Oct. 17, 1961 E. W. CLARK 3,004,358

ROTATING DISPLAY MECHANISM

Filed Oct. 9, 1957 2 Sheets-Sheet 1

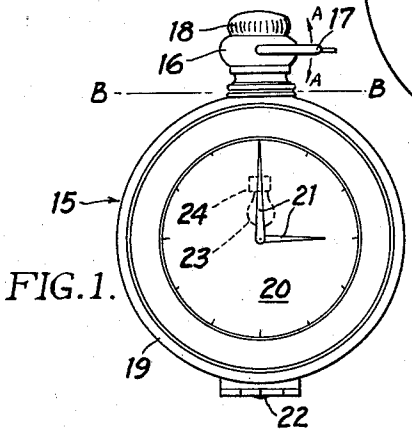


FIG. 1.

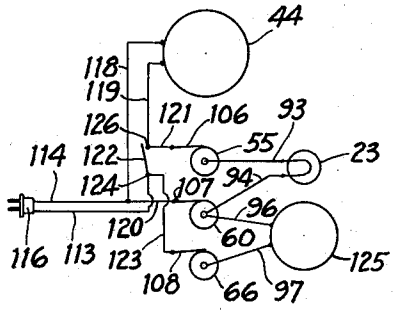


FIG. 5.

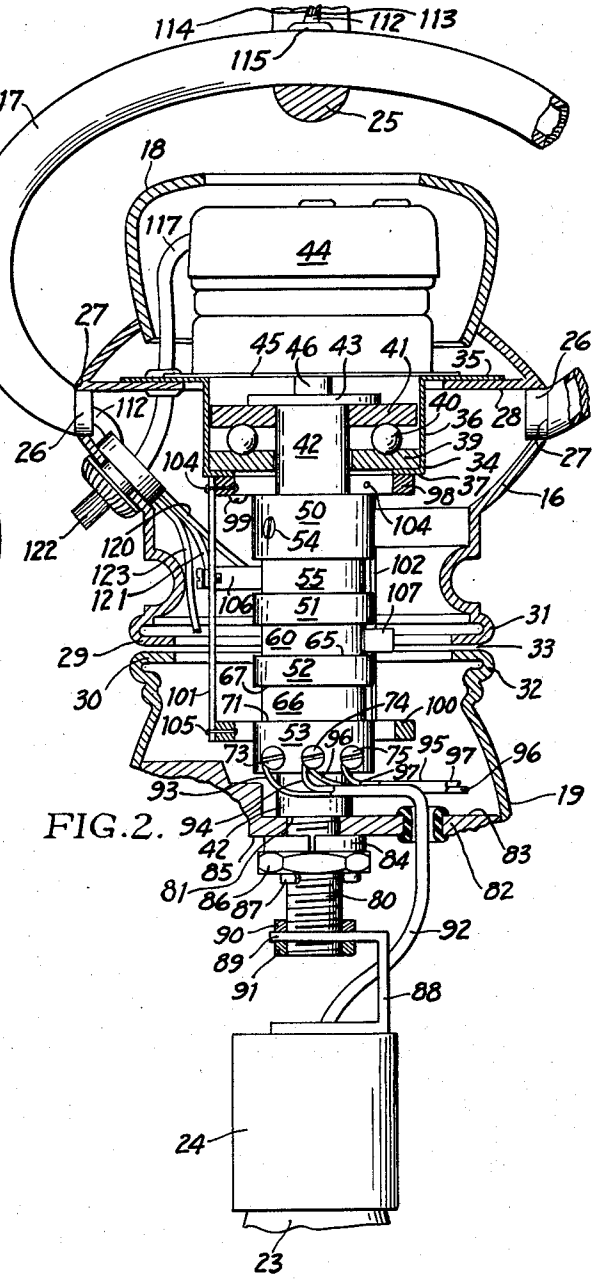


FIG. 2.

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ROTATING DISPLAY MECHANISM

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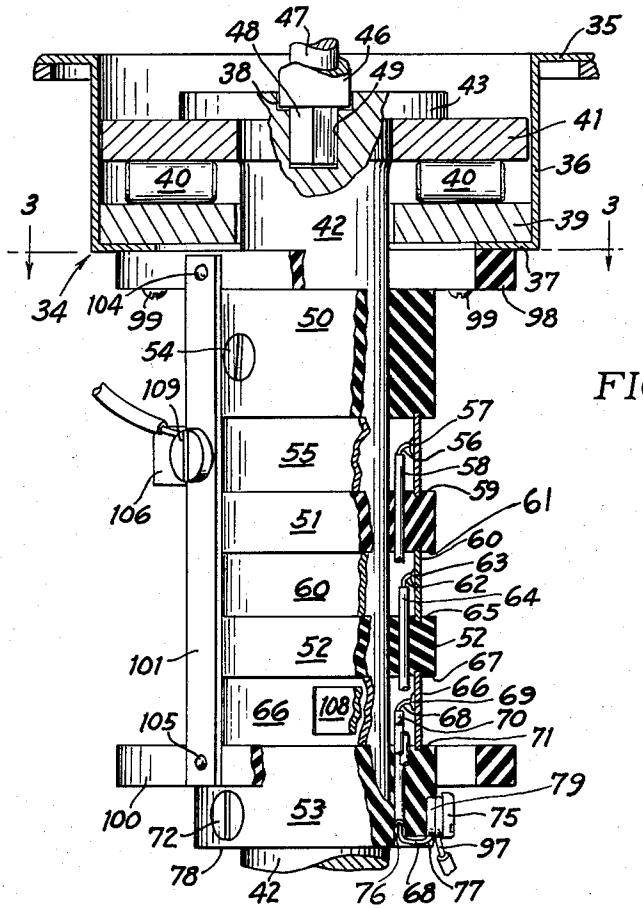


FIG. 4.

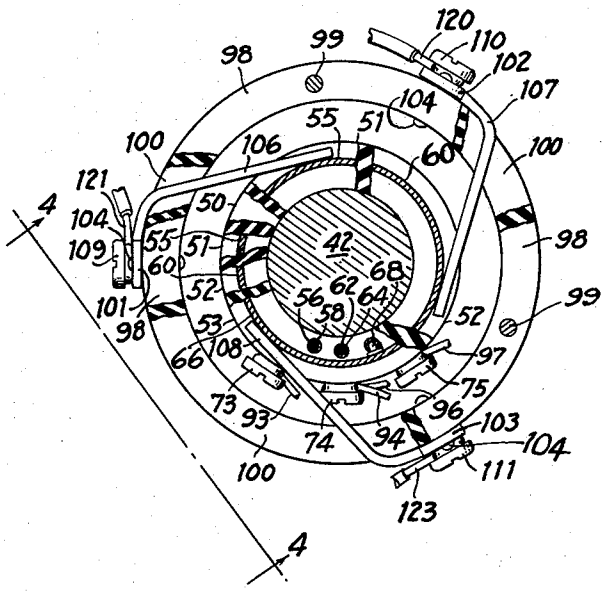


FIG. 3.

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3,004,358

ROTATING DISPLAY MECHANISM

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Filed Oct. 9, 1957, Ser. No. 689,077
4 Claims. (Cl. 40—33)

This invention relates to means for supporting and turning display means.

An object of this invention is to provide means for supporting and turning display means.

A further object of this invention is to provide a device of the above character adapted to support and turn a depending clock.

A further object of this invention is to provide a device of the above character which is also adapted to provide means for incorporation in an electrical circuit, whereby electrical energy may be continuously conveyed to means supported and turned by said device.

A further object of this invention is to provide an indicia-bearing clock and display means supported and turned by means simulating a pocket watch stem, whereby a clock simulating a pocket watch may be provided having a stationary stem section and a rotating main case section.

A further object of this invention is to provide a generally tubular, hollow casing which resembles the radially protruding neck portion of a watch case, the hollow tubular member having a tubular pendant-ring member pivotally coupled to same, the end of the hollow member being adapted to co-operate with an axially vented hollow cup having an external appearance simulating a watch winding knob, said body and cup serving to house driving means such as a motor, a shaft extending axially through said hollow housing from adjacent the motor and away from the cap into the case of a clock to be supported, means for securing a clock case to said shaft for rotation in unison therewith, said shaft being mechanically coupled to said motor for rotation therewith and supported in bearing means, whereby said clock housing may be rotated relative to said hollow member, by operation of said motor.

A further object of this invention is to provide a device of the above character in which a plurality of spaced dielectric collars are mounted upon said shaft, axially facing grooves being provided in the radial faces of said collars adapted to receive and support cylindrical conductor ring members in concentric relation to and spaced from said shaft, a cage comprising a pair of spaced, ring-shaped dielectric members joined by a plurality of bar members each having a finger adapted to continuously engage the exterior surface of one of said collar-supported ring members, said cage being supported in fixed relation to said hollow housing, a plurality of conductor binding members supported upon the dielectric collar member disposed between one of said conductor rings and the portion of the shaft adapted for co-operative engagement with a portion of a clock housing, each of said binding means being in co-operative relation to a portion of an electrical conductor which is also connected to a corresponding one of said conductor rings, whereby electrical conductors in said clock housing may be secured to the binding means which remain in fixed relation to said housing, being thereby placed in continuous electrical conductive relationship to the respective one of said finger-supporting bars.

Another object of this invention is to provide a device of the above character in which means are provided for delivering electrical energy to a plurality of electrically operated devices in said supported rotatable housing, said

hollow tubular member supporting means for interrupting the flow of electrical energy to the turning motor supported thereby and at least one of the electrically operated devices in said rotatable housing without interrupting operation of at least one of the other electrically actuated devices in said rotatable housing.

The above and other features and objects of this invention will in part be obvious, and will in part be apparent to those having ordinary skill in the art to which this invention pertains.

In the accompanying drawings and the following description of the embodiment disclosed therein, like reference characters indicate like parts.

In the drawings:

FIG. 1 is a view in front elevation of a pocket watch simulating clock embodying the instant invention;

FIG. 2 is a view partly in section and partly broken away, of a portion of the clock case and the supporting and turning mechanism which simulates the stem, winding knob, and pendant ring portions thereof;

FIG. 3 is a view taken along the line 3—3 in FIG. 4, portions of the device being broken away to more clearly show details of its construction;

FIG. 4 is a view in side elevation, partly broken away of the structure illustrated in FIG. 2, the view being taken in the direction indicated by the arrows 4—4 in FIG. 3; and

FIG. 5 is a schematic diagram of the electrical circuits of the device shown in FIG. 1.

In FIG. 1 a clock resembling a pocket watch in appearance is illustrated. The clock which resembles a pocket watch in external appearance illustrated in FIG. 1, comprises a main cased clock portion **15** below the line B and above it a radially projecting stem portion **16** to which the pendant ring **17** is pivoted and from the outer end of which the winding knob simulating portion **18** projects. The clock portion **15** of the device illustrated in FIG. 1 comprises a case **19** having a clock face **20** and associated therewith a pair of clock hands **21**. Suitable driving mechanism is provided for the clock hands **21** and the clock may be set by any suitable means such as setting wheel **22**. The clock casing **19** also houses illuminating means such as a light bulb **23** in co-operative engagement with a socket **24** by means of which electrical current may be supplied to the light bulb **23** for producing light serving to illuminate the clock.

The radially projecting stem portion **16** serves to house means for rotatably supporting the cased clock portion **15** shown in FIG. 1 below line B, and to house means for rotating the rotatable support means with which the rotating means co-operate. The stem portion **16** may be supported in fixed position with the rotating means so oriented that its axis is vertical. In the device shown in FIG. 1, a pendant ring **17** is shown extendnig to the right generally parallel to line B. The pendant ring **17** is in pivotal co-operative relationship with the stem member **16** and is adapted to be supported by appropriate means **25**, such as a hook, cord, wire, chain, or the like, shown in FIG. 2.

As shown in FIG. 2, pendant ring **17** may be a tubular member, bent symmetrically to C-shape. The central portion of pendant ring **17** is adapted to rest upon support means **25**. Adjacent the ends of pendant ring **17** are cylindrical portions **26** having a common axis. As shown in FIG. 2, the cylindrical portions **26** are preferably smaller in external diameter than the remaining portion of pendant ring **17** in order that a radially extending shoulder face **27** is provided and adapted to co-operate with member **16**. Radial shoulder face **27** thus co-operates with member **16** to limit the positioning of pendant ring **17** relative to stem member **16** in so far as axial displacement along the axis of the cylindrical por-

tions 26 is concerned. Stem portion 16 may be made of any suitable material by any suitable method, for example, die cast aluminum, and constitutes a hollow, generally, tubular shell of varying diameter, within which a radially inwardly extending annular flange 28 is provided. As shown, flange 28 is preferably an integral portion of stem or housing 16. The cylindrical portions 26 of pendant ring 17 are received co-operatively in apertures provided in stem housing 16, the apertures being located diametrally opposite to each other. Thus pendant ring 17 is adapted to swing relative to housing 16, as indicated by the arrows A in FIG. 1, about the axis of cylindrical portions 26 when the latter portions are in co-operative relation to said housing. The external form of member 16 may be of any suitable shape and is preferably proportionally sized and of a shape characteristic of the radially extending stem portion of a pocket watch. I prefer that the adjacent portions of stem or frame member 16 and the main case portion 19 of the clock 15 have radially inwardly extending parallel flange portions 29 and 30, adjacent which radially outwardly extending rib or bead portions 31, 32 are respectively provided. The adjacent bead portions 31, 32 serve to substantially conceal the gap or space 33 between the flanges 29 and 30.

A bearing mounting cup 34 has a radially outwardly extending flange 35 adapted to rest upon and be secured to the integral, annular flange portion 28 of the stem or housing 16. As shown in FIGS. 2 and 4, the side wall 36 of the cup 34 extends axially through the aperture encircled by flange portion 28 and is joined to the cup bottom 37. Cup bottom 37 has an axial aperture extending therethrough such that the bottom 37 might aptly be described as a radially, inwardly extending annular flange. The cup 34 is adapted to co-operatively receive and support suitable bearing means such as the anti-friction bearings illustrated in FIGS. 2 and 4, the former being of the ball type, while the latter is of the roller type. The anti-friction bearings comprise a cup-supported race 39, a plurality of anti-friction members 40 adapted to roll thereon and in turn adapted to support for free rotation a second race 41. An elongate shaft 42 is secured in co-operative relation to race 41 and is adapted to rotate therewith. Shaft 42 is mounted for rotation about a substantially vertical axis which is also the axis of rotation of bearing race 41. A radially, outwardly projecting flange or shoulder portion 43 is provided adjacent the upper end of shaft 42 and adapted to abuttingly rest against race 41. Means for rotating shaft 42 are provided in the form of motor 44, which, as shown in FIG. 2, is of a vertical shaft type, preferably having a radially outwardly extending case or frame flange 45, adapted to be secured in fixed relation to and resting upon the bearing cup flange 35. Motor 44 is preferably of the type having a shaft rotation speed of the order of one revolution per minute. As shown more clearly in FIG. 4, I prefer that the shaft bearing of motor 44 adjacent shaft 42 is of the extending or projecting type adapted to project into recess 38 provided in the adjacent end of shaft 42. Extended motor shaft bearing 46 is adapted to primarily support shaft 47 and secondarily may co-operate with shaft 42. Motor shaft 47 adjacent its free end is adapted to couple with shaft 42 and, as shown in FIG. 4, the end portion 48 of shaft 47 may be of square shape in section and extends into axial recess 49 of corresponding cross section in shaft 42.

Motor 44 being secured in fixed relation to stem or housing shell 16, thus will turn its shaft 47 and shaft 42 coupled thereto, when an appropriate flow of electrical energy is provided. As is shown most clearly in FIGS. 2, 3, and 4, a plurality of dielectric collars 50, 51, 52 and 53 are provided upon shaft 42. Each of the collars 51 and 52 has a pair of opposed grooves each extending axially into a respective one of the radial faces thereof in concentric relation to shaft 42. Each of the end collars 50 and 53 has an annular groove in the radial face thereof which faces respectively, collar 51, and collar 52. The annular grooves provided in collars 50, 51, 52, and 53 are all of substantially the same width and depth in radial section, are circular and of the same diameter.

Collar 50 is placed upon shaft 42 and secured thereto by suitable means, such as set screw 54, in the position shown in FIGS. 2, 3, and 4. The collar 50 is so oriented that the grooved radial face thereof is farther from integral shoulder portion 43 of shaft 42 than is the ungrooved radial face of collar 50. A contact band member 55 of right cylindrical form is then positioned with a marginal edge portion thereof received in the groove provided in the radial face of collar 50. Contact band 55 thus is positioned in spaced, coaxial relationship to shaft 42 and projects from collar 50 away from shoulder 43. As is shown in FIG. 4, a conductor or pigtail wire 56 is secured by any suitable means, such as solder fillet 57, to the surface of band 55 which faces shaft 42. The conductor 56, as shown, may have an insulating jacket 58, and have its major portion extending generally in parallel, spaced relationship to shaft 42. When band 55 has been placed in co-operative relationship to collar 50 with its pigtail wire 56 extending away from collar 50, collar 51 may be positioned upon shaft 42. The collar 51 has an axial aperture or bore adapted to co-operatively receive shaft 42 and a second aperture or bore extending parallel to and spaced from the aperture for receiving shaft 42. The second aperture or bore is adapted to receive a portion of pigtail wire 56 together with its encasing insulating jacket 58, as shown in FIG. 4, the pigtail wire 56 being fed through the bore provided therefor, as collar 51 is advanced along shaft 42 toward collar 50 until the marginal edge portion of band 55 remote from collar 50 is received in the axially facing groove provided in radial face 59 of collar 51.

A second band 60 is then placed with its marginal portion within the groove provided in radial face 61 of collar 51. The contact band 60 has a pigtail wire 62 secured to it by means such as solder fillet 63 and as shown in FIG. 4, may have an insulating jacket 64. As is shown in FIG. 3, pigtail wire 62 extends in spaced generally parallel relationship to pigtail wire 56 and shaft 42. Collar 52 is placed upon shaft 42 and advanced until the respective marginal portion of contact band 60 is received in the axially facing groove provided in face 65 thereof.

In advancing collar 52 into the position in which it is shown in FIG. 4, pigtail wires 56 and 62 are fed through respective apertures provided in that collar. Contact band 66 may then be placed in the position in which it is shown in FIG. 4 with a marginal portion thereof received in the axially extending annular groove provided in face 67 of collar 52. A pigtail wire 68 is secured to the face of contact band 66 adjacent shaft 42 by suitable means such as solder fillet 69. The pigtail wire 68 may have a jacket of insulation 70. Finally, collar 53 is placed upon shaft 42 and advanced until it is in the position illustrated in FIG. 4, wherein a marginal edge portion of contact band 66 is received in the axially facing annular groove provided in radial face 71 of the collar 53 and pigtail wires 56, 62, 68, extend through respective bores therein as shown in FIGS. 3 and 4.

Collar 53 is secured in fixed relation to shaft 42 by any suitable means such as set screw 72, to preclude axial displacement therealong. Thus, with set screws 54 and 72 respectively anchoring collars 50 and 53 against movement relative to shaft 42, contact bands 55, 60 and 66 are clamped together with collars 51 and 52 in fixed relationship to the shaft 42, it being understood that the contact band-receiving grooves are of such width and shape in radial section, that placement of the several collars and bands in the corresponding relationship illustrated in FIG. 4 results in wedging co-operative engagement of the respective co-operating portions of the several collars and bands. Thus, when the collars and intervening contact bands are assembled and mounted upon shaft 42, as just described, they present a plurality of spaced, recessed,

cylindrical contact surfaces disposed between ribs of dielectric material.

A plurality of binding terminals **73**, **74** and **75** are provided in co-operative engagement with collar **53** as shown in FIGS. 2, 3 and 4. As shown, the binding terminals comprise a screw the shank of which is in threaded co-operative engagement with collar **53**. As is shown most clearly in FIG. 4, the pigtail wire **68** extends through bore **76** in collar **53** and thence outward radially in slot **77** provided in radial face **78** of the collar **53**. A grommet or terminal member **79** is in co-operative engagement with pigtail wire **68** and encircles the shank of screw **75**. The terminal or grommet portion **79** is preferably recessed in substantially flush relationship to the peripheral surface of collar **53**, as shown in FIG. 4. Pigtail wire **62** in a similar manner extends through a corresponding bore and radial slot in collar **53** into co-operative engagement with a terminal member associated with binding screw **74** in a manner corresponding to that in which terminal **79** is associated with binding screw **75**, while pigtail wire **56** extends through collar **53** in a corresponding fashion and is similarly associated with means disposed for co-operation with binding screw **73** and corresponding to terminal **79**. Thus, binding screws **73**, **74**, and **75** are adapted to respectively connect conductors through the pigtail wires to contact bands **55**, **60** and **66**, respectively. It may be noted that the binding terminals or screws **73**, **74** and **75**, like the collar **53**, with which they co-operate, turn in unison with shaft **42**. As is shown in FIG. 2, shaft **42** extends downwardly through collar **53** to a threaded stud portion of reduced diameter. The threaded stud portion **80** projects axially from radial shoulder face **81**. As shown in FIG. 2, clock **19** has a mounting member **82** which may be a bracket or the like, in which an aperture is provided to receive a portion of shaft stud portion **80**. The upper face **83** of bracket member **82** rests in face-to-face flatwise engagement with radial face **81** of shaft **42** and the stud portion **80** of that shaft substantially fills the aperture and projects as shown. The bracket **82** is secured in the position shown in FIG. 2 by suitable means such as a split ring lock washer **84** compressed against the under side **85** of the bracket **82** by means such as nut **86** in threaded engagement with stud portion **80**. A cotter pin **87** may be secured in co-operative relation to stud portion **80** and nut **86**, as shown in the drawing, to preclude backing off of nut **86** and resultant loosening or disengagement of bracket **82** and shaft **42**. The stud portion **80** preferably projects downwardly beyond cotter pin **87** and serves as mounting and support means for light socket **24**. As shown in FIG. 2, socket **24** may be of the type having a permanently attached bracket portion **88**, the arm **89** of which has an aperture adapted to receive a portion of stud shaft portion **80**. A pair of nuts **90** and **91** are placed in threaded co-operative engagement with stud portion **80** and are adapted to clamp arm **89** of bracket **88** in fixed relation to shaft stud portion **80**. Wire **92** contains conductors **93** and **94** which respectively connect binding terminals **73** and **74** to corresponding contacts in socket **24** which are adapted for co-operative engagement with respective portions of the base of lamp bulb **23**.

Means (not shown), including an electric motor **125** indicated schematically in FIG. 5, provided to move hands **21**, are also housed in the main cased portion of the clock **15**. A wire **95** containing conductors **96** and **97** is shown fragmentally in FIGURE 2, conductor **96** thereof being secured by binding screw **74**, and conductor **97** thereof being secured by binding screw **75**.

A dielectric ring member **98** shown in FIGS. 2, 3 and 4, is secured in fixed relation to cup bottom **37** and in face-to-face engagement with the face of the cup bottom remote from the face engaged by race **39**. Ring **98** is secured to cup bottom **37** by means such as screws **99**. A second dielectric ring **100** substantially identical with ring **98** is provided and supported in coaxial relationship with ring **98** and shaft **42** by a plurality of tie bar members designated by the reference characters **101**, **102**, and **103** in the drawing. Each of the tie bars **101**, **102** and **103** is secured to ring **98** and ring **100**, by any suitable means, such as rivets **104** and **105**, respectively. The rings **98**, **100** and tie bars **101**, **102**, **103**, when so assembled, comprise a cage-like structure disposed in co-axial relationship to shaft **42**. A plurality of wiper blades **106**, **107** and **108** is provided, each supported by a respective one of the tie bars **101**, **102** and **103**. The wiper blades may be separate members secured to the respective tie bars, or may be integral portions or arms of a tie bar wiper blade assembly, as shown in the drawings. The tie bar wiper blade assembly shown in the drawings comprises an integral rather T-shaped member, the stem or wiper blade portion of which is so formed as to resiliently rest in tangential wiping contact upon a corresponding contact band. Thus, as shown most clearly in FIG. 3, wiper blade **106** rests tangentially upon contact band **55**, blade **107** upon band **60**, and blade **108** upon band **66**. The tie bar members and associated integral wiper blades may be formed of any suitable electricity conducting material, such as brass, copper, or other suitable material. Electricity conducting lubricants may, if desired, be applied to the surface of the respective bands to minimize physical damage by galling, abrasion, and the like, of the wiper blades and co-operating band surfaces. Suitable electrical conductor binding screws **109**, **110** and **111** are provided, each in threaded co-operation with a respective one of the bars **101**, **102**, and **103** and adapted to clamp an electrical conductor in co-operative engagement with the tie bar and its coupled wiper blade. As is shown in FIG. 2, and indicated schematically in FIG. 5, a wire **112** having conductors **113** and **114** extends from jack or plug member **116** through insulating protective bushing **115**, the hollow interior of pendant ring **17** and into the interior of stem or housing **16**. Jack or plug member **116** indicated schematically in FIG. 5 serves to connect wire **112** to a source of electrical energy in the conventional way. The pigtail wire **117** shown in FIG. 2, has a pair of conductors **118** and **119**, which, as shown in FIG. 5, are respectively coupled to terminals of motor **44**. Conductor **118** is also connected to conductors **114** and **120**, which latter conductor is bound to tie bar **102** by screw **110**. Conductors **119** and **121** are connected to a common terminal **126** of switch **122**. Conductor **121** extends from the terminal **126** of switch **122** into engagement with tie bar **101** to which it is bound by binding screw **109**. Conductor **123** has its ends joined respectively to tie bar **103** by binding screw **111** and to terminal **124**, the same terminal to which conductor **113** is secured. Thus, as shown most clearly in the wiring diagram FIG. 5, electrical energy will be supplied to clock motor **125** in a continuous fashion so long as jack plug **116** is connected to a source of such energy. The rotating motor **44** and illuminating means or light bulb **23** will operate when switch **122** is closed, and will not operate when switch **122** is open.

Having thus described a preferred embodiment of the invention, it will be apparent to those having ordinary skill in the art to which this invention pertains, that various modifications and changes may be made in the illustrated embodiment without departing from the spirit or the scope of the appended claims.

Therefore, what is claimed as new, and is desired to be secured by Letters Patent is:

1. A device for suspending, rotating, and supplying electricity to an animated display, said device comprising a hollow housing, a rigid shaft supported by said housing for rotation about an upright axis and adapted to support a display, a motor in said housing adapted to rotate said shaft, a plurality of dielectric collars on said shaft, each collar having at least one radial face in which a circular groove spaced from and coaxial with said shaft is provided, a plurality of cylindrical contact bands of electricity conducting material having marginal edge portions received in opposed grooves in adjacent collars, said

bands being supported in coaxial spaced relationship to said shaft and each other by and between said collars, a plurality of spaced electricity conducting means, each conducting means connected to one of said contact bands and adapted to be connected to a display and a portion of which extends parallel to said shaft between and spaced from said shaft and contact bands, a pair of wiper member supporting dielectric rings, one of said rings being supported in fixed relationship to said housing coaxial with said shaft, a plurality of substantially T-shaped wiper members supported by said fixed ring and supporting the second of said rings in coaxial relationship to said shaft, each of the stem portions of said T-shaped wiper members being in tangential resilient continuous wiping contact with a respective one of said contact bands, whereby electrical energy-carrying means is provided between each of said T-shaped wiper members in fixed, relative relation to said housing and a corresponding conducting means in fixed relative relation to said shaft, means adapted to conduct electrical energy to said motor, and means adapted to secure a display in fixed relationship to said shaft for rotation therewith, said display having a plurality of electrically operated devices therein, means connecting said electrical devices through said conducting means to respective devices bands whereby the display means may be rotated and the electrical devices therein operated when electrical energy is supplied.

2. A device for supporting a display device including first and second electrically operated components, the supporting device comprising in combination a hollow pendant ring member adapted to be supported by an elongate depending flexible member, a hollow tubular housing member in pivotal cooperation with said pendant ring, a rotatable shaft supported by said housing for rotation about an axis relative to said housing, a motor in said housing coupled in driving relation to said shaft, a plurality of dielectric collars on said shaft each having at least one radially extending face in which a groove is provided in spaced coaxial relationship to said shaft, a plurality of cylindrical contact bands of electricity conducting material, the marginal edges of said bands extending into said circular grooves whereby said bands are supported in coaxial spaced relationship to said shaft and in spaced relationship to each other, a plurality of conductors extending substantially parallel to said shaft and away from said motor, each of said conductors secured to the inner face of a respective one of said contact bands and extending away from said motor and through intervening dielectric collars to respective free ends, a cage, said cage comprising a pair of spaced dielectric rings, a plurality of T-shaped tie bar wiper blade elements equal in number to said contact bands one of said dielectric rings being secured in fixed relationship relative to said housing and in concentric relation to said shaft, the wiper blade portions of said members each being in resilient, continuous external tangential wiping contact with a respective one of said contact bands, at least two of said wiper blades being adapted to be coupled to a source of electrical energy whereby said energy may be supplied continuously to a first electrically operatable component of said display supported on and rotatable with said shaft and at least one wiper blade being coupled in series with a switch whereby a second electrically operatable component of said display device means may be actuated while said motor rotates said shaft.

3. A device for supporting and rotating an illuminated electrical display clock, said supporting and rotating device comprising a housing, a shaft, means supporting said shaft for rotation about an axis coinciding with the axis of the housing and against movement longitudinally of said axis of rotation relative to said housing, means secured in said housing for rotating said shaft relative to said housing, a cup-like auxiliary housing having a vent therein and substantially enclosing said shaft rotating means and cooperating with said housing, a display clock including an electric clock and a second electrical device, means securing said display clock to said shaft for rotation in unison therewith, a plurality of dielectric collars mounted upon said shaft, a plurality of cylindrical contact bands, each of said bands being interposed between an adjacent pair of said collars and supported thereby in coaxial spaced relationship to said shaft, said dielectric collars, bands and shaft being secured together in unitary fashion, a plurality of conducting means, each conducting means extending from a respective one of said contact bands to a free end adapted to be connected to a respective conductor of a display clock, means adapted to secure said display clock in fixed relationship to said shaft for rotation in unison therewith, a cage comprising a pair of dielectric rings, a plurality of T-shaped tie bar blade members secured in regular spaced relation to said rings, one of said rings being secured in fixed relation to said housing, whereby said cage is supported in coaxial spaced relation to said shaft with the blade portions of said tie bar blade members each in tangential resilient wiping contact with a respective one of said contact bands, at least two of said wiper blades being respectively connected to respective conductors adapted to supply electrical energy whereby such energy may be continuously supplied to said display clock supported by said device, switch means supported by said housing and adapted to control supplying of electrical energy to said shaft rotating means and at least one of said wiper blades, whereby electrical energy may be supplied to said display clock continuously and to said shaft rotating means and said second electrical device forming part of said display clock means when said shaft is rotated by said rotating means.

4. A device in accordance with claim 3, characterized by the fact that said shaft extends into said display clock is secured to said shaft, that said second electrical device comprises illumination means, that said illumination means is supported in fixed relation to said shaft within said clock case.

References Cited in the file of this patent

UNITED STATES PATENTS

704,513	Campbell	July 15, 1902
737,359	Currah et al.	Aug. 25, 1903
1,508,876	Dressler	Sept. 16, 1924
1,870,236	Chervenka	Aug. 9, 1932
1,957,763	Dupler	May 8, 1934
2,583,037	Alexander	Jan. 22, 1952
2,741,861	Roe	Apr. 17, 1956

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,004,358 October 17, 1961

Eugene W. Clark

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 7, line 25, for "devices" read -- contact --.

Signed and sealed this 6th day of February 1962.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

DAVID L. LADD
Commissioner of Patents