—b* is generally perpendicular to the vertical axis *a—a* of the hood **4**. Co-acting with the slipfitter portion **10** is a clamp plate **11** which is secured to the slipfitter portion **10** by suitable fastening means, such as the bolts **12** shown, the slipfitter portion **10** of the hood being provided with suitable tapped holes for the reception of said bolts. The slipfitter portion **10** of the hood communicates with the interior of the inverted bowl-shaped portion of the hood by means of an aperture **13** in the wall of the inverted bowl-shaped portion **8**. This aperture permits the introduction of suitable electrical conductors (not shown) into the interior of the inverted bowl-shaped portion **8** from the slipfitter portion.

Since the bracket **7** will not always properly be positioned with respect to the ground level, most luminaires are constructed with some provision for angularly adjusting the luminaire relative to the bracket. This is normally accomplished by providing space by the bracket end so as to permit pivotal movement about the point at which the luminaire is clamped to the bracket. In the case of a pendant luminaire, the slipfitter has been made with its interior surface conical, the small diameter being the point of clamping and the larger diameter providing space permitting movement of the end of the bracket. Since it is difficult and expensive to cast a part which requires a larger internal space than its mouth opening, the above-mentioned construction has been made with the hood and slipfitter as separate cast parts secured together by fasteners.

In accordance with the invention, the slipfitter portion **10** is cast as an integral part of the hood and still provides the space necessary for adjustment of the luminaire. To provide room for the adjustment of the internal end of the bracket **7** within the slipfitter portion, the interior wall surface of the slipfitter portion is constructed in a manner which permits a core plunger to be withdrawn from the cavity. The cavity must have a smaller end adjacent the bowl portion **8** to provide the draft necessary for withdrawal of the plunger and, as shown, is cast so that its cavity is symmetrical about an axis *c—c* which is at a predetermined acute angle *d* with respect to the horizontal axis of the slipfitter portion as a whole. As used herein, the term "symmetrical" means that the surfaces about the axes referred to are produced with a similar draft angle relative to the axes so that the casting cores may be easily withdrawn. The opening in the slipfitter, produced by the core plunger, is greater in height than in width, being only slightly wider than the pipe bracket diameter. The height at the end adjacent to the bowl-shaped portion of the hood **8** is great enough to permit adjustment of the hood in relation to the pipe bracket in a vertical direction. Thus, it is not necessary to utilize a two-piece construction or a construction which necessitates the casting of undercut portions.

To complete the adjustment mechanism, a pair of bosses with tapped holes **14** are provided on the upper and lower surfaces of the slipfitter portion. A pair of adjusting screws **15** are threadedly secured in the tapped holes **14** and provides a mechanism for adjusting the luminaire angularly in a vertical plane with respect to the bracket **7**.

To cast the interior cavity of slipfitter portion at an

angle with respect to its horizontal axis, a lower area **16** of the slipfitter is not cast integrally with the hood. To more completely seal the interior of the luminaire from the elements, this lower area **16** is covered by a plate **17** which is made integrally with the clamp plate **11**, the clamp plate being aligned with respect to the slipfitter by a suitable tongue **18** provided on the clamp plate which coacts with a groove **19** provided in the end of the slipfitter portion adjacent to the lower adjusting screw **15**. To further seal the luminaire, a suitable gasket **20** may be provided between the interior end of the bracket and the exterior wall of the inverted bowl-shaped portion.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A luminaire comprising an optical assembly including a reflector and a refractor secured together by a clamp band and hood means for enclosing the electrical components of the luminaire and supporting the optical assembly on a support bracket secured to said optical assembly by a pair of clasps, said hood means comprising an open bottom inverted bowl-shaped portion which is symmetrical about a vertical axis, hook means on the outer surface of said bowl engaged with said pair of clasps, and a generally tubular slipfitter portion extended outwardly from said inverted bowl-shaped portion having exterior walls symmetrical about a horizontal axis and interior walls symmetrical about an axis which is at at predetermined acute angle with respect to said horizontal axis, an aperture in the wall of said inverted bowl-shaped portion symmetrical about said horizontal axis permitting electrical conductors to be introduced into the interior of said inverted bowl-shaped portion from said slipfitter portion, said slipfitter portion being provided with a pair of bosses on its top and bottom with a pair of adjusting screws threadedly secured in said bosses, clamp means for securing said slipfitter portions to its said pole bracket, said clamp means including a cover plate extension having a tongue which engages with a notch provided in the

lower portion of said slipfitter portion and means for securing said clamp means to said slipfitter portion.

2. A luminaire comprising an assembly including optical means, and a hood secured to one another in alignment along a first axis, said hood having integral therewith a tubular slipfitter portion extending laterally therefrom and having a circumferential inner surface symmetrical about a second axis extending at an acute angle to a plane passing through said slipfitter portion perpendicular to said first axis, said slipfitter portion being adapted to receive therein an elongated support member for supporting said assembly, a clamp means separately and adjustably secured to said slipfitter portion at the outer end thereof for securing said slipfitter portion to the support member, said clamp means defining with said slipfitter portion an end opening in which the support member is adapted to be received in clamping engagement with said clamp means and said end of said slipfitter portion, the diameter of said inner surface in a direction generally along said first axis being substantially greater than the diameter of the support member adapted to be received therein, and adjusting means secured to said slipfitter portion inwardly of said clamp means for adjusting said assembly on the support member with its first axis at different angles relative to the support member.

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NORTON ANSHER, *Primary Examiner.*

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,233,094 February 1, 1966

John P. Foulds

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 1, line 13, for "2,489,075" read -- 2,489,076 --; line 17, for "attained" read -- attached --; line 39, for "s" read -- is --; column 4, line 12, for "separately" read -- separably --.

Signed and sealed this 31st day of January 1967.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents