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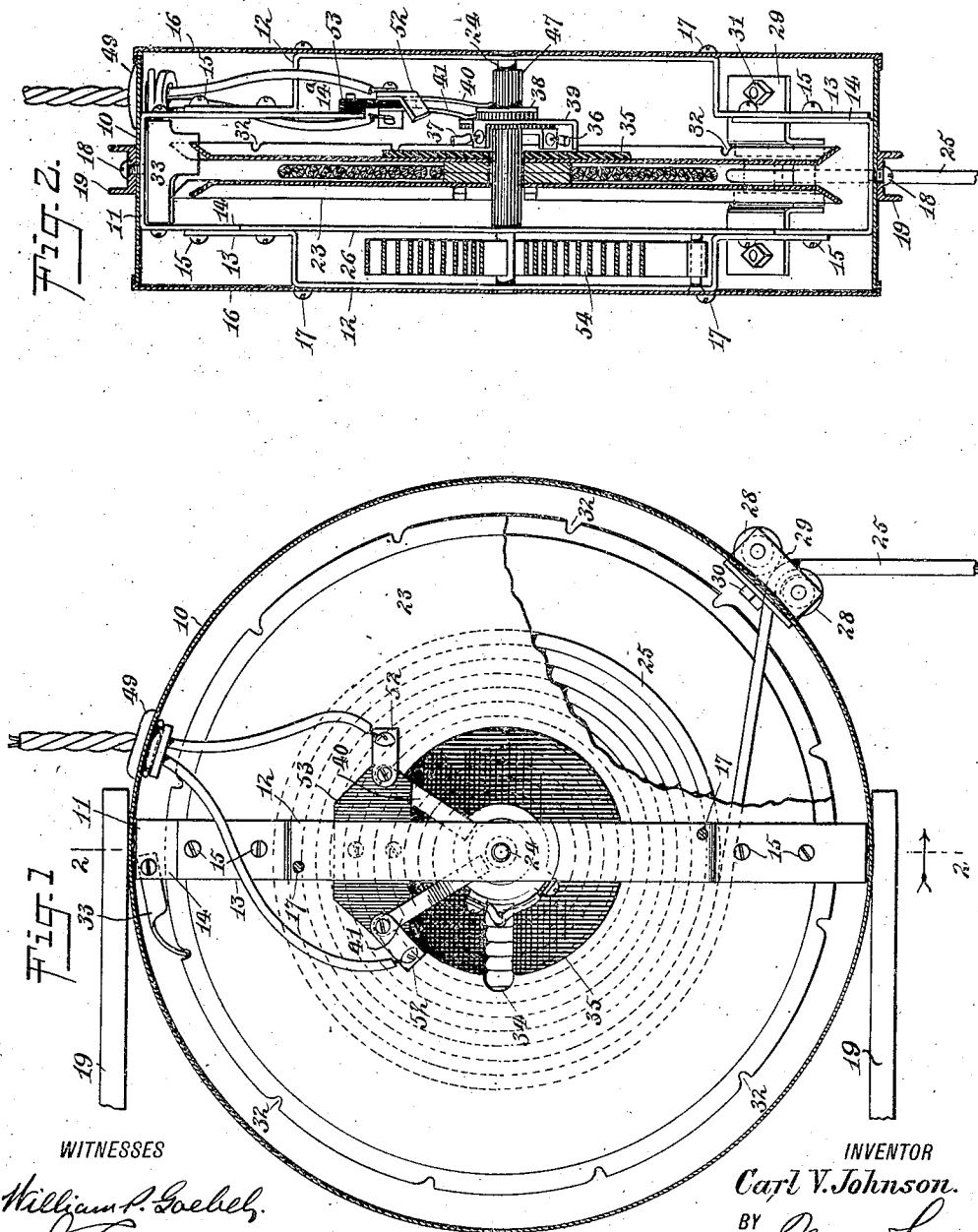
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C. V. JOHNSON

WINDING DEVICE FOR DROPLIGHTS

Filed Sept. 25, 1918

2 sheets-sheet 1



WITNESSES

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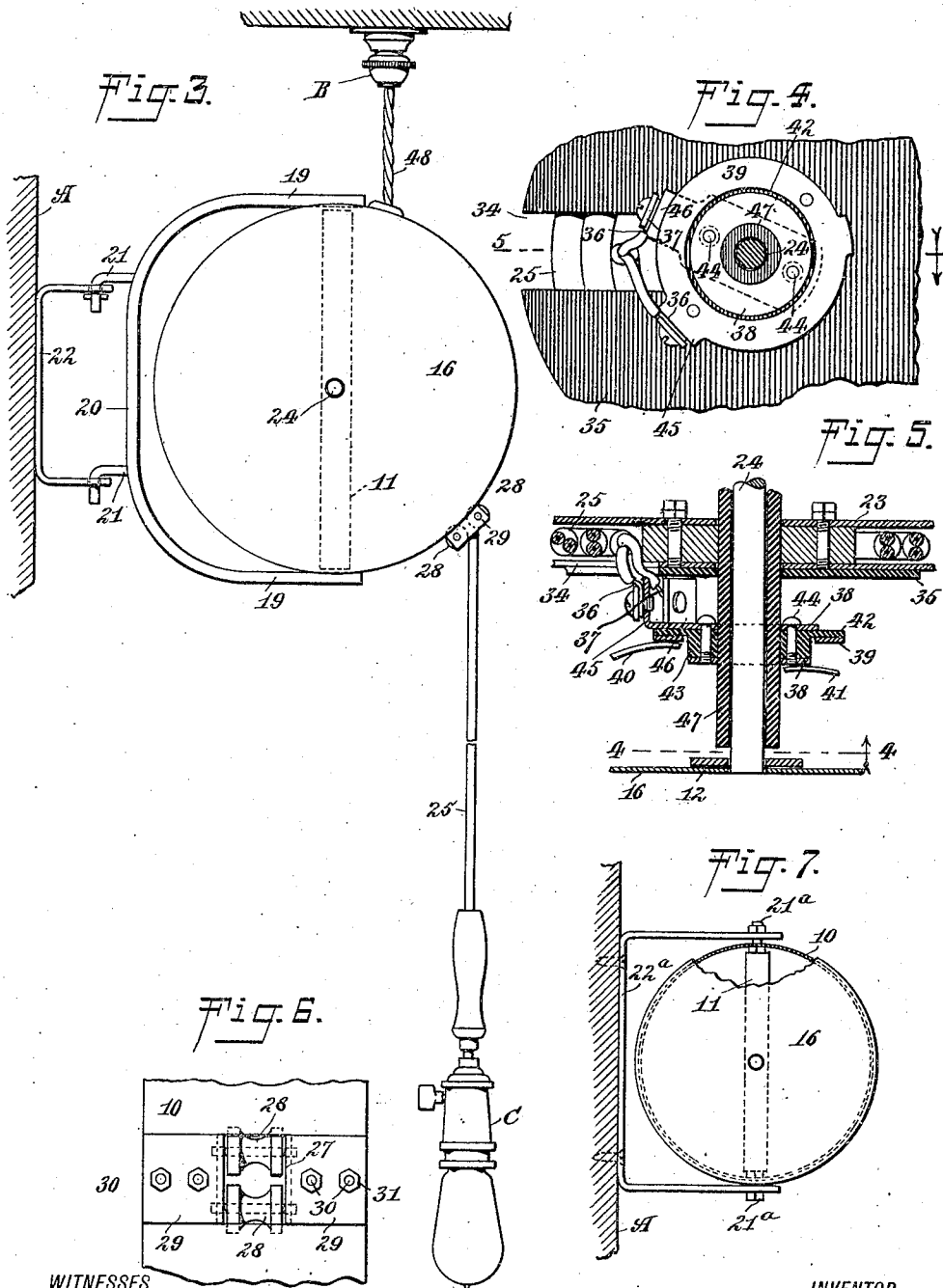
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UNITED STATES PATENT OFFICE.

CARL V. JOHNSON, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO INDISPENSABLE MANUFACTURING COMPANY, OF RENO, NEVADA, A CORPORATION OF NEVADA.

WINDING DEVICE FOR DROPLIGHTS.

Application filed September 25, 1918. Serial No. 255,721.

To all whom it may concern:

Be it known that I, CARL V. JOHNSON, a citizen of the United States, and a resident of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Winding Device for Droplights, of which the following is a description.

My invention is particularly adapted for drop lights employed in garages, although the invention is capable of wider use. The general object of the invention is to provide a winding device of the indicated character improved in various particulars with reference to simplicity of construction and with a view to promote convenience in assembling the parts as well as to facilitate adjustment and operation.

More specifically, the invention has in view the provision of simple supporting means of a character to make the complete device readily portable and adapted to be hung up in a particular locality when it is needed.

A further object is to provide a guide for the conductor cord and so arranged as to effectively guide and guard the cord in all directions in its movements into and from the casing of the winding mechanism.

Also, an important object is to provide a novel arrangement of the framework and casing of the winding device whereby not only is the maximum strength obtained in the frame by few elements of simple form but whereby casing covers provided at opposite sides are made readily detachable for examination or adjustment of interior parts, and the covers when in place are firmly secured to the framework and are made removable without disturbing the frame parts or casing.

The manner in which the above and other objects are attained will appear from the specific description following.

Reference is to be had to the accompanying drawings forming a part of this specification it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a sectional view of the casing, the frame and winding mechanism being shown in elevation and part of the winding drum being broken away;

Figure 2 is a transverse vertical section on the line 2—2, Figure 1;

Figure 3 is a side elevation of the supported winding device;

Figure 4 is a detail in transverse vertical section on the line 4—4, Figure 5, the view being given to show the collector rings;

Figure 5 is a horizontal section on the line 5—5, Figure 4;

Figure 6 is a fragmentary face view showing the guide pulleys for the conductor cord;

Figure 7 is a side elevation of the supported winding device showing a modification of the supporting means.

In carrying out my invention in accordance with the illustrated example, a cylindrical casing body 10 is provided to accommodate the winding mechanism and the controlling means therefor. Within the casing is a frame designated generally by the numeral 11 and including side bars 12 centrally offset for their major portion. The ends 13 of the side bars 12 overlap the side arms of upper and lower U-shaped frame members 14 which are secured to the overlapping ends 13 by screws 15 or other fastening means.

The cylindrical casing body 10 has a removable cover 16 at each side to afford ready access to the interior parts and the offset side bars 12 of the frame lie in vertical planes for bracing the cover 16 to which said side bars are secured by screws 17 or equivalent means. It will thus be seen that the side bars of the frame afford a substantial brace and support for the removable covers and that the removal of the latter in no way disturbs the frame parts or the interior mechanism supported thereby, and in no way disturbs the casing body as will appear.

The cylindrical body of casing 10 is secured to the frame 11 by screws 18 engaging the top and bottom U-shaped frame members 14 and these screws 18 or any equivalent fasteners employed for the purpose are utilized in the form shown in Figures 1 to 3, for securing the winding device to the upper and lower arms 19 of the U-shaped yoke 20 which is formed with upper and lower pivot pins 21 of L-shape, the ends of the pins being both disposed downwardly to be received in aligned holes in a face bracket 22 on a wall A of a garage or other structure, it being understood that in practice a series of brackets 22 may be disposed about a room and that the yoke 20 can be detached from any particular bracket and

engaged with another in a particular locality where light is desired, the yoke serving as a convenient means to facilitate the carrying of the winding device. In the form shown in Figure 7 bolts 21^a are passed through the casing body 10 and top and bottom members of the frame 11 and directly through a fixed bracket 22^a secured to the wall A. Thus, in the form shown in Figure 3, the winding device swings on the bracket 22 with the pins 21 as a center, whereas in Figure 7 the casing and frame turn about the axis of the top and bottom bolts 21^a, the former construction being preferred.

15 A winding drum 23 is provided, arranged to wind a flexible conductor cord 25 thereon in one plane, that is, in the form of a flat coil. Said drum turns with an axle 24 supported at its ends in the offset side bars 12 of the frame and in an additional frame bar 26 secured to one frame bar 12 and bridging the offset portion thereof. The cord 25 extends from the groove of the winding drum through an opening 27 in a side of the cylindrical casing body 10 below the axis of rotation of the drum. The proper guiding of the cord 25 into and out of the casing in the raising and lowering of the lamp C carried by the cord, is an important factor in promoting convenience in the use of a winding device of this character and to insure against binding of the wire as the lamp is carried in different directions from the position of the winding device. I effect a guiding and

35 guarding of the cord in all directions in its movements through the opening 27 in a very simple manner through the medium of a pair of grooved pulleys 28 between which the cord passes. These pulleys are journaled in similar angle plates 29, said plates in one flange thereof forming bearings for the pulleys 28 while the other flanges of the angle plates lie at the interior of the casing body 10 and are secured by bolts 30 and nuts 31. The angle plates, it will be seen, involve a minimum expense and can be easily secured in position, and with the pulleys 28 provide an effective cord guide.

The cheeks or side plates of the drum 23 have notches 32 adapted to receive the free end of a gravity lock 33 pivoted to the frame 11 at the top, the lock permitting the turning of the drum in one direction by a pull on the cord 25 and permitting a reverse movement of the drum for winding except when the drum is slowed up to permit the lock to enter a notch 32.

The conductor wires of the cord 25 extend through an opening 34 in a side of the drum 23, the opening extending also through an insulating disk 35 and the respective terminals 36, 37 of the conductor wires are secured to binding posts on collector rings 38, 39 engaged by brushes 40, 41 to connect the conductor wires in circuit with the supply sys-

tem. The collector ring assembly will best be understood from Figures 4 and 5, and forms an important factor in simplifying my improved winding device and facilitating the making of the electrical connections. The two collector rings 38, 39 are insulated from each other by a disk 42, said disk having a hub 43, the flange or disk proper of which has secured thereto the one ring 39, while the other ring 38 is made up of ring parts at opposite faces of the hub 43 and secured to each other and to said hub by screws 44 or the like. The respective collector rings 38, 39 have ears 45, 46 carrying the binding posts for the conductor terminals. By the described arrangement the collector ring assembly constitutes a rigid unit having a throughbore to be fitted on an insulator sleeve 47 on the axle 24. Conductor wires 48 extend from a ceiling support B or other socket or the like leading from the supply system and enter the casing body 10 through an insulator bushing 49, the respective conductors being secured to brushes 40, 41 in the present example through the medium of bracket arms 52, said brushes and brackets being carried by an insulating plate 53 secured to a depending end 14^a of one of the arms of the upper U-shaped frame members 14.

The coil spring 54 to turn the axle 24 and drum 23 is disposed in the frame at the opposite side of the drum from the brushes and collector rings between the frame bar 26 and the adjacent offset side bar 12.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the mechanical details herein illustrated, since manifestly the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:

1. A drop light mechanism including a frame presenting side bars having offset portions and end members joining said side bars, a casing body secured to the end members of the frame, separate covers for the opposite sides of the casing body and lying against the offset portions of the side bars, means detachably securing the covers to the side bars, a winding drum revolvably supported in said frame, a conductor cord winding on said drum and extending through said casing body to support a drop light, conductors extending through said casing body and adapted to connect with a source of electricity, and means within the casing to connect the respective conductors in circuit.

2. A drop light mechanism including a casing body, a frame within said body, sup-

porting means, means detachably fastening said casing body and frame to said supporting means and to each other, removable covers for the opposite sides of said casing body, means detachably-securing said covers to the sides of the frame independently of said fastening means to permit of the removal of the covers without disturbing the connection between said supporting means and said frame and casing body, a winding drum revolubly supported in said frame, a conductor cord on said drum adapted to carry a drop light, means tending to turn the drum in a direction to wind said conductor cord, and means to connect the wires of said conductor cord with a source of electricity.

3. A drop light mechanism including a winding drum, an axle carrying the said drum, a conductor cord on said drum and adapted to carry a drop light, a collector unit on said axle and connected with said cord, and brushes engaging said unit and adapted to be connected with a source of electricity, said unit comprising an insulator disk having a hub, a metal collector ring fixed on said disk outside of the hub and engaged by one brush, a second collector ring composed of two ring elements respectively on opposite faces of the hub and rigid with the latter and with each other, one of said ring elements being engaged by the other brush, and means connecting the respective collector rings with the wires of said conductor cord.

4. A drop light mechanism including a casing body, a frame within said body, a conductor cord extending into the body, winding mechanism for said conductor cord,

said winding mechanism being supported in said frame, supporting means outside of said casing, and means at the same time securing the casing body and the frame to said supporting means and to each other.

5. A drop light mechanism including a casing body, winding means within said casing body, a frame within said casing body, a cover at a side of the casing and detachably secured to the frame at a side thereof, external supporting means, and means passing through the casing body and securing said supporting means to the frame independently of the securing means for the detachable cover.

6. A drop light mechanism including a casing body, winding means within said casing body, a frame within said casing body, an external supporting bracket, means extending through said casing body and securing said bracket to said frame and serving also to secure the casing body to the frame, said frame presenting side members and covers forming end closures of said casing body and braced by said side members of the frame.

7. A drop light mechanism including a casing, a frame therein, a winding drum supported in said frame, and a supporting yoke presenting upper and lower arms, and means passing through said casing and securing said arms to said frame, said yoke having means to engage the same with a support.

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Witnesses:

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