

Sept. 26, 1933.

A. SAEDER

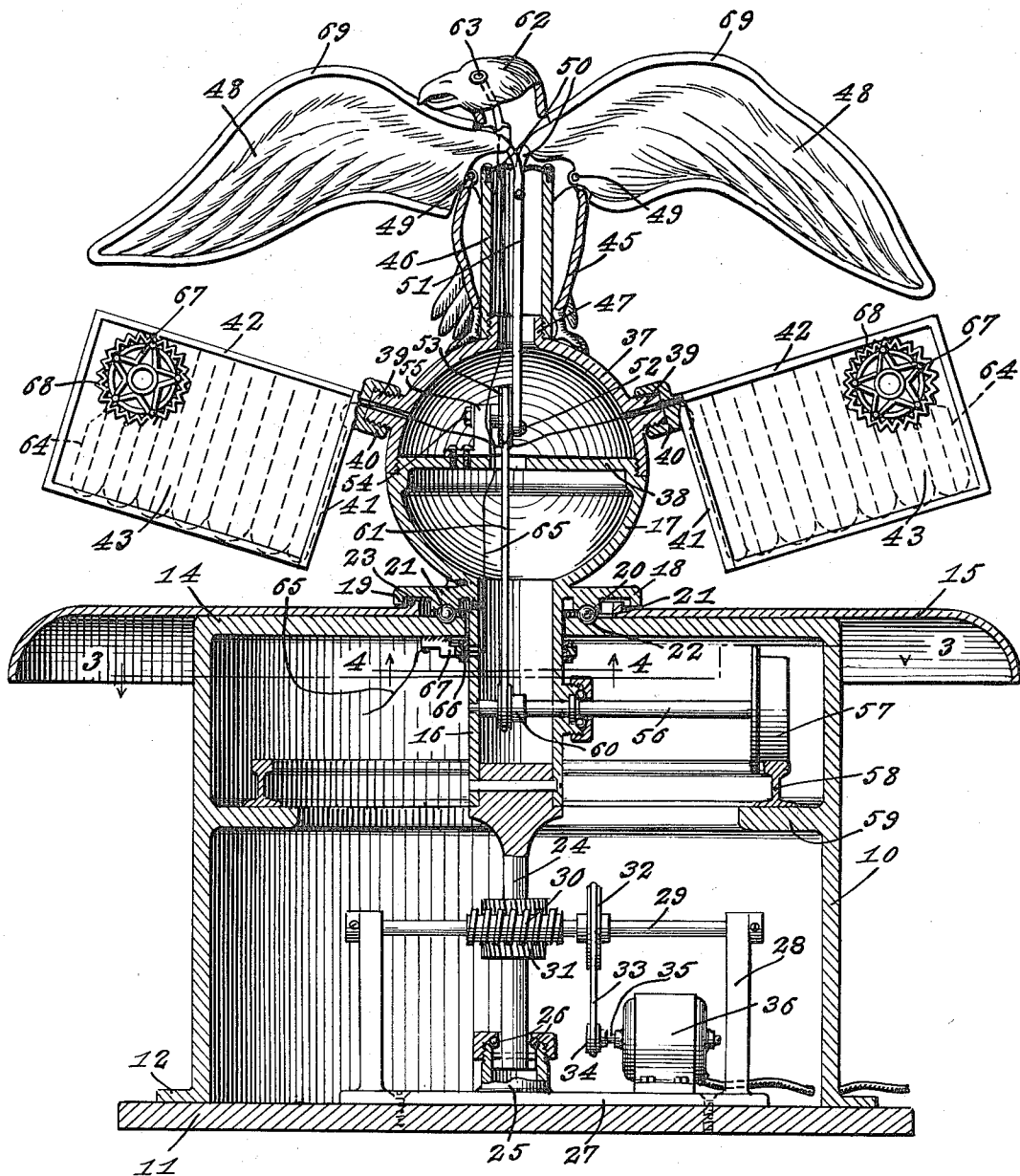
1,928,573

MECHANICALLY OPERATED DISPLAY DEVICE

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Fig. 1.



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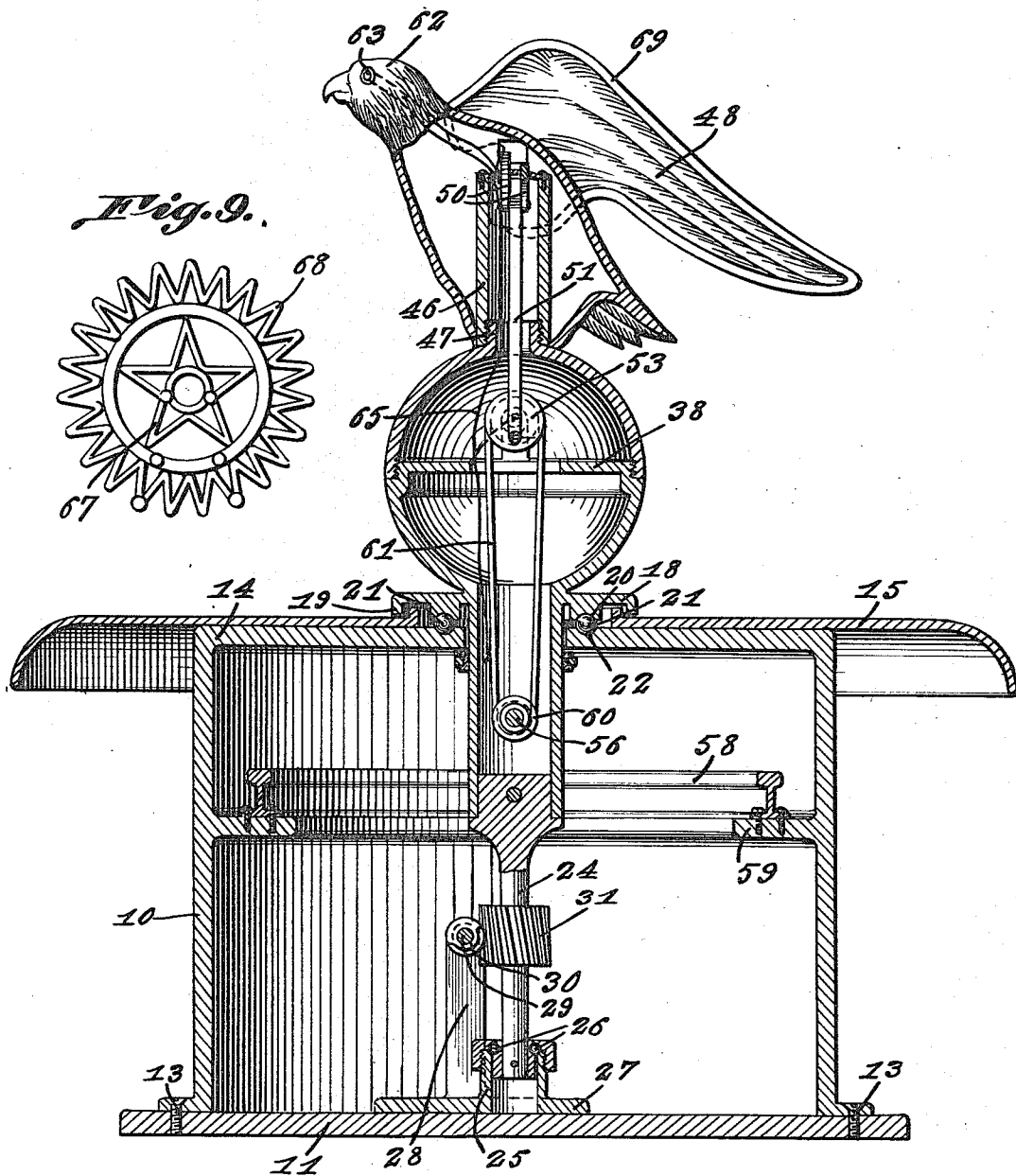
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Fig. 2.



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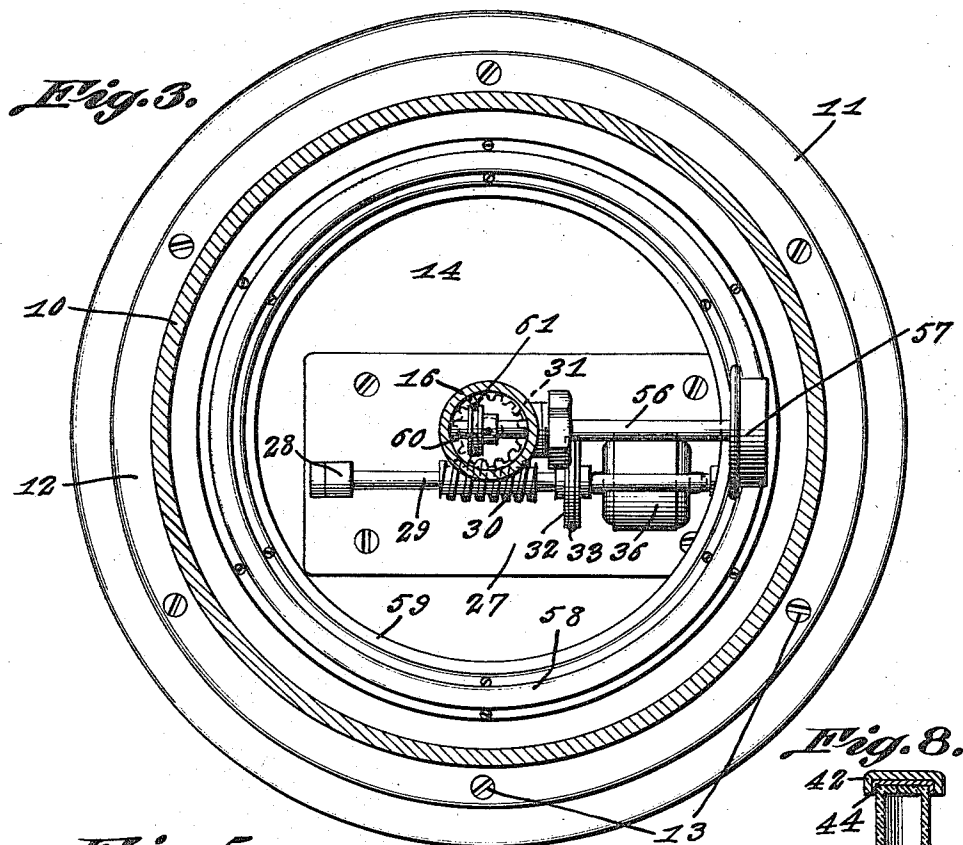
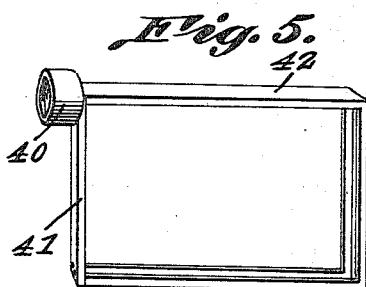
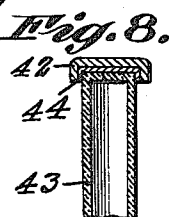
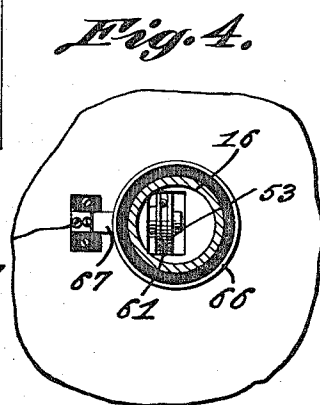
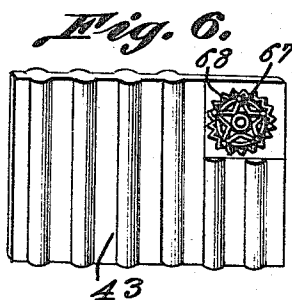
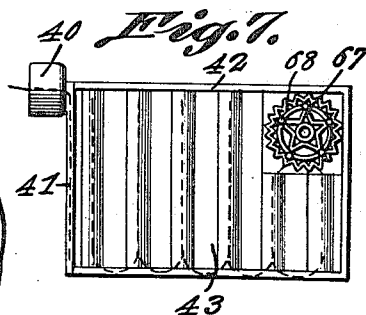
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MECHANICALLY OPERATED DISPLAY DEVICE

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

1,928,573

MECHANICALLY OPERATED DISPLAY
DEVICEAlvin Saeder, St. Louis, Mo., assignor of one-half
to Angelo Aljinovich, St. Louis, Mo.

Application February 8, 1933. Serial No. 655,810

3 Claims. (Cl. 46—40)

The invention relates to a mechanically operated display device and more especially to an illuminated motion ornament.

The primary object of the invention is the provision of a device of this character, wherein a hollow sphere and an image, preferably the representation of an eagle, will be caused to turn and the wing sections of such eagle representation will be put in motion, thereby lending animation to the device, while carried by the sphere are emblems representative of flags, the latter, as well as the eyes of the eagle representation, being illuminated, thus giving attraction to the device in the working thereof.

Another object of the invention is the provision of a device of this character, wherein the rotatable sphere, as well as the image mounted thereon, in the movement of the same will derive momentum from an electric motor, the same being confined within a base or support, the device in its entirety being of novel construction and novel assembly.

A further object of the invention is the provision of a device of this character, wherein the make-up of the same effects a display article, it being simple in construction, automatic in its operation, strong, durable, and inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawings, which disclose the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is a front elevation partly in section of the device constructed in accordance with the invention.

Figure 2 is a vertical sectional view thereof.

Figure 3 is a sectional view on the line 3—3 of Figure 1 looking in the direction of the arrows.

Figure 4 is a sectional view on the line 4—4 of Figure 1 looking in the direction of the arrows.

Figure 5 is a perspective view of one of the flag display frames.

Figure 6 is a fragmentary perspective view of the flag panel.

Figure 7 is a detail elevation of the flag and panel assembled.

Figure 8 is an enlarged fragmentary transverse sectional view thereof.

Figure 9 is a plan view of an emblem illumination for the flag.

Similar reference characters indicate corre-

sponding parts throughout the several views in the drawings.

Referring to the drawings in detail, the device comprises a base structure including a box-like body 10 superimposed upon a bed plate or other supporting medium 11, the body being open at its bottom and being formed with an external laterally extended edge flange 12 receiving fasteners 13 detachably securing the body to the bed as will be apparent. The closed top 14 of the body 10 has superimposed thereon an inverted dished canopy 15, the body being circular or cylindrical and likewise its bed and canopy.

Centrally with respect to the body 10 and projected vertically thereinto is the tubular axle 16 of a hollow sphere 17 which protrudes above the plane of the canopy 15, the latter and the top 14 of the body 10 being cut away to accommodate the axle 16 in its mounting. At the merger of the sphere 17 with the axle 16 is a turntable 18 having a downturned marginal rim 19, while at the inner face of this table 18 concentrically with respect to the axle 16 is formed a ball raceway 20 for accommodating anti-friction balls 21, these being also fitted in a raceway 22 formed in the top 14 of the body 10. The center opening of the canopy 15 is provided with an upturned wall 23 so that the latter will be overlapped by the rim 19 but spaced inwardly therefrom. This turntable 18 functions as a water shed at the center opening in the body 10 and canopy 15. The tubiform axle 16 has fitted therein a perpendicular journal 24 engaged in a bearing 25 equipped with anti-friction bearings 26 and rising from the base 27 of a rigging 28. This rigging has journaled therein a horizontally disposed driven shaft 29 provided with a worm screw 30 meshing with a worm gear 31 fixed to the journal 24. The shaft 29 carries a belt wheel 32 having trained thereover a belt 33, the same being also trained over a belt wheel 34 fixed to the power shaft 35 of an electric motor 36 supported in the rigging 28. This rigging is made fast to the bed 11 interiorly of the body 10. Thus it will be seen that when the motor 36 is started its power shaft 35 will transfer motion to the axle 16 for the turning of the sphere 17.

The sphere 17 has a removable section 37 to permit access to the interior thereof, its other section being formed with a horizontal partition 38 interiorly of the sphere, while on the section 37 are formed externally threaded nipples 39 for engagement in female couplings 40 provided on removable sections 41 of frames 42. These frames 42 each receives a glass panel 43 so constructed as to be imitative of a flag. The panel 43 is fitted

within its frame 42 by rubber inserts 44 therebetween to exclude moisture and rain and to assure a tight fit between the panel and said frame.

5 Superimposed upon the sphere 17 is an image, in this instance, representative of an eagle, and its body 45 has therein a tubular post 46, the latter being removably threaded at its lower end upon a connection 47 of the sphere 17 for the mounting
10 of the image perpendicularly thereon. The wings 48 of this eagle image are pivoted at 49 with the body 45 at opposite sides thereof so that the said wings 48 may be caused to flap or flutter to give animation to the eagle image. The wings
15 48 at their inner ends above the pivots 49 have links 50 connected therewith and also connected with a throw rod 51 eccentrically pivoted at 52 to a belt wheel 53, its axle 54 being mounted in a bearing 55. The bearing is made fast to the
20 partition 38 in the sphere 17. The rod 51 reciprocates through the post 46.

Journalled transversely in the axle 16 is a rotary shaft 56 carrying a track wheel 57 movable upon a circular track 58 supported by a ledge 59 internally of the body 10. The shaft 56 at that part
25 within the axle 16 has fixed thereto a belt wheel 60 over which is trained a belt 61, the same being also trained over the belt wheel 53. Thus it will be seen that when the axle is rotated the
30 wheel 57 traveling upon the track 58 will cause the rotation of the shaft 56 and through the belt 61 the wheel 53 will be rotated and the rod 51 reciprocated, thereby transmitting motion to the
35 wings 48 of the eagle image for animation thereof.

The head 62 of the eagle image has fitted therein electrically lighted eyes 63, while the flag panels 43 are suitably equipped with electric illumination, the current feed to the electric illumination
40 medium such as a neon tube 64 of said panels and the illuminating eyes 63 of the head 62 being fed through a circuit 65 including a contact ring 66 and a brush 67 playing thereon, the ring being
45 supported upon and insulated from the axle 16, while the brush is carried at the under face of the top 14 of the body 10, it being understood that the circuit is grounded through the axle 16.

The illuminating medium 64 is designed to give the appearance to the flag panels 43 of red and blue bars or stripings, while at one corner of
50 each panel is an electrically illuminated star emblem 67 included in the said circuit 65. This star emblem 67 includes a fluted illuminated border 68. Thus it should be apparent that each
55 panel 43 will be illuminated and likewise the eyes 63 of the head 62 of the eagle image, thereby lending attraction to the device. The circuit arrangement and its equipment are of any approved kind for illumination.

In the operation of the device the sphere 17
60 and the eagle image will be rotated by power from the motor 36 and during rotation the flag

panels 43 will be illuminated, while the wings 48 of the eagle image will be set in motion for the flapping thereof, the device being serviceable as an illuminated display device for any purpose as
80 may be desired.

Marginally of the wings is arranged an electric illumination medium 69 in electrical connection with the circuit 65 so that the wings will be illuminated as will be apparent.

What is claimed is:

1. A device of the kind described comprising a box-like body, a tubular axle vertically disposed centrally of said body, a sectional sphere above the body having its lower part integral with the axle, a turntable formed with the axle at the
85 merger of the sphere therewith, a canopy at the top of the body and interfitted with said turntable, an image carried by the sphere and having pivoted wings, a circular track within the body concentrically of the axle, a wheeled shaft horizontally
90 journaled in the axle and having its wheel movable upon said track, connections between said wheeled shaft and the wings for the flapping of the latter when the wheeled shaft is rotated, and means for driving the said axle.

2. A device of the kind described comprising a box-like body, a tubular axle vertically disposed centrally of said body, a sectional sphere above the body having its lower part integral with the axle, a turntable formed with the axle at the
95 merger of the sphere therewith, a canopy at the top of the body and interfitted with said turntable, an image carried by the sphere and having pivoted wings, a circular track within the body concentrically of the axle, a wheeled shaft horizontally
100 journaled in the axle and having its wheel movable upon said track, connections between said wheeled shaft and the wings for the flapping of the latter when the wheeled shaft is rotated, means for driving the said axle, and illuminated
105 panels supported by the sphere at diametrically opposite sides of said sphere.

3. A device of the kind described comprising a box-like body, a tubular axle vertically disposed centrally of said body, a sectional sphere above the body having its lower part integral with the axle, a turntable formed with the axle at the
110 merger of the sphere therewith, a canopy at the top of the body and interfitted with said turntable, an image carried by the sphere and having pivoted wings, a circular track within the body concentrically of the axle, a wheeled shaft horizontally
115 journaled in the axle and having its wheel movable upon said track, connections between said wheeled shaft and the wings for the flapping of the latter when the wheeled shaft is rotated, means for driving the said axle, illuminated
120 panels supported by the sphere at diametrically opposite sides of said sphere, and means for removably connecting the panels with said sphere.

ALVIN SAEDER.