Jan. 17, 1928. 1,656,557

I. S. CALL

DISPLAY APPARATUS

Filed June 15, 1926

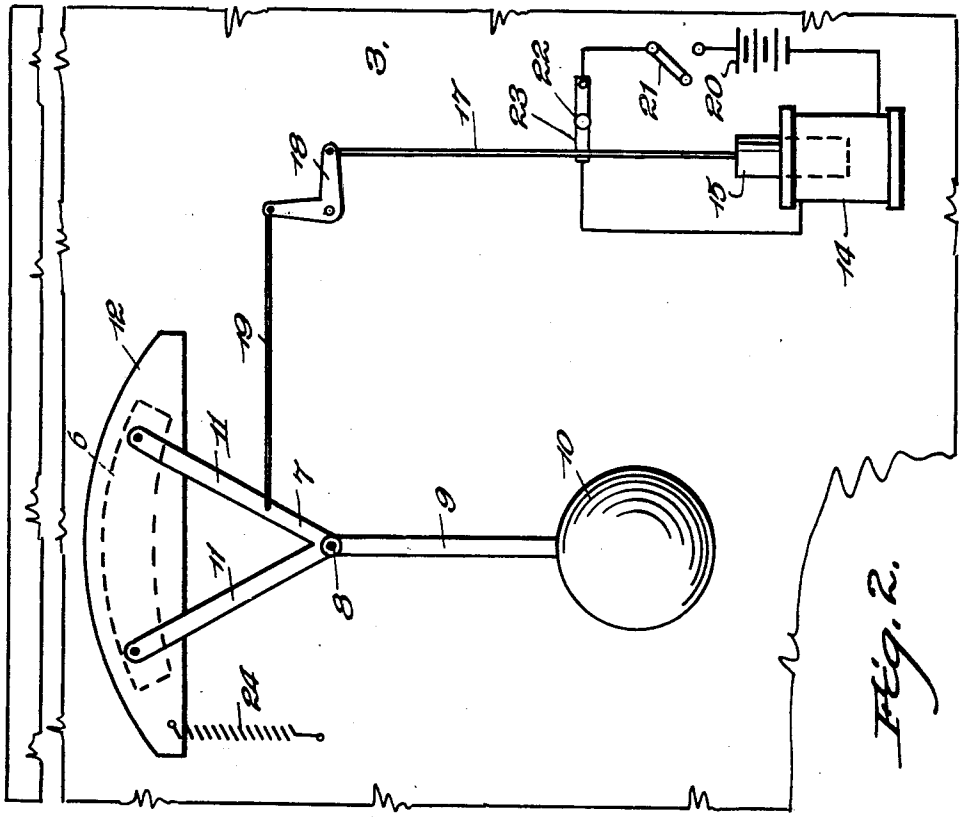


Fig. 2.

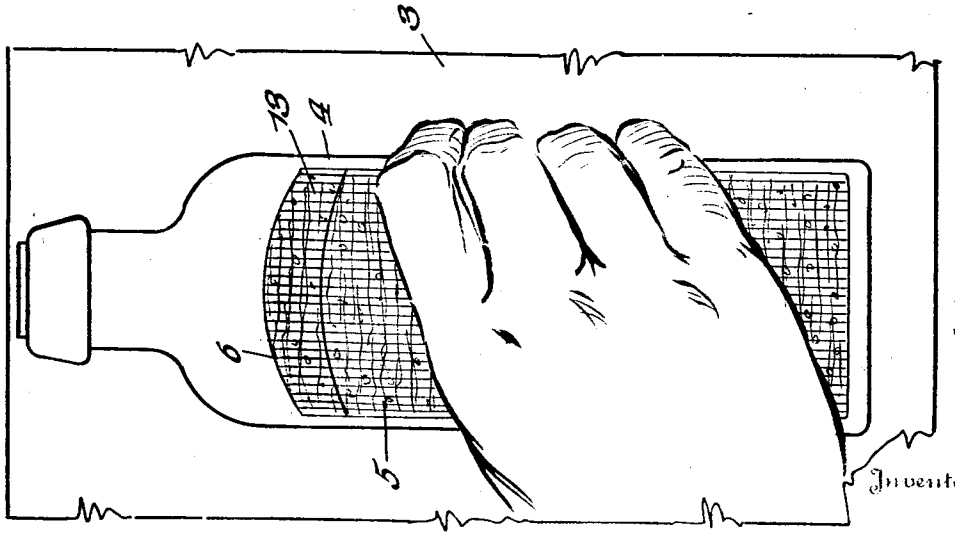


Fig. 1.

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DISPLAY APPARATUS.

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The present invention relates to display apparatus, the object being to provide a sign or picture on which liquid appears, a portion of the liquid being given the simulation of movement.

In the accompanying drawings:—

Figure 1 is a front elevation of an embodiment of the invention.

Figure 2 is a similar view of the rear thereof, portions being illustrated diagrammatically.

As disclosed, a display sheet or card 3 is employed, on which is printed or painted the picture of a container 4, which obviously may take any desired form. In the specific embodiment the form is a bottle, and the lower portion thereof is represented as containing liquid, shown at 5. The sheet or card is cut away and a glass inserted at 6 at the top of the representation of the body of liquid.

Pivotally supported on the rear side of the card or design is a frame, preferably of Y-form, and designated 7. The pivotal support for said frame is illustrated at 8. The depending arm 9 of the frame carries a suitable pendulum or weight 10. The upstanding arms 11 of the frame support a plate 12 that is located behind the opening 6, and has the simulation of liquid thereon, as illustrated at 13.

An electro-magnet 14 suitably supported either on or adjacent to the sheet or card 3 and an armature 15 operating in the electro-magnet, is connected by a link 17 with a bell crank 18. This bell crank has a link connection 19 with the frame 7. The electro-magnet 14 is included in an electric circuit, which also includes a suitable source of power 20 and may further have a circuit controller as 21 therein. A second automatic circuit controller comprises a pair of contact elements 22 and 23, one being carried by the link 17 and moving with said link into and out of engagement with the other contact element 22. A spring 24 may also be employed and is connected to the plate 12 and coacts with the weight 10 during the swinging movement of the frame and plate.

With this construction, it will be evident that when the switch 21 is closed, the circuit will be initially complete through the electro-magnet 14, thereby energizing the latter and causing the armature to be drawn into said magnet. This pulls down the link 17 and moves the frame and plate 12 in one direction. The downward movement of the link 17 causes the contact element 23 to disengage from the contact element 22, so that the electro-magnet is deenergized. Consequently the weight 10 and spring 24 will react to cause the frame and plate to move back again, thereby raising the armature and carrying the contact element 23 back into engagement with the contact element 22, whereupon the magnet is re-energized. As a consequence the plate is continuously swung back and forth partly by the gravitation of the pendulum 20 and partly by the electric motor, and this action gives a simulation of movement of the surface portion of the liquid through the opening 6.

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. A display sheet having a display picture thereon and an opening therethrough adjacent the picture, a depending swinging pendulum member behind the plate having a pivot mounting, and a portion extending upwardly above the pivot mounting, a plate mounted on said upwardly extending portion and swinging with the pendulum, said plate being behind the opening and having a picture portion that is movably associated with the display picture, an electric motor including a movable armature, a support carrying said movable armature, circuit closing means for the motor including a member operated by the armature support, and a link connection between the armature support and pendulum member for effecting the swinging of the latter on the movement of the armature.

2. A display sheet having a display picture thereon and an opening therethrough adjacent the picture, a swinging pendulum member behind the plate having a pivot mounting and a portion extending upwardly above the pivot mounting, a plate mounted on said upwardly extending portion and swinging with the pendulum, said pendulum having a weight sufficient to keep the same in

a substantially upright central position, said plate being behind the opening and having a picture portion that is movably associated with the display picture, an electric motor including a movable armature, circuit closing means for the motor operated by the armature, a bell crank, a link connected to one arm of the bell crank and supporting the armature, and a link connecting the other arm of the bell crank and the pendulum.

3. A display sheet having a display picture thereon and an opening therethrough adjacent the picture, a swinging pendulum member behind the plate having a pivot mounting and a portion extending upwardly above the pivot mounting, a plate mounted on said upwardly extending portion and swinging with the pendulum, said plate being behind the opening and having a picture portion that is movably associated with the display picture, an electric motor including a movable armature, a support carrying said movable armature, a link connection between the armature support and pendulum member for effecting the swinging of the latter on the movement of the armature, circuit closing means for the motor comprising coacting elements, one of which is moved by the armature support, and a spring for normally holding the pendulum in central position and reacting on said pendulum as the pendulum is swung by the electric motor.

In testimony whereof, I affix my signature.

ISAAC SLATER CALL.