June 3, 1941. H. V. LONGLEY 2,244,206

DISPLAY DEVICE

Filed Jan. 27, 1940 3 Sheets-Sheet 1

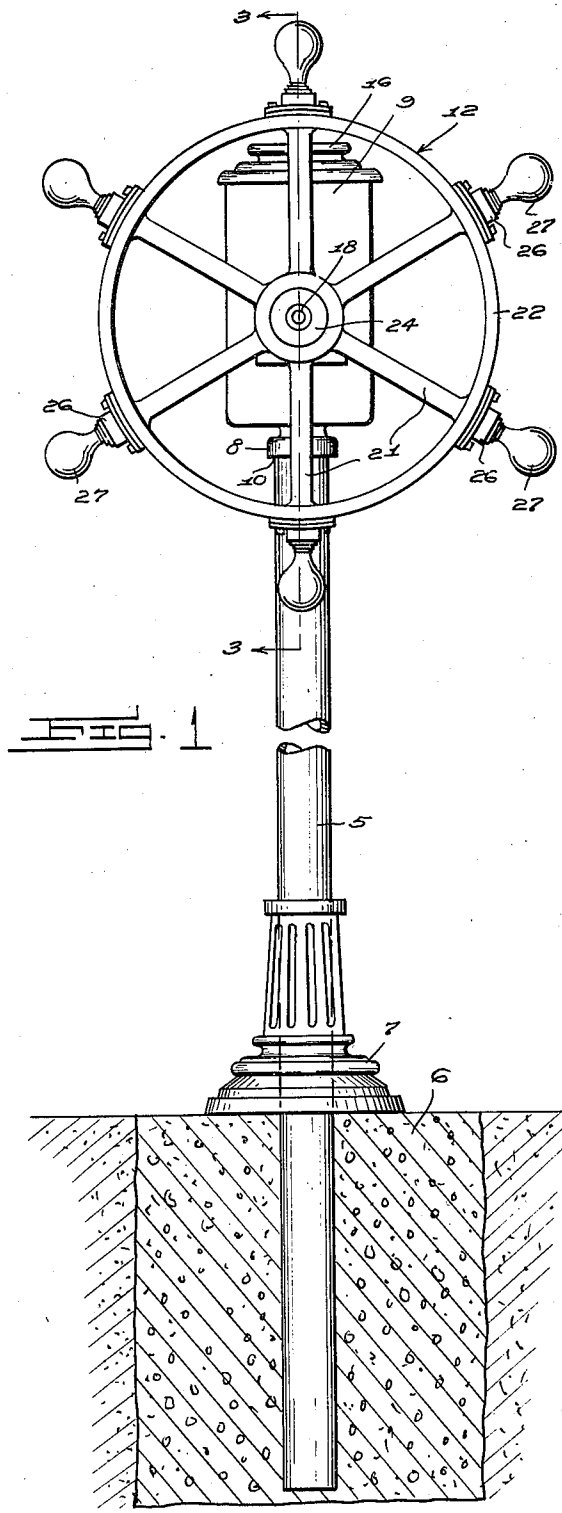


FIG. 1

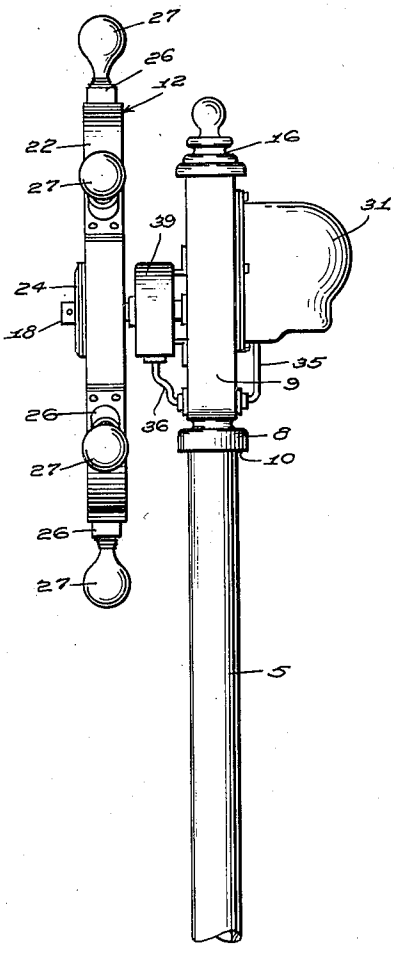


FIG. 2

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DISPLAY DEVICE

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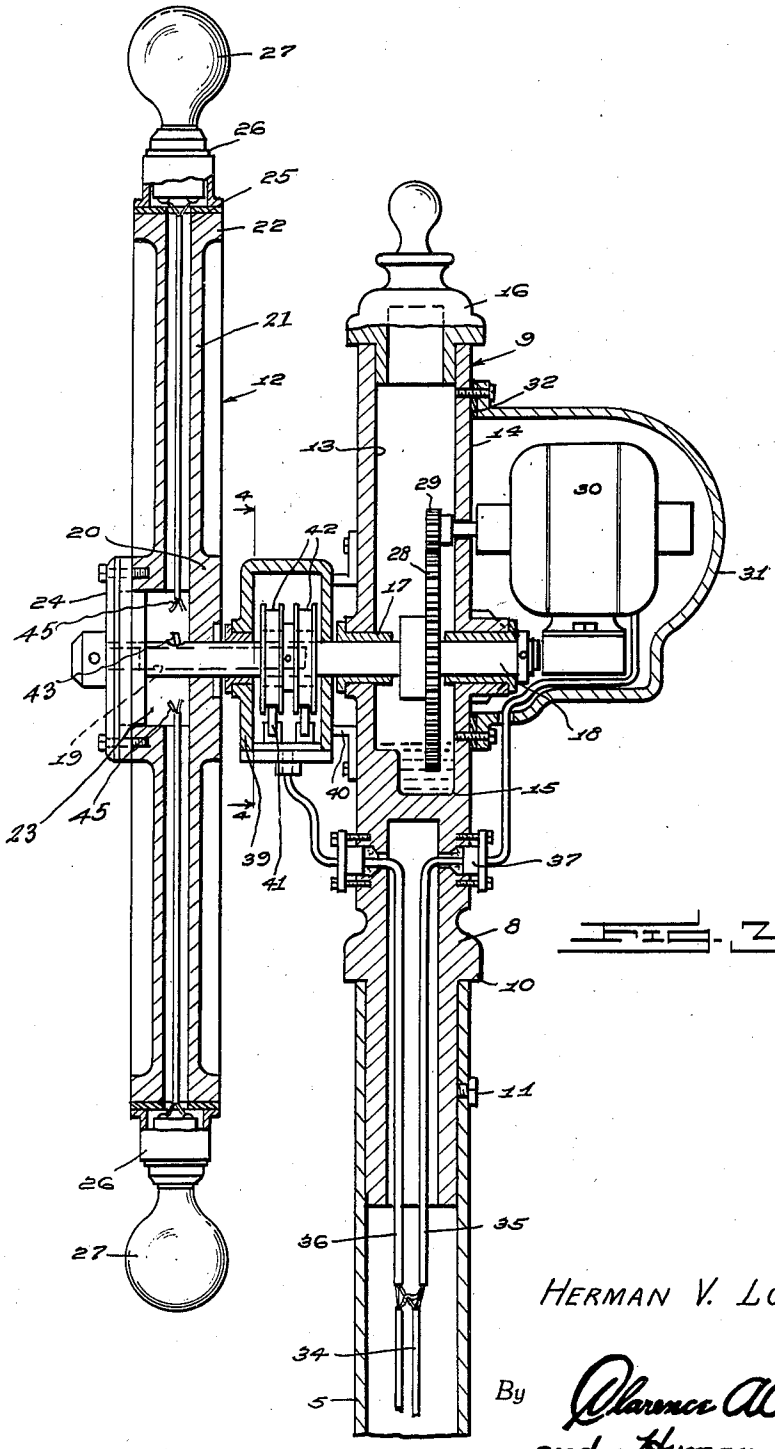


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Filed Jan. 27, 1940 3 Sheets-Sheet 3

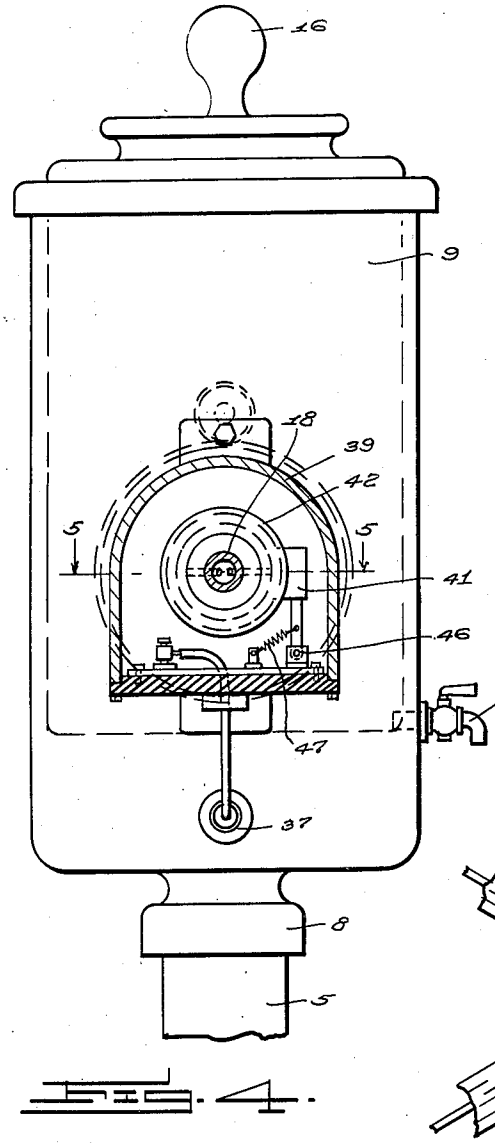


FIG. 4.

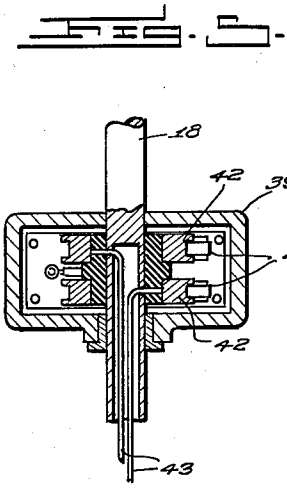


FIG. 5.

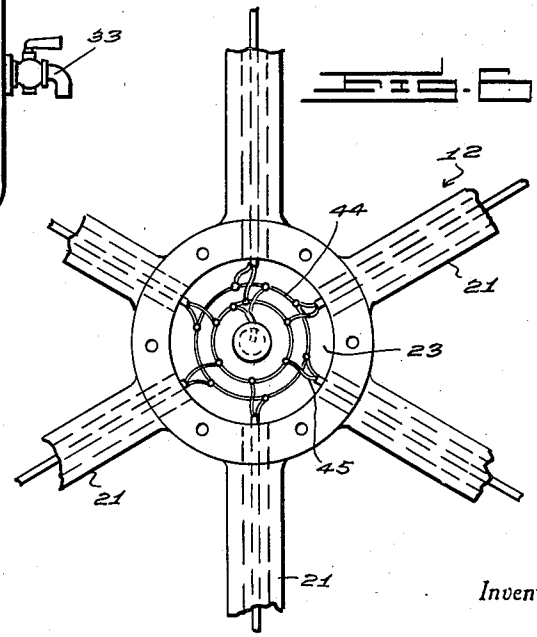


FIG. 6.

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Patented June 3, 1941

2,244,206

UNITED STATES PATENT OFFICE

2,244,206

DISPLAY DEVICE

Herman V. Longley, Elkton, Va., assignor of one-half to Leslie C. Reeves, Haddonfield, N. J.

Application January 27, 1940, Serial No. 316,029

1 Claim. (Cl. 240—10.1)

This invention relates to a display device especially adapted for advertising purposes and primarily for attracting the attention of persons to a selected place, establishment or to merchandise on display, and has for the primary object the provision of a power driven rotatable and illuminated device which may be seen for a maximum distance and may be conveniently located so that the visibility thereof to persons within a selected area will be assured.

With these and other objects in view, the invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a front elevation, partly in section, illustrating a display device constructed in accordance with my invention.

Figure 2 is a fragmentary side elevation illustrating the device.

Figure 3 is a fragmentary vertical sectional view illustrating the device.

Figure 4 is a sectional view taken on the line 4—4 of Figure 3.

Figure 5 is a sectional view taken on the line 5—5 of Figure 4.

Figure 6 is a fragmentary front elevation of a portion of the display element illustrating the arrangement of electric wires therein.

Referring in detail to the drawings, the numeral 5 indicates a hollow supporting post, the lower portion of which is mountable in a cement foundation 6. An ornamental base 7 is arranged on the post 5 and rests upon the foundation 6. A tubular extension 8 of a housing 9 extends into the upper end of the post with a frictional fit therewith. The extension 8 has a shoulder 10 to engage the upper end of the post for limiting the movement of the extension into the post. A set screw 11 is carried by the post to engage with the extension for securing the housing 9 against rotation on the post but which will permit the housing to be rotated when desiring to change the direction of the display device 12 carried by said housing.

The housing 9 includes front and rear walls 13 and 14, a bottom wall 15 and a removable top wall 16 having an ornamental shape thereto. The front and rear walls 13 and 14 have openings to receive journals 17 which rotatably support a shaft 18, a portion of which is hollow, as shown at 19. Secured on the hollow portion of the shaft which is arranged exteriorly of the housing 9 is the display element 12 in the form of a wheel including a hub 20, radially extending spokes 21 and a rim or felly 22. A portion of the hub is hollow to form a chamber 23 closed by a removable cover plate 24 through which the shaft 18 extends. The shaft is keyed or otherwise secured to the hub 20 and the spokes are of hollow formation and communicate with the chamber 23. The felly 22 has openings 25 communicating with the hollow spokes and mounted on the felly over the openings 25 are electric lamp sockets 26 supporting electric lamps 27. The electric lamps extend radially from the periphery of the wheel so that they can be visible from the front, rear and sides of the device. The electric lamps may be of one color or a combination of colors if desired.

A gear 28 is secured on the shaft 18 within the housing 9 and meshes with a pinion 29 secured on the shaft of an electric motor 30 mounted in a casing 31 supported on the housing 9. The electric motor is for the purpose of rotating the display element.

The casing 31 is detachably mounted on the housing 9 and it is preferable that a gasket 32 be arranged between the housing and the casing for sealing the interior of the casing against atmospheric condition. However, vent openings may be provided in the bottom of the casing for cooling the motor therein if desired.

The bottom wall 15 of the housing 9 is recessed to form a sump to receive lubricant and a portion of the gear 28 extends into the lubricant so as to pick the lubricant up and carry it to the pinion 29. Also the lubricant taken up by the gear 28 will gravitate therefrom onto the shaft 18 and reach the bearings 17 for lubricating the latter.

A drain valve 33 is mounted on the housing 9 and connects with the sump to permit the lubricant to be drained therefrom when it is deemed necessary that the lubricant should be changed after a period of use.

Electric feed wires 34 enter the lower end of the post by being carried through the foundation from an electrical output. The electric feed wires 34 extend upwardly in the post and are connected to branch electric feed wires 35 and 36. The feed wires 35 and 36 extend upwardly in the extension 8 and leave the latter to the exterior thereof by way of stuffing glands or boxes 37. The feed wires 35 enter the casing 31 and are connected to the electric motor 30 while the feed wires 36 enter a box 39 mounted on the front wall of the housing 9 by brackets 40 and through

which the shaft 18 extends. The box 39 encloses contact brushes 41 and collector rings 42. The collector rings are mounted on and insulated from the shaft 18 and have connected thereto electric conductors 43 which enter the hollow portion of the shaft 18 and leave said hollow portion within the chamber of the hub of the rotatable display element and are connected to annular conductors 44 arranged in the chamber of the hub and to which are connected electric conductors 45. The electric conductors extend through the spokes and openings 25 of the felly or rim and are connected to the electric lamp sockets 26.

The brushes 41 are pivotally mounted as shown at 46 and are spring-influenced, as shown at 47, to engage with the collector rings 42. It is preferable that the base portion of the box be constructed of insulating material. Also it is desired that the box be of a waterproof construction.

From the foregoing description taken in connection with the accompanying drawings it will be seen that all the electrical equipment such as the electric motor, electric feed wires, brushes and collector rings are housed within the various parts of this device so as to be protected against weather elements.

With the electric circuit closed the electric motor will be in operation rotating the display element and also illuminating the electric lamps thereon. The rotation of the display element will be rather rapid so that the electric lamps individually will not be observable and the illumination therefrom will be more in the form of a ring of light capable of being seen for a maximum distance also giving a very pleasing and attractive appearance so as to readily attract the attention of persons in the vicinity of the device.

A device of the class described is easily installed, economical to retain in operation and may be manufactured and sold at a low cost.

It is believed that the foregoing description, when taken in connection with the drawings, will fully set forth the construction and advantages of this invention to those skilled in the art to which such a device relates, so that further detailed description will not be required.

Having thus described the invention, what I claim is:

A display device comprising an upright, a vertically arranged gear housing supported on the upright and including front and rear walls and having a lubricant sump at its bottom, a horizontally arranged shaft passing through the housing and having parts journalled in the front and rear walls thereof, a motor housing connected with the rear wall of the gear housing, a motor in the motor housing having its shaft passing through the rear wall of the gear housing, gears connecting the motor shaft with the first mentioned shaft and located in the gear housing with the gear on the first mentioned shaft extended into the sump, a wheel connected with the front end of the shaft and having a chamber in its hub and provided with hollow spokes, lamps carried by the periphery of the wheel, the front portion of the first mentioned shaft being hollow, a small housing supported from the front of the gear housing through which the shaft passes with the hollow portion of the shaft extending into the small housing, collector rings connected with the first mentioned shaft and located in the small housing, brushes in the small housing, conductors connected with the brushes and conductors connected with the collector rings passing through the hollow part of the shaft into the chamber, other conductors connecting the portions of the conductors in the chamber of the hub with the lamps and passing through the spokes.

HERMAN V. LONGLEY.