Feb. 28, 1933. M. H. EGAN 1,899,085

ILLUMINATING MEANS

Filed Nov. 24, 1931 2 Sheets-Sheet 1

Fig. 1.

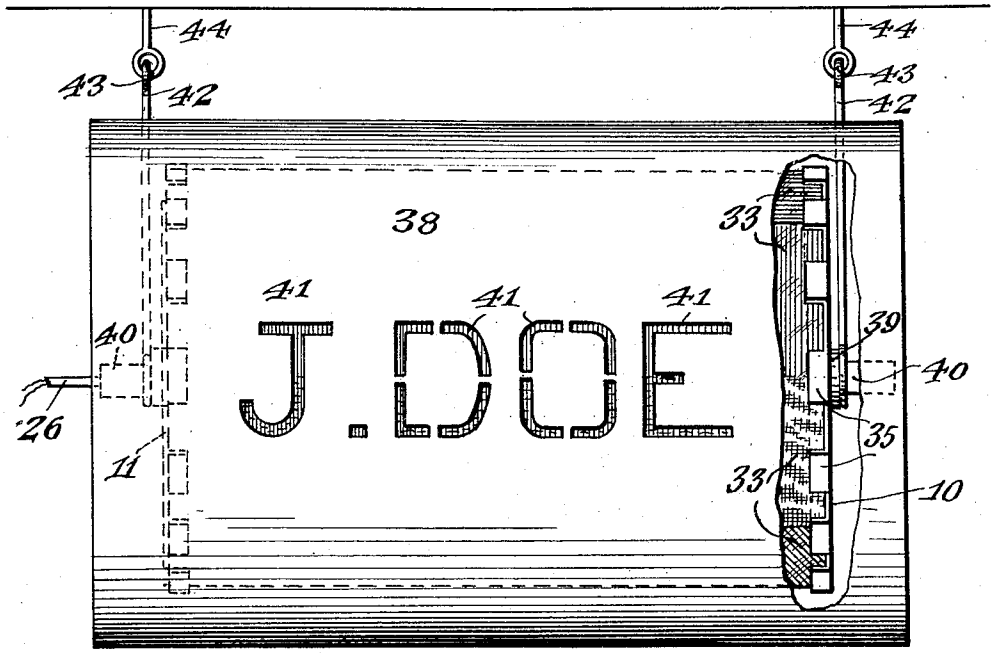

Fig. 2.

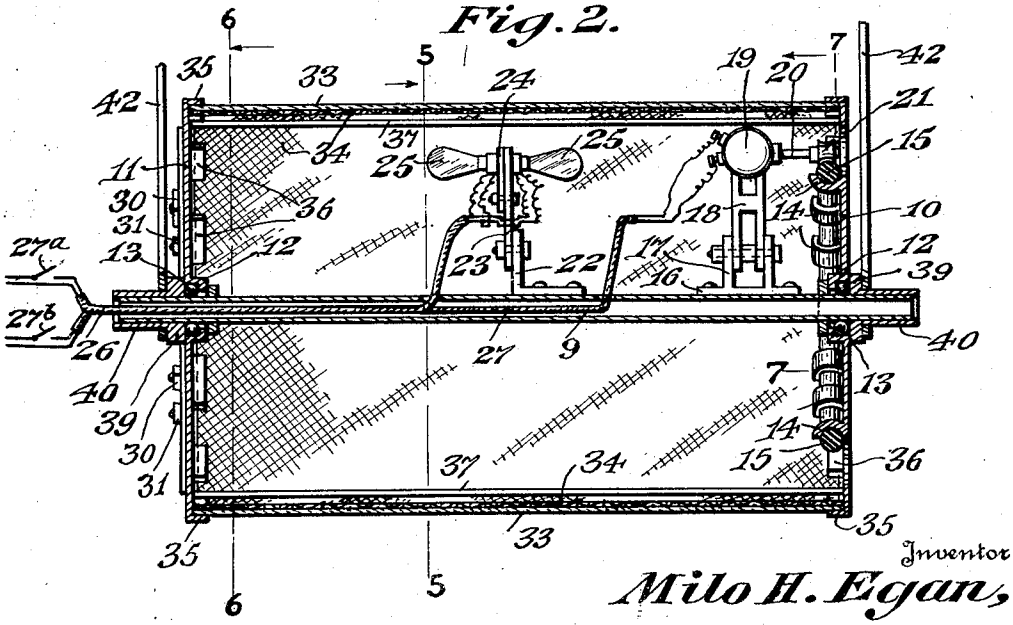

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Fig. 3.

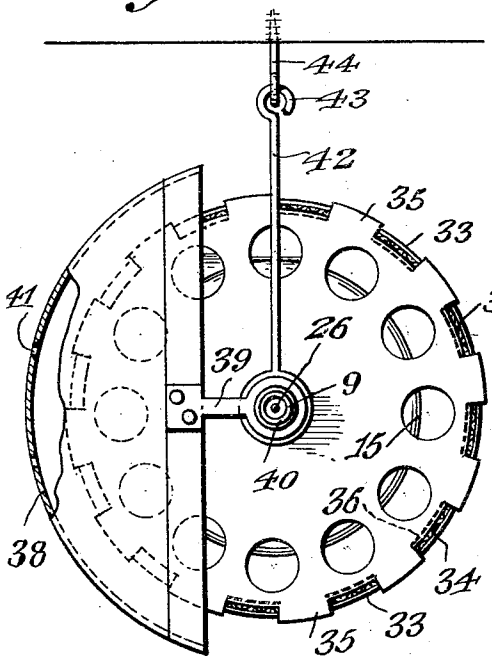

Fig. 4.

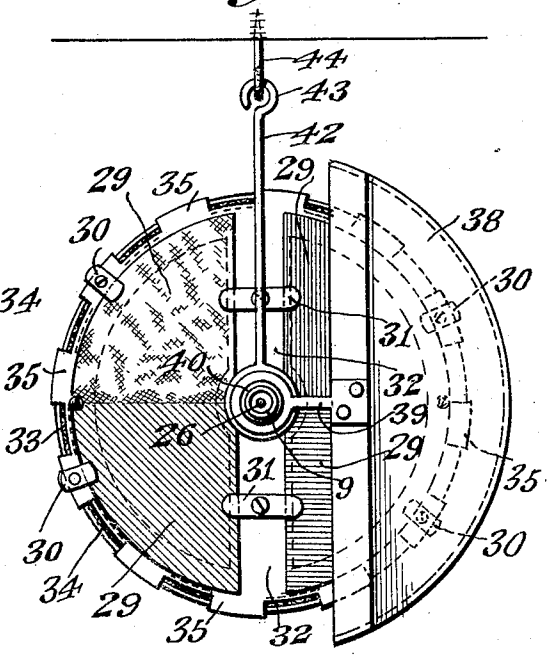

Fig. 5.

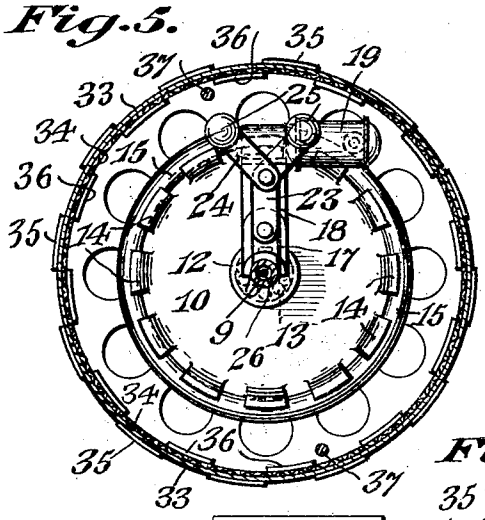

Fig. 6.

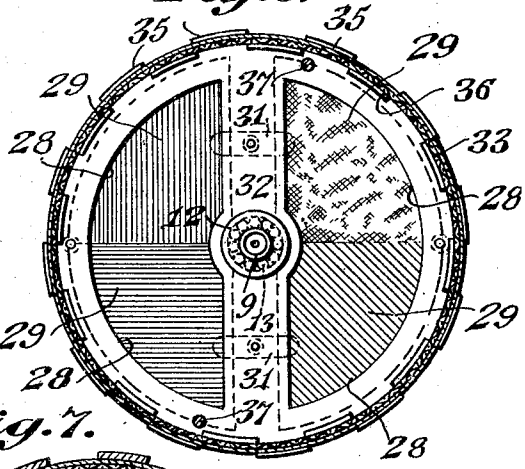

Fig. 7.

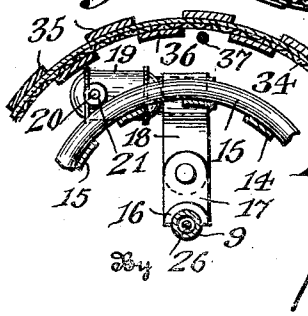

Fig. 8.

BLUE
RED
YELLOW
GREEN
AMBER
LAVENDER
PINK
MAGNET

33

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UNITED STATES PATENT OFFICE

MILO H. EGAN, OF FRANKLIN, IDAHO

ILLUMINATING MEANS

Application filed November 24, 1931. Serial No. 577,128.

The object of the present invention is to provide a novel, simple, effective and compact apparatus by which variegated lights are caused to be thrown upon any surface or object desired. For example, the means may be employed in a home for illuminating draperies, windows and the like, or it can be placed on a porch for illuminating the same. In like manner it may be employed in store windows or in connection with signboards and thus has a wide range of usefulness.

In the accompanying drawings:

Figure 1 is a side elevation of the preferred embodiment of the invention, and showing a shield that may be or may not be employed as desired.

Figure 2 is a longitudinal sectional view through the drum.

Figure 3 is an end elevation of the structure as shown in Figure 1, with a portion broken away.

Figure 4 is an elevation of the end opposite to that shown in Figure 3.

Figures 5, 6 and 7 are respectively sectional views taken on the lines 5—5, 6—6 and 7—7 of Figure 2.

Figure 8 is a plan view indicating how different colors may be employed.

In the embodiment disclosed, a fixed tubular axle 9 is provided, on which is journaled an illuminating drum. This drum consists of heads 10 and 11 provided with hubs 12 having ball bearings 13 on the axle 9. The ends of the axle, however, project beyond the drum.

One of the heads, as 10, preferably has a series of ears 14 cut from the material thereof and inset into clips that support a rubber or other yielding ring 15 constituting in effect a track gear. Adjacent said head and within the drum, and mounted on the axle 9, is a base 16 having upstanding ears 17 to which is pivoted a bracket 18. Mounted on this bracket and offset from the pivot axis is a small electric motor 19, which includes a drive shaft 20 having a friction gear element in the form of a roller 21 that rides on the periphery of the rubber ring 15. The bracket 18, having a loose pivotal connection and the motor 19 being offset, the arrangement is such that the roller 21 riding on the periphery of the ring 15 supports the motor and the weight of the motor in turn serves to maintain a proper frictional driving contact between the roller 21 and the ring 15.

About midway between the heads of the drum there is mounted on the axle 9 an angle bracket 22 on which is pivoted an arm 23 that is held in different positions by its frictional mounting. On this arm is pivoted another arm 24 that can be moved to different positions with respect to the arm 23 and is held by frictional contact. The free ends of the two arms 23 and 24 carry oppositely extending electric lamps 25 which can thus be differently positioned within the drum. A supply cord for electric current is shown at 26. This cord extends through the bore of the axle and is suitably connected to the lamps 25. Another cord shown at 27 is connected to the motor 19. These are suitably connected to a source of electrical energy and each may have a controlling switch 27*a*, 27*b* so that either the lamps or the motor may be individually operated.

The head 11 of the drum is preferably provided with relatively large openings 28 (see Figure 6) in order that access may be had to the lamps and to the motor. These openings are normally closed by transparent or translucent cover sheets 29 that may be of different colors, as indicated, their outer margins being engaged behind keeper lips 30 (see Figure 4), and their inner sides being retained behind turnbuttons 31 mounted on the central bar 32 of the head.

The annular wall of the drum consists of one or more sheets 33 of transparent or translucent material that may be made up of sections of different colors, as indicated in Figure 8. Where the device is to be used within a house or is otherwise protected from the elements, a flexible sheet or flexible sheets of any well-known material may be employed. If the device is to be used outdoors, the material may be of weather-proof substance, such as celluloid or glass. Where a flexible sheet is utilized it may be backed up by a sheet of screen material 34. In any event, this peripheral or cylindrical wall is prefera-

bly fastened to the heads by having the material of said heads cut into lips 35 and 36 that are inturned and alternately engage the outer and inner sides of the walls. To hold the drum heads against separation tie rods 37 are employed that connect the same and are preferably located within the cylindrical wall.

It may be desirable to have only one side of the drum exposed, and where this is the case, a semi-cylindrical opaque shield 38 is employed which extends around one side and has arms 39 secured to hubs 40 that are fixed to the projecting ends of the axle 9. If it is desired to have a display sign, it is only necessary to perforate the shield in some suitable manner, as indicated at 41 in Figure 1.

The device may be supported in any desired manner, but preferably hanger links 42 are employed, the lower ends of which are fixed to the hubs 40 and thus serve to securely hold the axle 9 against rotation. These hanger links may have hooks 43 at their upper ends for engagement with eyes 44 fastened to a ceiling or other support.

It is believed that the operation of the device will be clear. When current is supplied to the cord 26, the lamps will be illuminated and the motor 19 will be operated. As a consequence the drive roller or gear 21 will rotate on the ring gear 15, causing the drum to be slowly rotated. As it is thus rotated, the different sections of the cylindrical wall will pass before the lamps and cause variegated lights to traverse any object placed within the range of the light, thus producing a peculiarly beautiful and artistic effect. By relatively adjusting the lamps 25 the different colors may be made to overlap and increase the variegations and shades. Thus the device may be hung in a window and the light caused to flow over the shades and draperies or it may be hung upon a porch with the shield outermost and the light will seemingly move over the walls. Similar effects may be secured in show-windows or on bill-boards, signs, etc.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim, is:

1. In an illuminating apparatus, the combination with illuminating means including a rotatable display member, of a circular track gear element mounted on the display member, and a movably supported driving member having a drive gear element that rests on the track gear element and thereby supports the weight of the driving member, said weight securing a driving coaction between the drive and track gear element.

2. In an illuminating apparatus, the combination with illuminating means including a rotatable display member, of a circular track gear element mounted on the display member, and a pivotally supported motor having an offset drive gear element that rests on the track gear element and thereby supports the weight of the motor, said weight securing a driving coaction between the drive and track gear elements.

3. In an illuminating apparatus, the combination with illuminating means including a rotatable drum, of a circular track gear element mounted on the inside of the drum, and a motor movably mounted within the drum and having a drive gear element that rests upon the track gear element and thereby sustains the motor and is maintained in coaction with the track gear element.

4. In an illuminating apparatus, the combination with an axle, of illuminating means including a drum rotatably mounted on the axle and having heads, a circular track on the inside of one of the heads, and a motor pivotally supported on the axle and having a drive gear element resting on the track and supporting the motor.

5. In an illuminating apparatus, the combination with an axle, of illuminating means including a drum rotatably mounted on the axle and having heads, a circular track on the inside of one of the heads, a base on the axle within the drum, a bracket pivotally mounted on the base, a motor on the bracket offset therefrom to overbalance it, and a drive gear element for the motor resting on the track and supporting the motor against its overbalancing movement.

In testimony whereof, I affix my signature.

MILO H. EGAN.