E. S. LORIMER.

ADVERTISING OR DISPLAY DEVICE.

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1,101,647. **Patented June 30, 1914.**

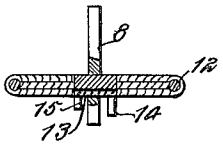


Fig. 4.

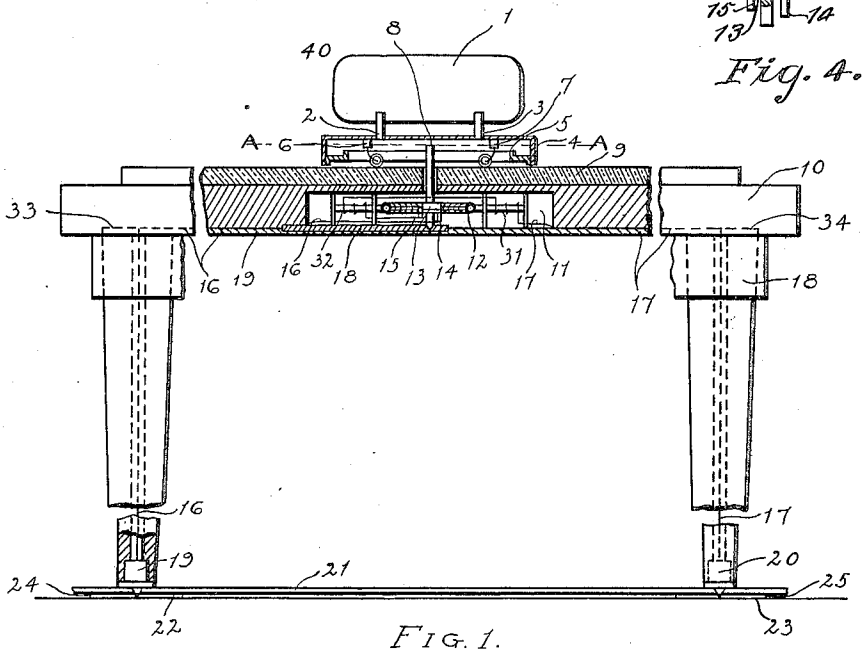


FIG. 1.

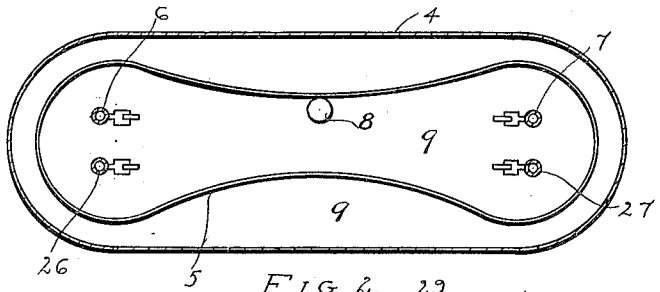


FIG. 2.

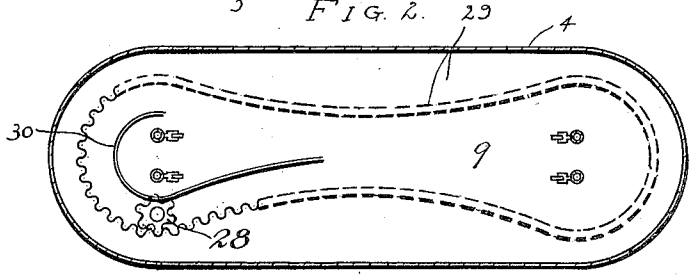


FIG. 3.

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ADVERTISING OR DISPLAY DEVICE.

1,101,647. Specification of Letters Patent. Patented June 30, 1914.

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To all whom it may concern:

Be it known that I, EGBERT S. LORIMER, a citizen of the Dominion of Canada, and a resident of Toronto, county of York, and Province of Ontario, Canada, have invented a new and useful Improvement in Advertising or Display Devices, of which the following is a specification.

My invention relates to display or advertising devices and pertains especially to devices of that type which are moved mechanically to attract attention thereto.

The object of my invention is principally to impart, through mechanism wholly concealed, a peculiar and seemingly irregular motion to a display advertisement, to arouse the curiosity and thus more certainly fix the attention of the beholder. I accomplish this and other desirable features, which will be hereinafter noted, by employing an electric motor of such design that it may be partially concealed in a supporting base of such thickness as to suggest the absence of such mechanism. The base in turn supports a member carrying a display advertisement to which the motor imparts a peculiar motion. The member carrying the display advertisement is of such dimensions as to suggest the absence of all mechanism therein and coacting with the base to wholly conceal the motor.

In the figures which accompany and form a part of this specification and in which like reference numerals designate corresponding parts throughout: Figure 1 is a view, partially in section, of one embodiment of my invention and illustrates the operative relations of the various parts of the device. Fig. 2 is a plan view, partially in section, of the movable or advertisement carrying member, the section being taken on the line A—A in Fig. 1. Fig. 3 is a plan view, partially in section, of an alternative form of movable member, and illustrates an alternative form of operating mechanism therefor, the section corresponding to that of Fig. 2. Fig. 4 illustrates the details of the armature, commutator and brushes of the motor.

Referring especially to Fig. 1, the base or support 10 for the movable member 40 may be of any convenient design and may be supported in any suitable manner; preferably the base is supported in a manner that suggests the absence of electrical conductors in order that the movement of the movable member may more thoroughly mystify the beholder. Thus, I employ a table 10 as shown in Fig. 1, the central portion of which is countersunk from the under side to form the cavity 11 as shown. This cavity is of sufficient depth to receive an electric motor which is preferably of the series alternating type that it may operate on either direct or alternating current. The motor shown comprises the field coils 31 and 32, ring armature 12 which comprises an iron ring and coils laced to a brass disk by wire as shown, commutator 13 and brushes 14 and 15, as shown in Figs. 1 and 4. The shaft of the motor is composed of magnetic metal and is of sufficient length to extend entirely through an aperture in the shell of that portion of the table top covering the central cavity 11. The motor is attached to the inner surfaces of the cavity 11 in any suitable manner so as to maintain the shaft 8 centrally within this aperture. The remaining extremity of the shaft 8 is provided with a hardened pivot point that bears in a pivot bearing provided near one extremity of a permanent bar magnet 18. This magnet serves as a step bearing for the motor shaft 8, and at the same time magnetizes and maintains in a magnetic condition the shaft 8. The portion of the table top inclosed by the framing 18 is cut away to a depth to admit a thin sheet of veneer 19 which entirely incloses the motor and cavity 11, and as its edges abut the inner surfaces of the framing 18 as indicated by the dotted lines 33 and 34, an observer is given the impression that no opening has been made in the table. One terminal of the motor is led from field coil 31 between the table top and veneer 19, through a hole in one of the table legs to a pointed caster 20. The other terminal 16 of the motor is led from brush 14, between the table top and veneer 19, through a hole in another leg of the table to a pointed caster 19. The remaining brush 15 of the motor is connected to field coil 32. Metallic plates 22 and 23 are placed on the floor or other support of the table and are covered by a rug or carpet 21, and are connected through leads 24 and 25 with any convenient supply of current. The table is so placed that the pointed casters 19 and 20 pierce the rug or carpet 21 over the metallic plates 22 and 23 and make contact therewith to complete the motor circuit. Thus the means of supplying current to the motor is entirely concealed. A plate of glass

9 is provided with a central aperture, and is placed on the top of the table so that the center of this aperture substantially coincides with the axis of the shaft 8. The glass provides a smooth surface for the operation of the movable member 40 and at the same time allows the observer to see that the top of the table is seemingly intact.

Referring to Figs. 1 and 2, the movable member 40 comprises a plate of sheet iron 5, the outer outline of which is substantially a flattened ellipse and the inner portion of which is cut away to leave an outline roughly resembling the figure 8. The edge of this inner outline is formed up at right angles to the plane of the metal sheet 5 and affords a smooth surface against which the shaft 8 is held by reason of its magnetism. An aluminum cover 4 is formed to engage the outer outline of the metal sheet 5, and is rigidly attached thereto. Four swivel casters, 6, 7, 26 and 27 are pivoted to the inner surface of the aluminum cover 4, and are provided with wheels upon which are placed rubber tires. The height of these casters is such that the metal sheet 5 is maintained as shown in Fig. 1 in a plane which cuts the shaft 8 near its extremity. The aluminum cover 4 is of such height as to clear the top of the shaft 8, and overhangs the sheet of metal 5 at all points and almost makes contact with the plate of glass 9. Thus at no point in the motion of the movable member is the beholder able to observe the shaft 8. Further, the entire movable member comprising the metal sheet 5, casters and aluminum cover, is designed of such height as to seemingly preclude the idea of contained magnetism. As has hitherto been mentioned the shaft 8 is magnetized and thus adheres to the inner outline cut in the metal sheet 5 and as the shaft is rotated it moves the movable member 40 upon the surface of the glass 9 in a seemingly irregular manner. A pair of clips 2 and 3 are attached to the upper surface of the aluminum cover 4, and serve to support a display advertisement 1, which is carried by the movable member 40. Thus the operating mechanism of the device as well as the means of supplying current to this mechanism is entirely concealed from the beholder.

Fig. 3 illustrates, partially in section, an alternative form of movable member and the mechanism for imparting motion thereto. This alternative member comprises an aluminum cover 4 provided with casters as hitherto described, within which is rigidly maintained a sheet of metal provided with an inner aperture in the outline of which is cut a rack. The shaft 8 of the motor is provided with a pinion 28 which engages this rack and is further maintained in such engagement by means of the metal guide 30 which is suspended from the under side of the cover 4, and a portion of which is shown in Fig. 3. Obviously the shaft 8 in this case need not be magnetized, and the operation of the movable member is substantially as described in connection with the form shown in Fig. 2.

While I have illustrated and described one complete embodiment of my invention and one alternative movable member to be used therewith, it is obvious that numerous changes may be made in the details of the device as set forth in the appended claims without narrowing the scope of my invention.

Having thus described my invention, what I claim is new, and desire to secure by United States Letters Patent is as follows:

1. In an advertising device, a base, a glass cover thereon, a support for said base, a centrally located recess in the under portion of said base, a motor therein the shaft of which extends through the upper surface of said base and through said glass cover and extends beyond the upper surface of said glass cover, a cover for said recess, electrical connections for said motor concealed in said base and likewise in said support for said base, a movable member provided with casters and free to move on said glass cover, and means concealed in said movable member for utilizing the rotary motion of said shaft to provide an irregular motion of said movable member.

2. In an advertising device, a base, a support for said base, a centrally located recess in the under portion of said base, a motor therein the shaft of which extends through the upper surface of said base and extends beyond the upper surface of said base, a cover for said recess, electrical connections for said motor concealed in said base and likewise in said support for said base, a member free to move on the surface of said base, and means concealed in said member for utilizing the rotary motion of said shaft to provide an irregular motion of said member.

Signed by me at Toronto, county of York and Province of Ontario, Canada, in the presence of two witnesses.

EGBERT S. LORIMER.

Witnesses:
S. B. CAMPBELL,
H. M. ROWE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."