

Feb. 14, 1933.

A. M. MOORE

1,897,271

DISPLAYING MACHINE FOR SHOW ROOMS, SHOW WINDOWS, AND THE LIKE

Filed July 7, 1931

6 Sheets-Sheet 1

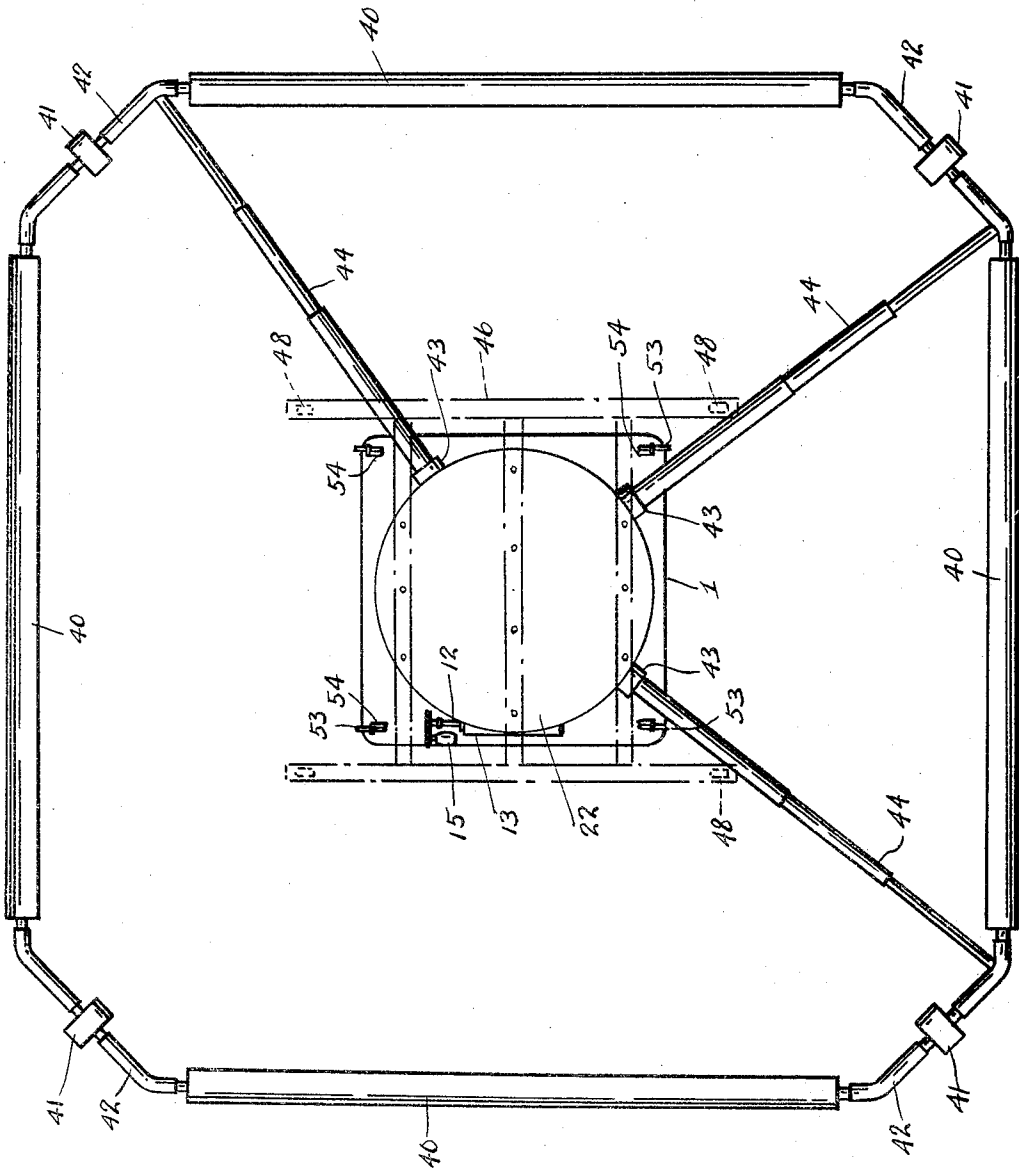


Fig. 1.

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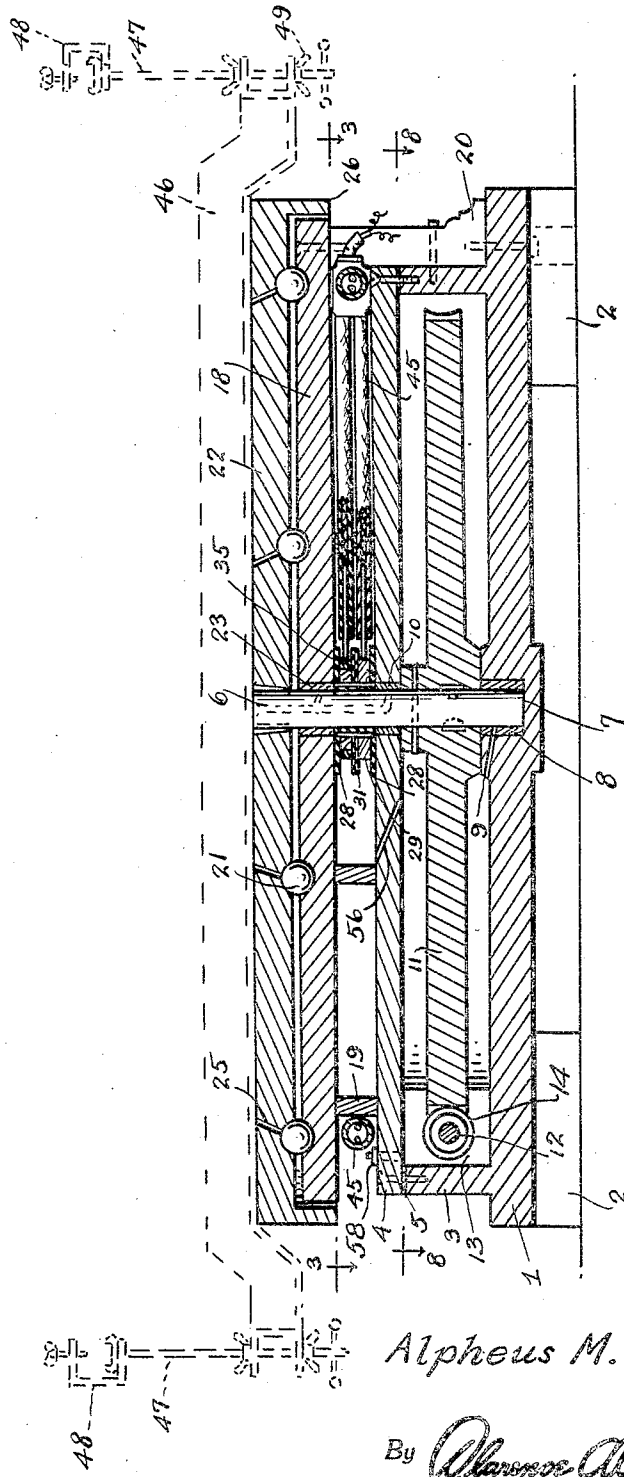
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Fig. 2.



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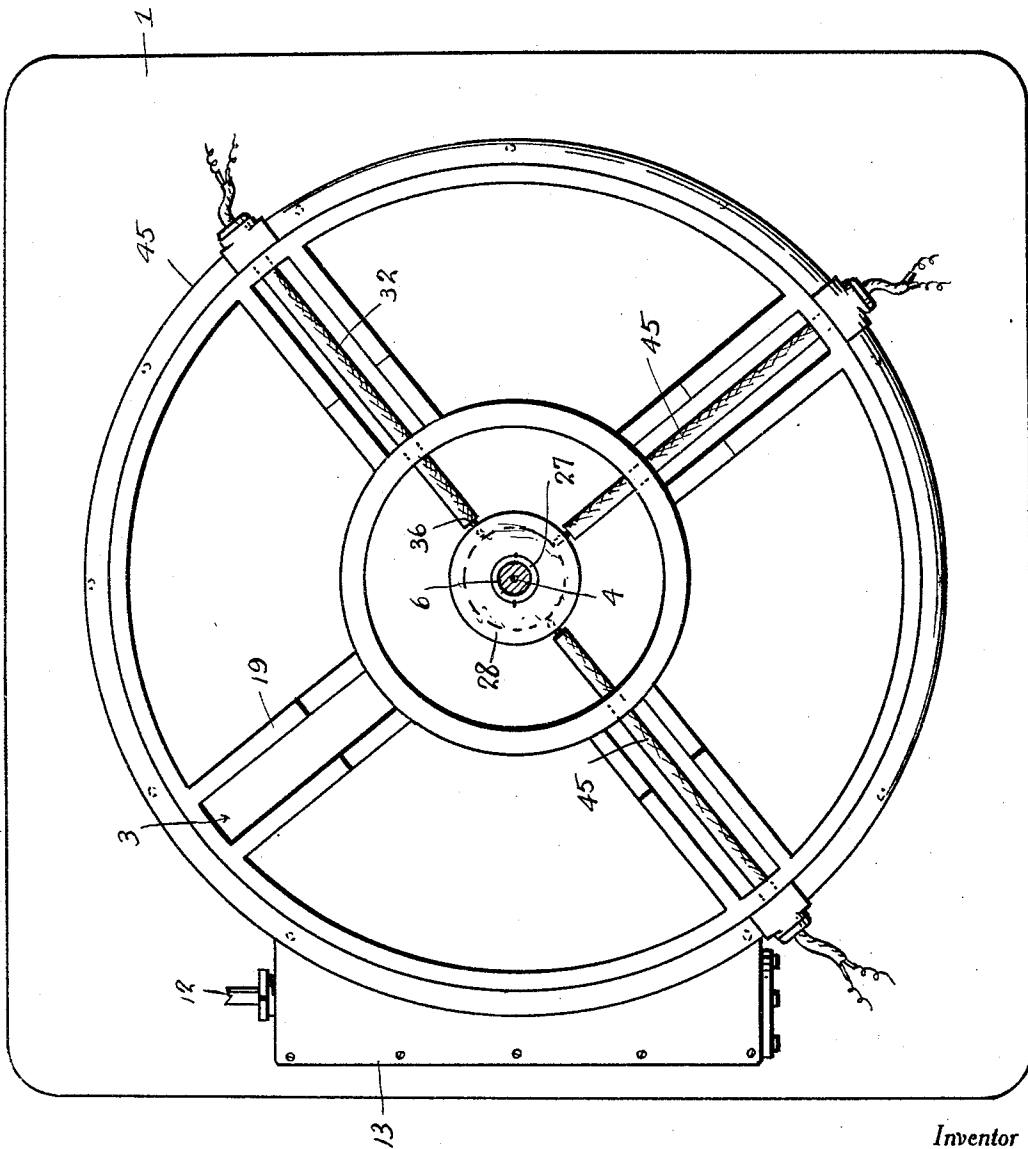
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Fig. 3.

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Fig. 5.

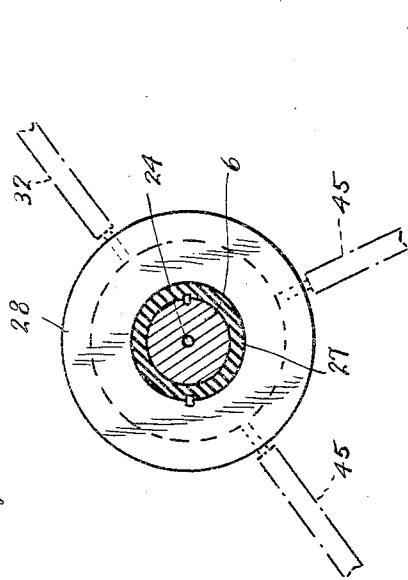


Fig. 7.

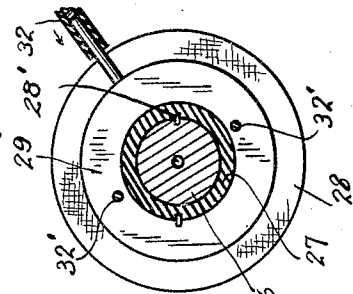


Fig. 6.

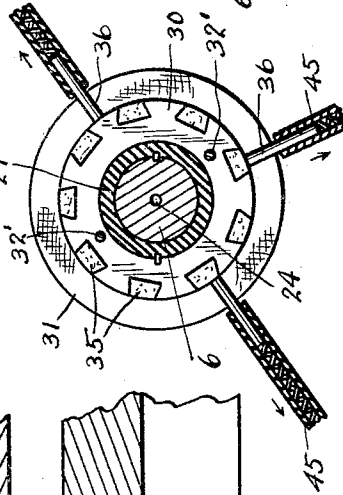
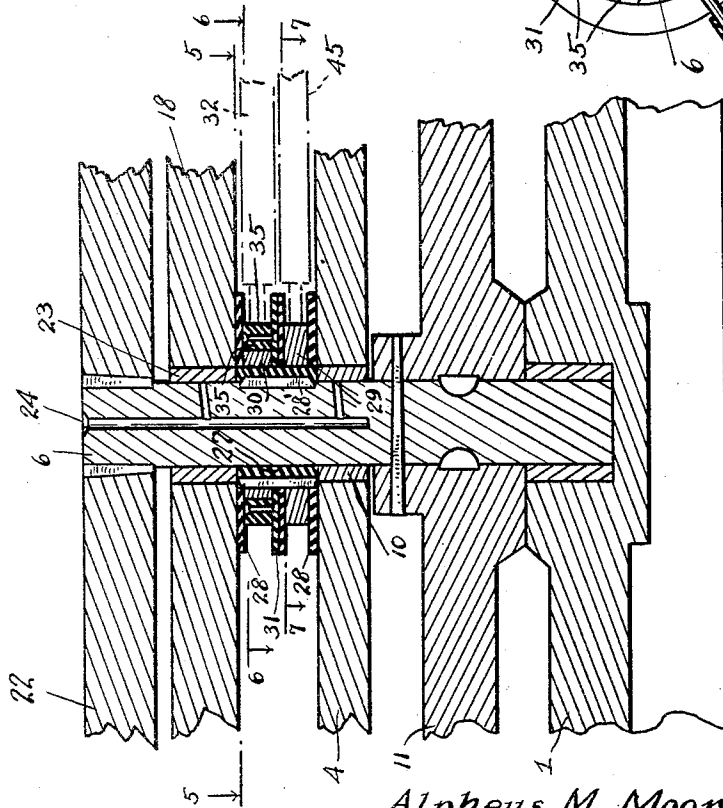


Fig. 4.



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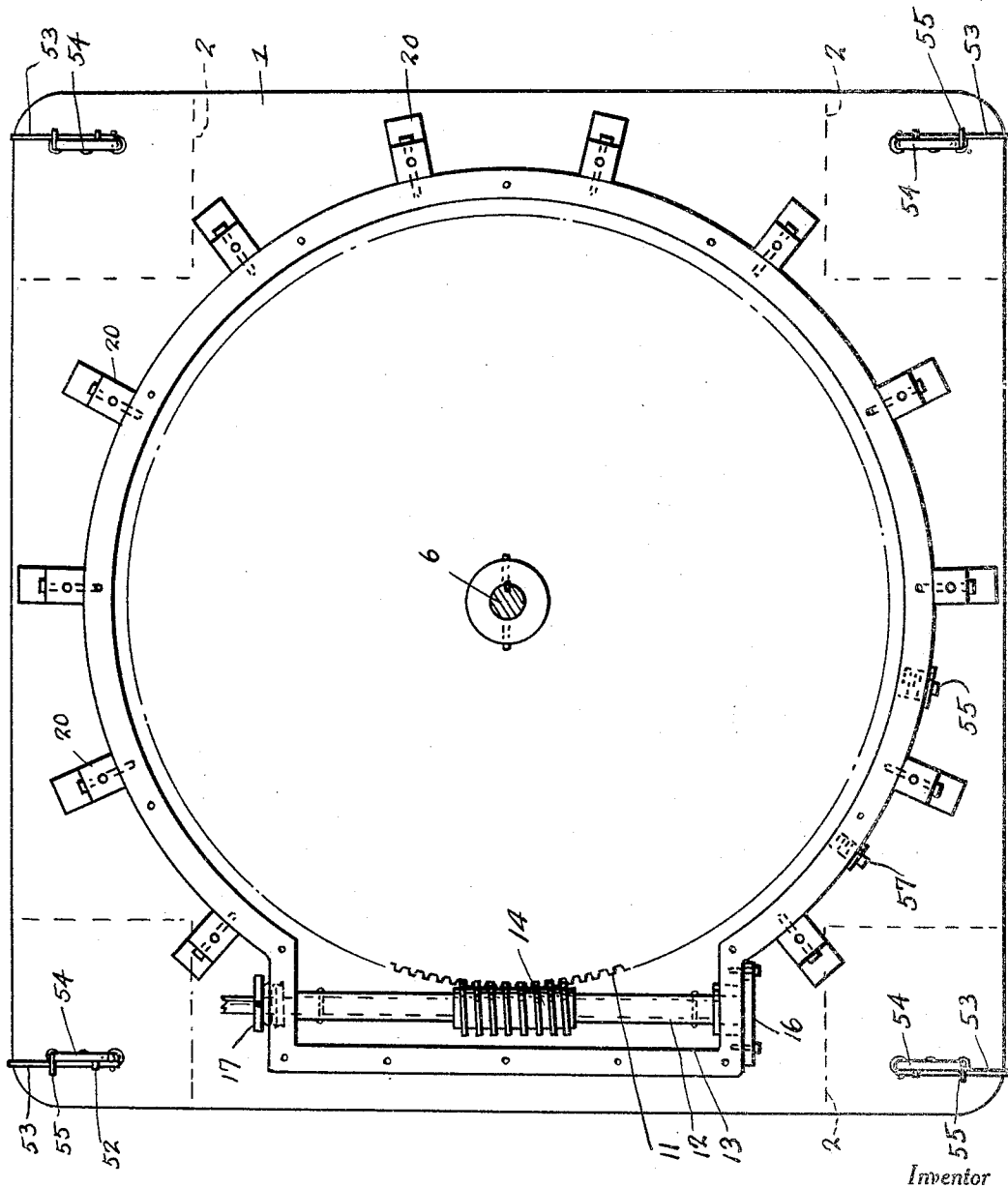


Fig. 8.

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Fig. 10.

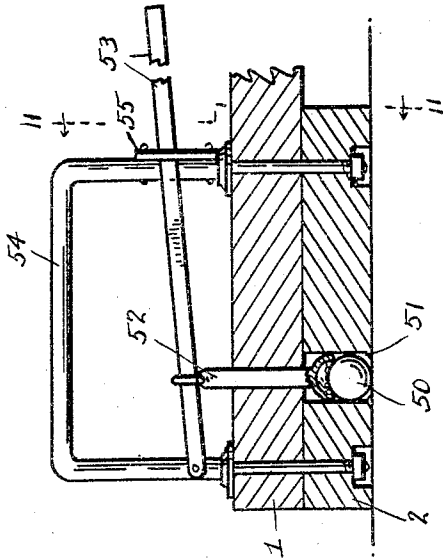


Fig. 11.

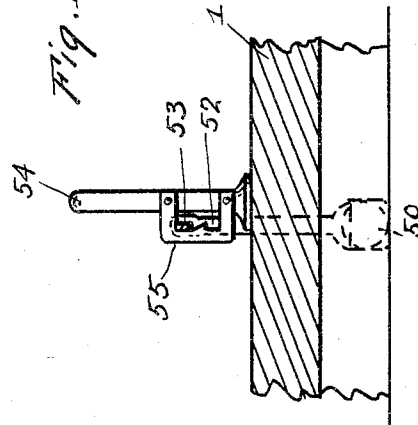
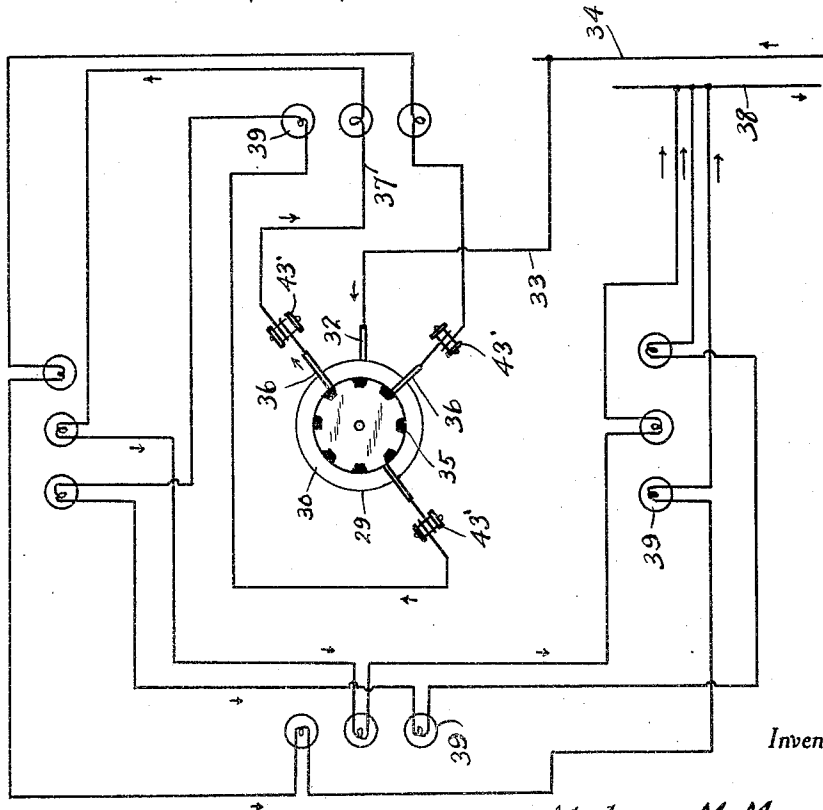


Fig. 9.



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UNITED STATES PATENT OFFICE

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DISPLAYING MACHINE FOR SHOW ROOMS, SHOW WINDOWS, AND THE LIKE

Application filed July 7, 1931. Serial No. 549,243.

This invention relates to an apparatus for displaying objects or articles of various kinds in show windows or show rooms, or the like, the general object of the invention being to provide a turn table for supporting the article or objects with a motor for driving the turn table, and with means for illuminating the object as it is turned with different colored lights, the circuits of which are alternately closed and opened.

Another object of the invention is to provide a sturdy, durable display device, displaying all kinds of show room merchandise, and has but few moving parts and which has its own built-in lighting equipment.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a top plan view of the device.

Fig. 2 is a vertical sectional view thru the turn table with the parts associated therewith.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a detail vertical sectional view showing the shaft and the parts associated therewith.

Fig. 5 is a section on the line 5—5 of Fig. 4.

Fig. 6 is a section on line 6—6 of Fig. 4.

Fig. 7 is a section on the line 7—7 of Fig. 4.

Fig. 8 is a section on the line 8—8 of Fig. 2.

Fig. 9 is a diagrammatic view of the circuit.

Fig. 10 is a sectional view with parts in elevation showing the castor arrangement for lifting the device from the surface on which it rests.

Fig. 11 is a section on line 11—11 of Fig. 10.

In these drawings, the numeral 1 indicates the base of the device, provided with the base blocks 2 for resting on a floor or other surface, and said base is provided with an up-standing flange 3 which, with the base forms a casing which is covered by the cover plate 4, a gasket 5 being placed between the cover and the upper edge of the flange.

A shaft 6 has its lower end journaled in a recess 7 in the center of the base 1 and the bearings 8 on the lower end of the shaft are placed in the recess which is supplied with oil through a channel 9 in communication with the interior of the casing. A bearing 10 is also provided in the cover plate for the shaft. A large gear 11 is located in the casing, and is fastened to the shaft. A shaft 12 is journaled in an offset portion 13 of the casing and carries a worm 14 which meshes with the teeth of the gear 11 and said shaft is driven from a motor 15 supported on the base.

One end of the part 13 has an opening therein which is covered by a plate 16 so that the shaft can be removed and the other end of said part 13 has a packing gland 17 through which the shaft passes.

A plate 18 is supported in spaced relation from the cover 4 by the supports 19 and 20 and said plate in its upper face has a pair of raceways for the balls 21 which engage raceways in the turn table or platform 22 which is fastened to the upper end of the shaft 6. A bearing 23 is carried by the plate 18 for the shaft and oil is supplied to this bearing 23 and the bearing 10 by the oil conduit 24. Oil ducts 25 are formed in the platform so that oil can be supplied to the balls 21. The platform is formed with a peripheral flange 26 which extends over the periphery of the plate 18.

A sleeve 27 of non-conducting material encircles that part of the shaft between the cover plate 4 and the plate 18 and is keyed to the shaft as shown at 28' and rings 28 of non-conducting material encircle the sleeve with one ring contacting the cover plate 4 and the other the plate 18.

A ring 29, preferably of brass encircles the lower part of the sleeve 27 and a ring 30 also

preferably of brass encircles the upper part of the sleeve and the rings are separated by the rings 31 of non-conducting material. The rings 29 and 30 are connected together by the rivets 32' which are also preferably of brass and which pass through the insulated rings 31, so that the two brass rings 29 and 30 are electrically connected together, and as will be seen, the rings 28 and 31 are of much larger diameter than the brass rings 29 and 30.

A spring pressed brush 32 contacts the lower ring 29 and is connected by a conductor 33 with a feed line 34. A plurality of notches are formed in the upper brass ring 30 to receive the wedge-shaped blocks 35, of non-conducting material and a number of spring-pressed brushes 36 engage the ring 30 and each of these brushes 36 is connected to a circuit 37, these circuits being connected with the return line 38, and each circuit has a number of lamps 39 therein, and I prefer to make the lamps in each circuit of a different color from the lamps in the other circuits.

From the foregoing, it will be seen that during the rotation of the shaft and the turn table or platform, the brushes 36 will alternately make and break the circuits due to their engagement with portions of the brass ring 30 and the insulating wedges 35 thereon while current will be supplied to the ring 30 from the source through the conductor 33 and the brush 32 which is in constant contact with the lower brass ring 29, the current passing from the ring 29 through the rivets 32' into the ring 30. Thus during the rotation of the parts, the three circuits shown in Fig. 9 will be alternately opened and closed so that the different colored lamps arranged in the three circuits will be lighted and extinguished, thus giving a pleasing and attractive lighting effect.

I place some of the lamps in the lamp housings 40 and some in the small housings 41. These housings 40 are of elongated form and are connected to the smaller housings 41 which are arranged in the corners of the substantially rectangular frame formed by the housings, by the tubular parts 42 which have sliding movement in the housings so that the area of the frame formed by the housings can be increased or decreased. This frame is connected to a number of reel housings 43 by the telescoping tubes 44. The reel housings 43 are suitably supported, preferably, from the casing containing the gearing. The conductors 37 are connected with spring actuated reels 43 in the housings 43, so that the conductors will be slackened or extended as the frame made of the lamp housings is expanded and contracted.

The conductors pass through suitable non-conducting tubing 45 and of course suitable connections are provided to connect sections of the connectors together. It will also be

understood, that, if desired, suitable means including brushes can be provided for conveying current to scenery carried by the platform or turn table so that this scenery can be driven when desired.

A skeleton frame 46 may be placed on the turn table as shown in dotted lines in Figs. 1 and 2 to support an automobile or the like, and the automobile can be fastened to the frame by jacks shown generally at 47, the upper end of each jack having a flange 48 engaging a part of an automobile so that by turning the shaft of the jack, the automobile can be raised or lowered as desired, and the jack locked in its adjusted position by the lock nut 49.

A castor ball 50 is placed in an opening in the corner of each base, and is held in place by the lip 51 formed at the lower end of the opening. A stem 52 has a semi-spherical part at the lower end thereof for engaging the ball and said stem is operated by a lever 53 pivoted to a yoke-shaped handle member 54 on the base, said member 54 has a toothed plate 55 on one limb thereof for holding the lever in adjusted position. Thus by pushing down upon the lever 53, the castor balls can be lowered so as to engage the surface on which the device rests, and thus raise the device off the surface so that it can be moved from one place to another. This movement is facilitated by the handles 54.

The oil may be placed in the casing formed by the parts 1 and 3 through an opening closed by a plug 58, and this oil can be drained by removing the drain plug 55. Air is admitted to the casing through the passage 56 and a level plug is shown at 57 for indicating the level of the oil.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

Having thus described my invention, what I claim as new is:—

1. In combination with a supporting member, a frame extending around the same, said frame including lamp housings, lamps in the housings for illuminating articles on the supporting member, means whereby the frame can be retracted or expanded, the lamps in the housings being arranged in groups, a circuit for each group, and means for alternately opening and closing each circuit.

2. In combination with a supporting member, outwardly and upwardly extending telescoping arms connected with said supporting member, an expansible and contractible frame connected with the outer ends of said arms and including lamp housings, lamps in

the housings for illuminating articles on the supporting member.

3. In combination with a supporting member, outwardly and upwardly extending telescoping arms connected with said supporting member, an expansible and contractible frame connected with the outer ends of said arms and including lamp housings, lamps in the housings for illuminating articles on the supporting member, reel housings connected with the supporting member and to which the inner ends of the arms are connected, spring actuated reels in said reel housings, and conductors passing through the arms and portions of the frame and connected with the lamps and having their inner portions passing around the reels.

4. In combination with a supporting member, outwardly and upwardly extending telescoping arms connected with said supporting member, an expansible and contractible frame connected with the outer ends of said arms and including lamp housings, lamps in the housings for illuminating articles on the supporting member, reel housings connected with the supporting member and to which the inner ends of the arms are connected, spring actuated reels in said reel housings, conductors passing through the arms and portions of the frame and connected with the lamps and having their inner portions passing around the reels, said lamps being arranged in groups, the lamps in one group being of a different color than those in the other group, with the conductors forming a circuit for each group, and means for alternately opening and closing each circuit.

5. In combination with a turn table for supporting an article, illuminating means for such article including an expansible and contractible frame, surrounding the turn table, telescopic arms having their outer ends connected with the frame and their inner ends supported from a stationary part of the turn table, said frame including lamp housings, lamps in the housings arranged in groups, the lamps in each group being of a different color from those of the other groups, a circuit for each group and means operated by the movement of the turn table for alternately opening and closing each circuit.

In testimony whereof I affix my signature.

ALPHEUS M. MOORE.