Sept. 11, 1962 R. K. FARRINGTON 3,053,979

HOOD FOR DISCONNECTING AND LOWERING HANGER

Filed April 19, 1960 2 Sheets-Sheet 1

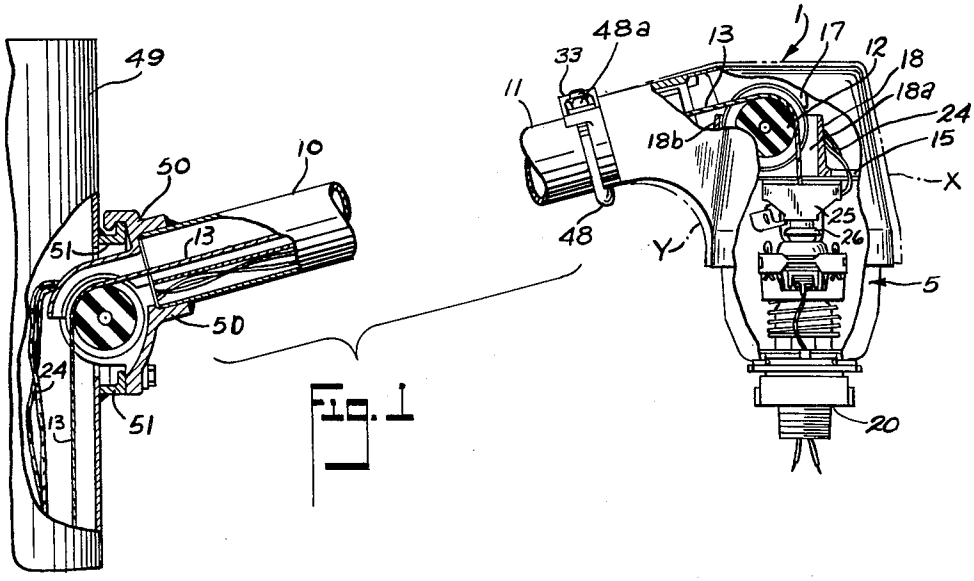


Fig. 1

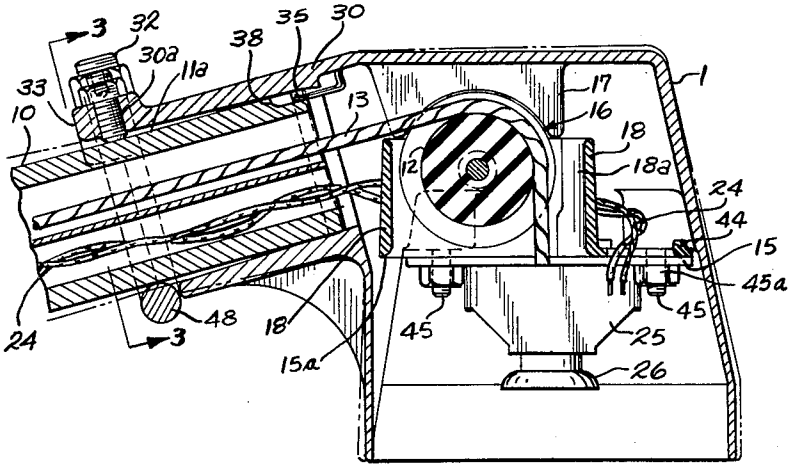


Fig. 2

INVENTOR.
ROBERT K. FARRINGTON

BY

Meyer, Baldwin, Doran & Young
ATTORNEYS

Sept. 11, 1962 R. K. FARRINGTON 3,053,979

HOOD FOR DISCONNECTING AND LOWERING HANGER

Filed April 19, 1960 2 Sheets-Sheet 2

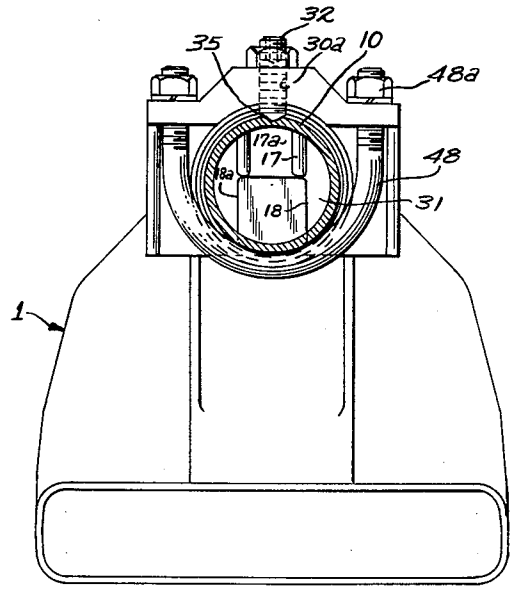


Fig. 3

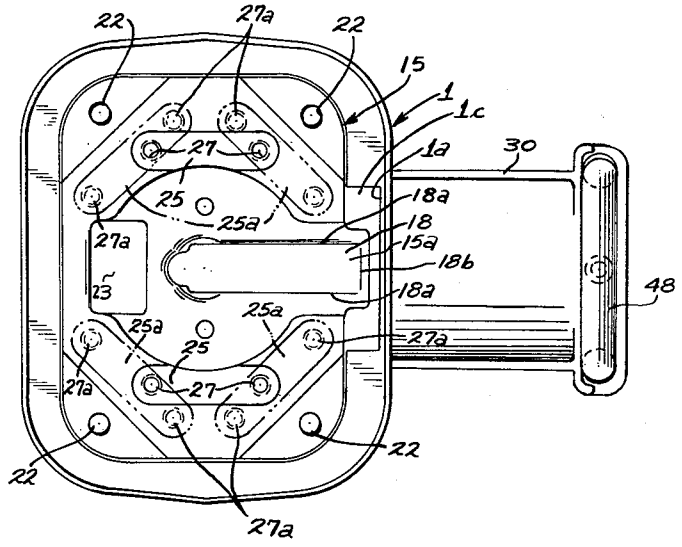


Fig. 4

INVENTOR.
ROBERT K. FARRINGTON

BY

Meyer, Baldwin, Doran & Young
ATTORNEYS

United States Patent Office 3,053,979
Patented Sept. 11, 1962

3,053,979

HOOD FOR DISCONNECTING AND LOWERING HANGER

Robert K. Farrington, Shaker Heights, Ohio, assignor to The Thompson Electric Company, Cleveland, Ohio, a corporation of Ohio

Filed Aug. 19, 1960, Ser. No. 50,776
10 Claims. (Cl. 240—64)

This invention relates to improvements in means for connecting a lowering and disconnecting hanger to the outer end of a hollow mast arm. Particularly, the invention is directed to a hood for connecting a lowering and disconnecting hanger for an electrical device, such as a lighting fixture, on a hollow mast arm.

It is an object of the present invention to provide a hood for a disconnecting and lowering hanger adapted to be mounted on the end of a hollow mast arm, the hood having a base plate mounted therein, the plate having an upstanding portion which serves as a lower shroud member for a pulley, and the hood having an upper shroud member depending from the top of the interior thereof to form an upper shroud member for the pulley, one of the shroud members adapted to rotatably mount the pulley inside the hood.

It is an object of the present invention to provide a hood for a disconnecting and lowering hanger adapted to be mounted on the end of a hollow mast arm, the hood having a base plate mounted therein which serves as a portion of a shroud member for a pulley, the base plate also having a through opening for receiving electrical conductors for an electrical device supported by said disconnecting and lowering hanger, the plate also being adapted to mount insulators for separable electrical contacts for energizing the electrical device.

It is an object of this invention to provide a hood for a disconnecting and lowering hanger adapted to be mounted on the end of a hollow mast arm, the hood having a base plate mountable therein which serves as a lower shroud for a pulley which is rotatably mounted inside the hood, the hood having a collar portion with an internal bore adapted to receive the outer end of the mast arm with clearance between the collar and the mast arm, said hood having fastening means for securing the hood to the mast arm including a plumbing screw threaded in the collar portion and adapted to engage and push against the portion of the mast arm within the collar portion for varying the alinement of the collar portion, whereby to plumb the hood with respect to the ground.

It is an object of the present invention to provide a hood for a disconnecting and lowering hanger adapted to be mounted on the end of a hollow mast arm, the hood having a base plate mountable therein which serves as a lower shroud member for a pulley which is rotatably mounted inside the hood, the hood having a collar portion with an internal bore adapted to receive the outer end of the mast arm with clearance between the collar and the mast arm, said hood having fastening means for securing the hood to the mast arm including a plumbing screw threaded in the collar portion and adapted to engage and push against the portion of the mast arm within the collar portion for varying the alinement of the collar portion, the internal bore of the collar portion diverging outwardly to permit the alining movement between the mast arm and collar portion when the screw is moved. The set screw cooperates with a U-bolt embracing the mast arm. It is essential that the disconnecting hanger be exactly vertical to work right, especially with heavier weights suspended from the hanger.

It is an object of the present invention to provide a partition plate adapted to be mounted within a hood for

a lowering and disconnecting hanger for supporting an electrical device such as a lighting fixture; the hood having an internal seat and the plate adapted to be fastened rigidly to the seat; the plate also having an upstanding shroud portion having side walls adapted to form at least a part of the shroud for a pulley rotatably mounted on said walls; the plate also having an opening therethrough for receiving electrical conductors to energize the device supported by the hanger, the partition plate also being adapted to support insulators for electrical contacts associated with the hanger.

Other objects will be apparent from the specification that follows, the appended claims, and the drawings in which:

FIG. 1 is a fragmentary elevational view of a hood constructed according to the present invention and fastened on the end of a mast arm which is secured to a hollow metal pole, some of the parts being broken away and shown in section;

FIG. 2 is a central sectional view through the hood of FIG. 1 on an enlarged scale;

FIG. 3 is a sectional view taken along the line 3—3 indicated in FIG. 2; and

FIG. 4 is a bottom plane view of the hood of FIGS. 1 and 2 showing the partition plate inside thereof, the plate being adapted to provide a lower portion of a shroud for a pulley.

The present invention provides a hood 1 for a disconnecting and lowering hanger 5 adapted to be mounted on a hollow mast arm 10 at its outer end 11. A pulley 12 is rotatably mounted inside the hood 1 for directing a lowering cable 13 from the hood into the mast arm. A base plate 15 is provided for the hood and mounted therewithin to partition the interior of the hood and to provide means of shrouding and rotatably mounting the pulley 12. A shroud 16 is provided for the pulley and the shroud comprises an upper shroud member 17 depending from the interior top of the hood 1 and a lower shroud member 18 rigidly connected with the partition plate 15 and projecting upwardly therefrom.

The pulley 12 is rotatably mounted in one of the described shroud members and in the preferred embodiment shown in the drawings, the pulley 12 is rotatably mounted on side walls 18*a* of the lower shroud portion projecting from the plate 15. The shroud members 17 and 18 are so arranged and constructed that they approach each other sufficiently close to prevent the cable 13 on the pulley 12 from escaping between them and to prevent electrical wires 24 contacting pulley 12 or cable 13.

As seen in the drawings, the hanger 5 is particularly well suited to support an electrical device with separable contact elements such as lighting fixture base 20. In order to fasten an electrical device such as base 20 within the hood, the partition plate must be secured within the hood and for this purpose, openings 22 are provided in the partition plate 15 preferably spaced apart along its marginal edge. In addition a through opening 23 is provided in the central portion of plate 15 and near one marginal edge thereof for receiving electrical conductors 24 which energize the electrical device supported by the hanger. As also noted in the drawings, the plate 15 is adapted to mount insulators 25 for separable electrical contacts 26 for such electrical device. The partition plate 15, for this purpose, is provided with openings 27 generally located between the marginal openings 22 and the generally central relatively large opening 23. The insulators 25 are rigidly fastened to the base 15 by suitable fastening means, such as screws, passing through openings 27.

In the embodiment shown and as best seen in full lines in FIGS. 2 and 4, two contacts 26, 26 are held

by the insulators 25, 25. However, the partition plate can be adapted readily to mount four insulators (each identified by the reference numeral 25*a* and shown in dot-dot dash lines) for four contacts by providing a series of suitable openings 27*a* which serve the same purpose as holes 27 in the two-contact system, to receive suitable screws.

According to the present invention, the hood can be alined for vertical plumbing quickly and conveniently on the end of the mast arm by inexpensive means including a collar portion 30 provided on one end of the hood and having an internal bore 31 adapted to receive the outer end 11 of the mast arm 10 with clearance between the collar 30 and the mast arm 10. The hood has fastening means for securing the hood to the mast arm, the fastening means including a plumbing screw 32 threaded in a longitudinally projecting portion 33 of the collar portion 30 of the hood at a zone spaced from the end of the arm 10 and adapted to engage and push against the portion 11*a* of the mast arm which is within the collar portion of the hood to thus vary the alinement of the collar portion and hence the alinement of the hood with the mast arm.

As seen in the drawings and as best illustrated in FIG. 2, the internal bore 31 of the collar portion of the hood diverges outwardly to permit the alining movement between the mast arm and the collar portion when the screw 32 is moved inwardly or outwardly in its threaded opening 30*a* while nuts 48*a* are adjusted to pull U-bolt 48 snugly against the mast arm. During this adjustment the hood pivots about boss 35, mentioned hereinafter.

As seen in FIG. 2, the extreme possible alined positions of the mast arm are indicated by dot-dash lines. In the preferred embodiment as shown in FIG. 2 of the drawings, a plumbing movement of up to four degrees in either direction is provided to permit adjustment of alinement between the mast arm and the hood. In practice, this is usually sufficient to adjust the axis of the hood vertically. In FIGURE 1, the extreme outward and inward positions of the hood body are shown in dot-dash lines and numbered X and Y respectively. The tilted positions of the hood also are shown in dot-dash lines in FIGURE 2.

To aid in the orientation of the mast arm relative to the hood, a boss 35 is provided in the internal bore 31 of the collar portion 30, the boss being adapted to engage in a notch 38 provided in the end 11 of the mast arm 10. When the boss 35 engages notch 38, the position of the pulley 12 with respect to the mast arm is set. As mentioned above, the contact of the boss 35 and notch 38 also provides a pivot point therebetween when the screw 32 pushes against and biases the portion 11*a* of the mast arm 10 into alinement.

In another important aspect of the present invention, the partition plate is adapted to fit within the hood so that the plate can be inserted within the hood in one way only.

As previously indicated, the partition plate 15 has through openings 22 around its marginal edges adapted for fastening the plate to the interior of the hood. As seen in the drawings, the hood is provided with an internal seat 44 with a plurality of stud bolts 45 projecting therefrom for receiving the openings 22 of the plate 15.

The plate 15 has a lateral projection 15*a* which forms a base for the inward side portion 18*b* of the shroud member sidewalls 18*a*, the projection 15*a* lying generally in the same plane as the latter and being so constructed and arranged that the plate can be inserted within the hood to be mounted on seat 44 one way only. As best seen in FIG. 4, the hood 1 is provided with a hollowed out portion 1*a* to permit the projection 15*a* and the sidewall 18*b* of plate 15 to clear the side of the hood through clearway 1*c* and, thus allow the marginal openings 22 of the plate to be alined properly with the stud bolts 45 of the internal seat 44. If plate 15 is turned 180° from its described position, there is no recess to receive the projection 15*a*. After proper seating, the plate 15 is secured to the seat 44 by the use of nuts 45*a*.

It is also noted that when the plate 15 is seated properly, the sidewalls 18*a* of the upstanding shroud portion 18 substantially abut the sidewalls of the upper shroud portion 17 and the pulley, when the pulley is mounted on the sidewalls 18*a*, fits into the cooperating recessed portion 17*a* of the upper shroud member.

Thus, in accordance with the present invention, the hood 1 can be easily mounted on the mast arm 10 by U-bolt 48 and a pair of nuts 48*a* which secure the collar 30 of the hood to the end of the mast arm. The position of the hood is adjusted easily to plumb the hanger 5. As previously indicated, the plumbing screw 32 biases the mast arm 10 which pivots about the contact of notch 38 and boss, the lowering of the screw 32 and the tightening of the U-bolt 48 working in opposite directions.

The mast arm 10 may be connected to a hollow metal pole 49 by connecting element 50 and a hollow bracket 51 as described in my copending application Serial No. 26,612, filed May 3, 1960, entitled "Pole Connection for Mast Arm," now abandoned.

Various changes of details and arrangements of parts can be made by one skilled in the art without departing from either the spirit of this invention or the scope of the appended claims:

What is claimed is:

1. A hood for a disconnecitng and lowering hanger adapted to be mounted on the end of a hollow mast arm and having a pulley rotatably mounted inside thereof for directing a lowering cable from said hood into said arm, a partition plate of substantially the same size as the internal cross sectional dimensions of said hood removably mounted within said hood, a shroud for said pulley comprising an upper shroud member depending from the top of the hood and a lower shroud member rigidly connected with said plate, said pulley rotatably mounted in one of said members, said shroud members approaching each other sufficiently close to prevent a cable on said pulley escaping between them.

2. A hood as defined in claim 1 having a collar portion with an internal bore adapted to receive the outer end of the mast arm with clearance between said collar and mast arm, said hood having fastening means for securing the hood to the mast arm including a plumbing screw threaded in said collar portion at a zone spaced from the end of said arm and adapted to engage and push against the portion of the mast arm within the collar portion for varying the alinement of the collar portion and hence the alinement of the hood with the mast arm, and a U-bolt mounted in said collar portion adjacent said plumbing screw and embracing said mast arm in such manner as to grip said mast arm in opposition to said plumbing screw.

3. A hood as defined in claim 2 in which the internal bore of the collar portion of the hood diverges outwardly to permit said alining movement between said mast arm and said collar portion when said screw is moved.

4. A hood as defined in claim 3 in which the internal bore of the collar portion has a boss adapted to engage in a notch provided in the end of the mast arm to align the position of the pulley with the mast arm and provide a pivot point for tilting said hood when said screw pushes against and biases said mast arm into alinement.

5. A partition plate for a lowering and disconnecting hanger adapted to be mounted within a hood having internal seating means and a lateral recess in one internal wall portion, said plate being of substantially the same size as the internal, cross sectional dimensions of said hood, said plate adapted to be fastened rigidly to the seating means, said plate having an upstanding hollow

shroud portion having side walls adapted to form at least a part of a shroud for a pulley rotatably mounted on said walls, said plate having an opening therethrough for receiving electrical conductors used to energize said device, said portion plate also having means to support insulators for electrical contacts for the hanger.

6. A partition plate as defined in claim 5 having through openings around its marginal edges adapted for engagement with fastening means to secure said plate to the internal hood seat, said upstanding shroud portion of said plate being offset in such manner as to project beyond the marginal edge of said plate whereby when said openings in the marginal edges are aligned properly with the internal hood seat when the plate is inserted within the hood one way only, the shroud portion is aligned with the lateral recess of the hood to permit the plate to be seated.

7. A hood for a lighting fixture hanger adapted to be mounted over the distal end of a hollow mast arm and having means mounted inside thereof for directing a lowering cable from said hood into the arm, a collar projecting from said hood having an internal bore adapted to receive the distal end of the mast arm, a portion of said collar projecting longitudinally beyond the remainder of said collar, a plumbing screw threaded in said portion in such manner as to adjustably bear against the mast arm in use of said hood at a point longitudinally spaced from the distal end of the mast arm, a U-bolt mounted in said portion and embracing the mast arm in such manner as to act in opposition to said plumbing screw, said internal bore of said collar being spaced from the mast arm adjacent said portion in such manner that said hood is tiltably adjustable relative to the mast arm by said plumbing screw.

8. A hood as defined in claim 7 wherein said internal bore of said collar has an internally projecting boss

adapted to engage a complementary notch in the distal end of the mast arm in such manner as to provide a pivot joint about which said hood pivots during plumbing adjustment.

9. Hanger means for a lighting fixture comprising a hollow mast arm, a generally downwardly open hood having a generally laterally projecting collar telescoped over the distal end of said arm in use of the hanger means, said hood having means mounted inside thereof for directing a lowering cable from said hood into said arm, said collar having an outwardly tapered internal bore for receiving said arm, a portion of said collar projecting longitudinally beyond the remainder of said collar adjacent the top surface of said arm, a plumbing screw thread fitted in said portion in such manner as to adjustably bear against said arm at a point longitudinally spaced from the distal end of said arm, a U-bolt mounted in said portion and embracing said arm in such manner as to act in opposition to said plumbing screw, and said collar being radially spaced from said mast arm adjacent said portion whereby said hood is tiltably adjustable by said plumbing screw.

10. Hanger means as defined in claim 9 wherein said internal bore has an internally projecting boss spaced inwardly from the end of said collar, and said arm has means defining a notch in the distal end thereof adjacent the top surface of said arm into which said boss fits thereby providing a pivot point about which said hood pivots during plumbing adjustments.

References Cited in the file of this patent

UNITED STATES PATENTS

2,403,355	Farrington et al.	July 2, 1946
2,728,848	Farrington et al.	Dec. 27, 1955
2,846,570	Harling	Aug. 5, 1958