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[54] **ELECTRIC WIRE DISPENSING APPARATUS**
 9 Claims, 4 Drawing Figs.

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ABSTRACT: A portable supporting apparatus for systematically unwinding conduit wire (Romex for example) protectively coiled for use in cardboard cartons of various sizes. It permits the wire to be pulled out and dispensed smoothly without twisting. One man can pull the wire up through walls and wherever else necessary without having to return to the carton to untwist kinks and unmanageable deformations. It comprises a pedestal-type stand, a rotatable carton supporting platform, and piloting and guard means on the post above the platform which guides the free end of the wire to govern it and minimize dispensing difficulties.

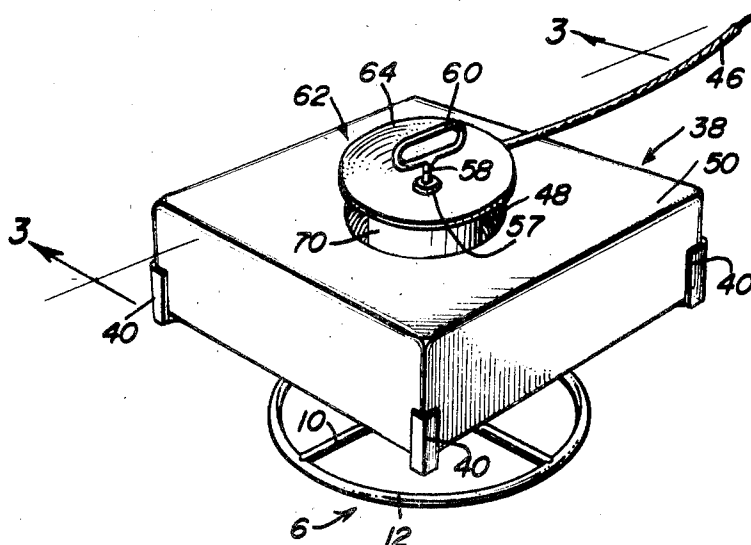


Fig. 1

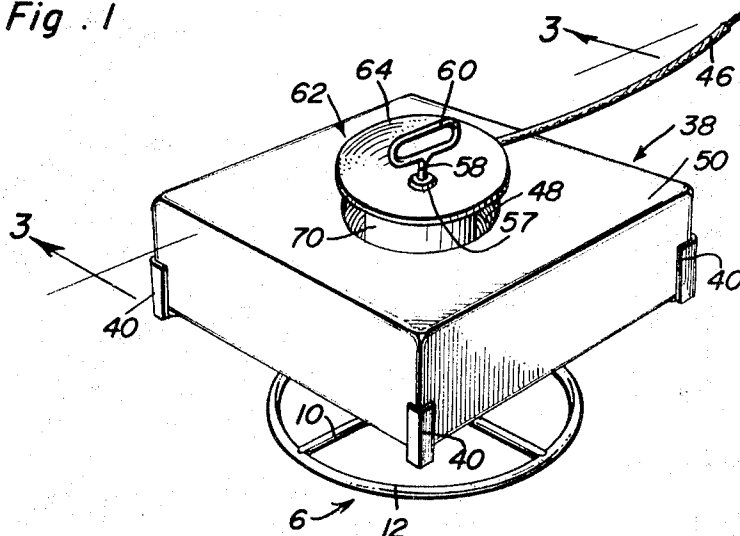


Fig. 2

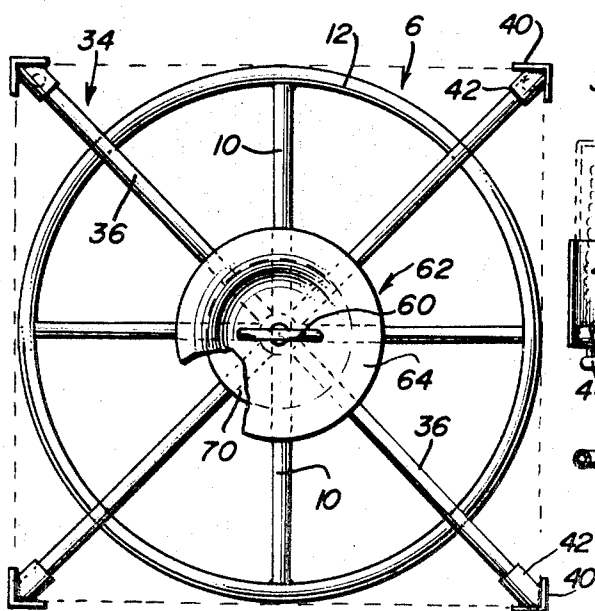


Fig. 3

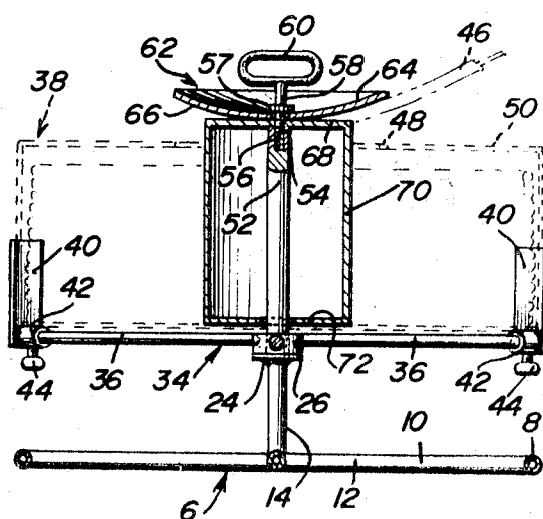
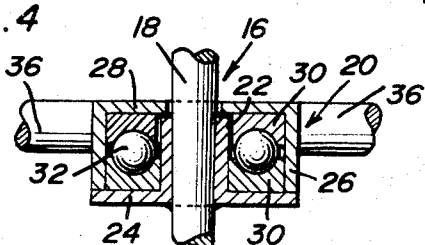


Fig. 4



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ELECTRIC WIRE DISPENSING APPARATUS

The present invention relates to the broad category of winding and reeling and, more particularly, to a portable supporting apparatus which is characterized by a pedestal-type stand having a self-standing base and a perpendicular post or standard the median portion of which is provided with means to accommodately support a platform, that is, a platform which clampingly supports and rotates a carton in which the wire is coiled and stored and from which the withdrawable end of the wire is guidingly payed out for unhampered use.

Stated more specifically, the invention has to do with a self-supporting stand having a post which is provided with properly orientated and coordinating facilities which serve not only to balance and rotatably support the wire containing carton but embody specially constructed guard means on the upper end of the post by way of which the hand pulled wire is fed out for use virtually free of twisting and the attending dispensing difficulties which are encountered when using present day conduit wire handling procedures.

Briefly the concept has to do with supporting, unwinding and dispensing means, an apparatus for example, for a supply of electric wire coiled, as usual, in a cardboard carton. It is characterized by a portable stand embodying a self-supporting normally horizontal base. This base is centrally provided with a rigid upstanding post. The median lower portion of the post is provided with ball bearing hub means which functions to support a carton seating platform. The platform is spaced from and rotatable in a plane parallel to the base and is equipped with means for releasably clamping the respective corner portions of the cardboard carton in a manner to assist in retaining the carton atop and for simultaneous rotation with the platform. Guard means is operatively mounted on the upper end of the post and is designed and adapted to govern and guide the free end of the wire as it is hand pulled and payed out of a discharge opening which is cut for this purpose in the top wall of the carton.

In carrying out a preferred embodiment of the invention the base is of ringlike form and has integral coplanar radial circumferentially spaced spokes. The post or standard is perpendicular to the post when the base is seated horizontally on the floor or support surface. Specially constructed ball bearing races are provided in hub means on the post in a manner to support the bracket-equipped arms which make up a reel-type platform. In addition to the uniquely performing guard means on the upper end of the post a drum surrounds the upper part of the post and is interposed between the platform and the guard means and facilitates stabilized functioning of the parts.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a view in perspective of an electric wire dispensing apparatus constructed in accordance with the invention showing the manner in which it is erected or set up for conduit wire dispensing use.

FIG. 2 is a view on an enlarged scale in top plan and wherein the carton for the conduit wire is shown in place in phantom lines.

FIG. 3 is a section taken approximately on the plane of the horizontal section line 3-3 of FIG. 1, looking in the direction of the indicating arrows.

FIG. 4 is an enlarged fragmentary detail view of the hub means which supports the central part of the platform on a median portion of the post.

Referring to the views singly and collectively the aforementioned portable pedestal-type stand is denoted by the numeral 6. It comprises a base, more particularly, a tubular or equivalent ring 8 of requisite diameter adapted to rest on the floor or other support surface 10. This ring is provided with

equidistant circumferentially spaced radial spokes 12 joined at their outer ends to the inner periphery of the ring 8 and having their inner ends converging and serving to support the coaxial lower end portion 14 of the aforementioned perpendicular standard or post 16. A median portion 18 of the post (FIG. 4) is provided with antifriction hub means 20. More specifically the hub means comprises a collar or sleeve 22 which is fitted around and secured to the post and has an outstanding ledge-like flange 24. This flange serves to rotatably support the rim portion 26 of an inverted cup 28 surrounding the post and cooperating with the flange in providing a housing for upper and lower ball races 30 with conventional ball bearings 32 assembled therebetween. This hub means provides a satisfactory support for the slightly elevated rotary platform 34. This platform comprises four coplanar outstanding arms 36 coordinated in the manner shown to provide a satisfactory support for the bottom of the wire containing cardboard box or carton 38. This bottom of the carton rests on the arms and the outer ends of the arms are provided with retainers. More specifically the retainers comprise upstanding angle brackets 40 which are circumferentially spaced and each of which is provided with a socket member or sleeve 42 fitting over the arm and adjustably held by a setscrew as at 44 in FIG. 3. Thus the carton is clampingly supported for rotation and unwinding of the free end portion 46 of the conduit wire. To achieve this result it is necessary to cut a hole 48 of requisite diameter in the top wall 50 of the carton.

It will be noted in FIG. 3 that the upper end portion 52 of the post is provided with an internally screw-threaded fixedly mounted axially aligned socket member 54 which serves to accommodate the attachable and detachable screw-threaded shank 56 on the stem 58 of a loop-shaped handle or finger grip 60. This stem can be provided with a hold-down shoulder 57 to facilitate placing and retaining the aforementioned twist resisting wire guiding guard 62. This guard is concavo-convex in form and is preferably disclike in plan. The concave side 64 faces upwardly and the convex side 66 downwardly. This convex side resides atop the top wall 68 of an insertable and removable cylindrical hollow drum 70. This drum is fitted over the socket member and post and the apertured bottom wall 72 rests retentively on the interior of the apertured bottom wall of the aforementioned carton 38. The manner in which the component parts are constructed and assembled is believed to be clear particularly when comparing FIGS. 1 and 3. The details of the hub structure are shown in FIG. 4. The details of the pedestal-type stand and platform are brought out with particularity in FIG. 2.

The concavo-convex disclike guard 62 allows the wire 46 to be pulled out and upward at a reasonably steep angle. The handle equipped means 56, 58 and 60 and the disc and drum are assembled and the handle 60 can be used for convenience in carrying the overall assembly around.

To use the apparatus, the carton 38 has to be prepared, that is, a circular hole 48 of a diameter larger than the diameter of the guard disc 62 has to be cut out in the manner illustrated particularly well in FIG. 1. The bottom of the carton has a hole cut out in the center just large enough to allow it to slip down on the post and to rest on the platform. Then the drum 70 is slipped over the post and is inserted inside of the coil or roll of wire in the carton. The disc and handle is screwed down on the drum thus holding the carton firmly in place. The adjustable angle brackets 40 on the outer ends of the reel or platform arms, that is the brackets 40 can be regulated to hold the carton from moving from its given seated position.

This apparatus as is evident allows the wire to be pulled out of the carton without twisting or "corkscrewing." In fact, the electrician can pull the wire up through walls and wherever else necessary for considerable distances without returning to the carton to untwist knots or kinks. Experience has shown that this apparatus speeds up wire stringing, especially on long distances and where a considerable amount of wire must necessarily be used. It will be evident therefore that the apparatus when properly used well serves the purposes for which it has been devised and satisfactorily used.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What I claim as new is as follows:

1. A supporting, unwinding and dispensing apparatus for a supply of electric wire coiled in a cardboard carton comprising a portable stand embodying a self-supporting normally horizontal base centrally provided with a rigid vertical post, a carton seating and supporting platform mounted for free rotation on a median portion of said post, said platform being spaced from and rotatable in a plane parallel to said base and having means for releasably clamping the respective corner portions of the carton and assisting in retaining the carton atop and for simultaneous rotation with said platform, and a guard operatively mounted on an upper end of said post and designed and adapted to govern and guide the free end of the wire as it is hand pulled and payed out of a discharge opening which is provided therefor in a top wall of said carton.

2. The apparatus defined in and according to claim 1, and in combination, a drum mounted on an upper portion of said post and interposed between a central axial portion of said platform and an underneath central portion of said guard.

3. The apparatus defined in and according to claim 2, and wherein said drum is cylindrical in cross section and is of a vertical height slightly greater than the depth of the carton so that an upper end protrudes above the level of the top wall of said carton.

4. The apparatus defined in and according to claim 2, and wherein said guard comprises a concavo-convex disc having its concave side facing upwardly and its convex side facing downwardly, and manually regulatable assembling means carried by an upper end of said post and removably clamping said disc atop a coacting upper end of said drum.

5. The apparatus defined in and according to claim 4, and wherein said disc is of a prescribed diameter larger than the diameter of the drum so that the outer marginal portion overhangs and projects evenly beyond the outer peripheral surfaces of said drum.

6. The apparatus defined in and according to claim 4, and wherein said disc is of a prescribed diameter larger than the diameter of the drum so that the outer marginal portion overhangs and projects evenly beyond the outer peripheral surfaces of said drum; said assembling means comprising an internally screw-threaded socket member fixed atop said post, a screw having a shank screwed into the socket member, said screw having an upper end provided with a handling and carrying grip.

7. A supporting, unwinding and dispensing apparatus for a coiled supply of electric wire confined, as usual, in a packaging and protecting carton, said apparatus comprising a ringlike self-standing base having coplanar radial circumferentially

spaced spokes, said base adapted to reside flatwise on a floor or similar support surface, an axial post having a lower end joined to and connecting inner ends of said spokes, a stationary collar surrounding and fixed to an elevated median portion of said post and having an outstanding ledgelike flange, an inverted hub-forming cup encircling the post and having a depending rim flange resting and turnable on and relative to said ledgelike flange and providing hub means, antifriction ball bearings operatively housed in said hub means, a carton seating and supporting reel providing a platform and embodying coplanar radial circumferentially spaced arms joined at inner ends to the rim of said cup, angle brackets adjustably and detachably mounted on the respective outer ends of said arms and adapted to retentively grip coacting corners of the carton when it is seated for use on the platform, a significant upper portion of said post extending above the level of said platform, and means carried by the extending upper portion of said post for assisting in dispensing and paying out the wire progressively and for unhampered remote controlled use by an electrician, whereby to speed up wire stringing requirements.

8. The supporting unwinding and dispensing apparatus defined in and according to claim 7, and wherein the aforementioned means which is carried by the extending upper end portion of the post embodies a cylindrical readily applicable and removable drum, said drum being provided with apertured end portions fitted over component portions of the post, said drum being of a vertical height greater than the depth of the carton in a manner that the upper portion is capable of extending through and beyond an opening which is cut in the upper wall of the carton, said means also embodying an attachable and detachable guard, said guard being of concavo-convex form and comprising a disc, said disc being of a diameter greater than the diameter of the upper end of the drum and having outer marginal edge portions overhanging the peripheral surfaces of the drum.

9. The supporting unwinding and dispensing apparatus defined in and according to claim 7, and wherein the aforementioned means which is carried by the extending upper end portion of the post embodies a cylindrical readily applicable and removable drum, said drum being provided with apertured end portions fitted over component portions of the post, said drum being of a vertical height greater than the depth of the carton in a manner that the upper portion is capable of extending through and beyond an opening which is cut in the upper wall of the carton, said means also embodying an attachable and detachable guard, said guard being of concavo-convex form and comprising a disc, said disc being of a diameter greater than the diameter of the upper end of the drum and having outer marginal edge portions overhanging the peripheral surfaces of the drum, and said means also including a handle and a screw-threaded shank and means for coupling the screw-threaded shank to a socket member on the upper end of the standard, and the upper end of said shank being provided with a handle.