Jan. 19, 1937. D. H. JOHNSON 2,068,414

ADVERTISING DISPLAY

Filed Feb. 3, 1934 2 Sheets-Sheet 1

Fig. 1.

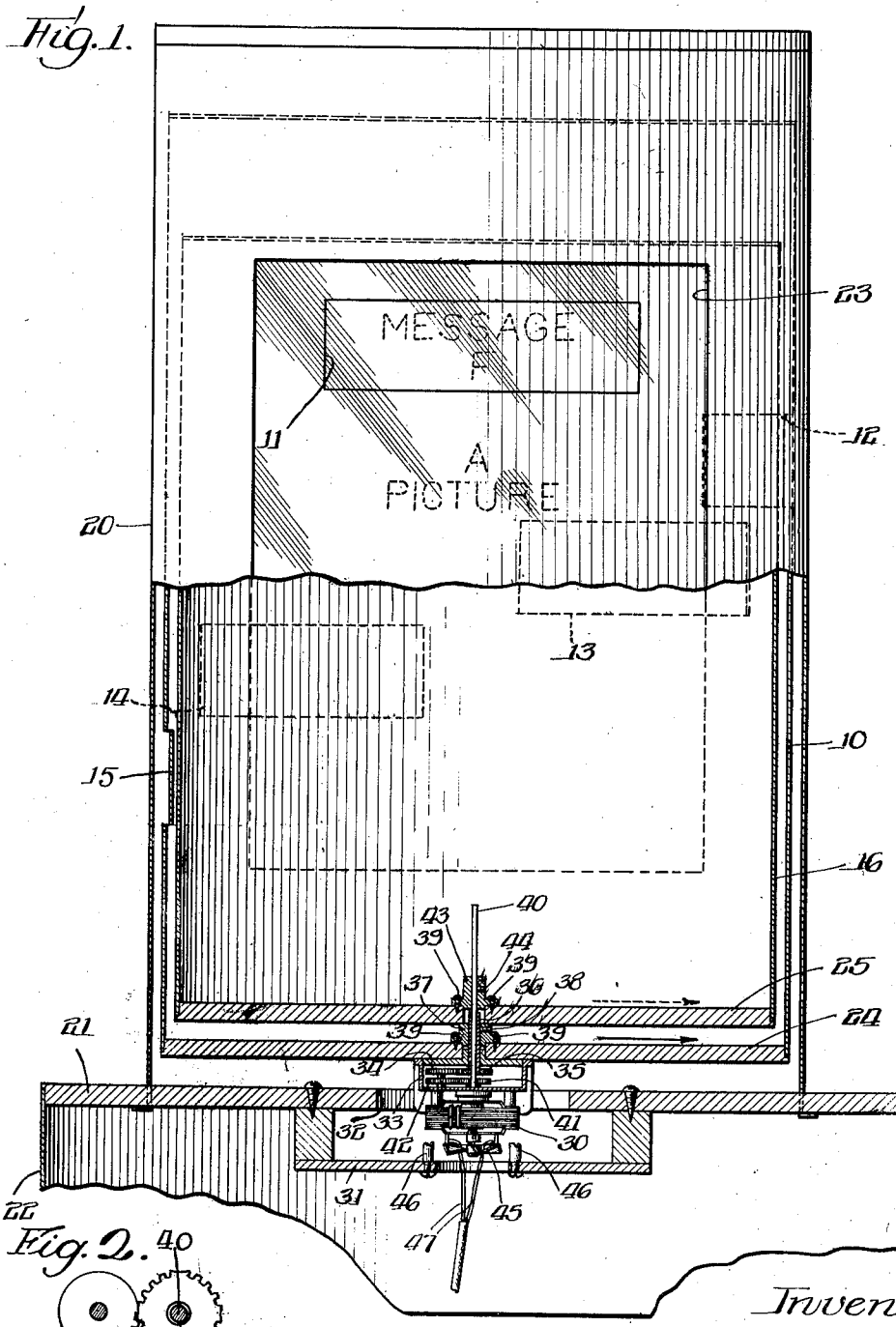


Fig. 2.

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Fig. 3.

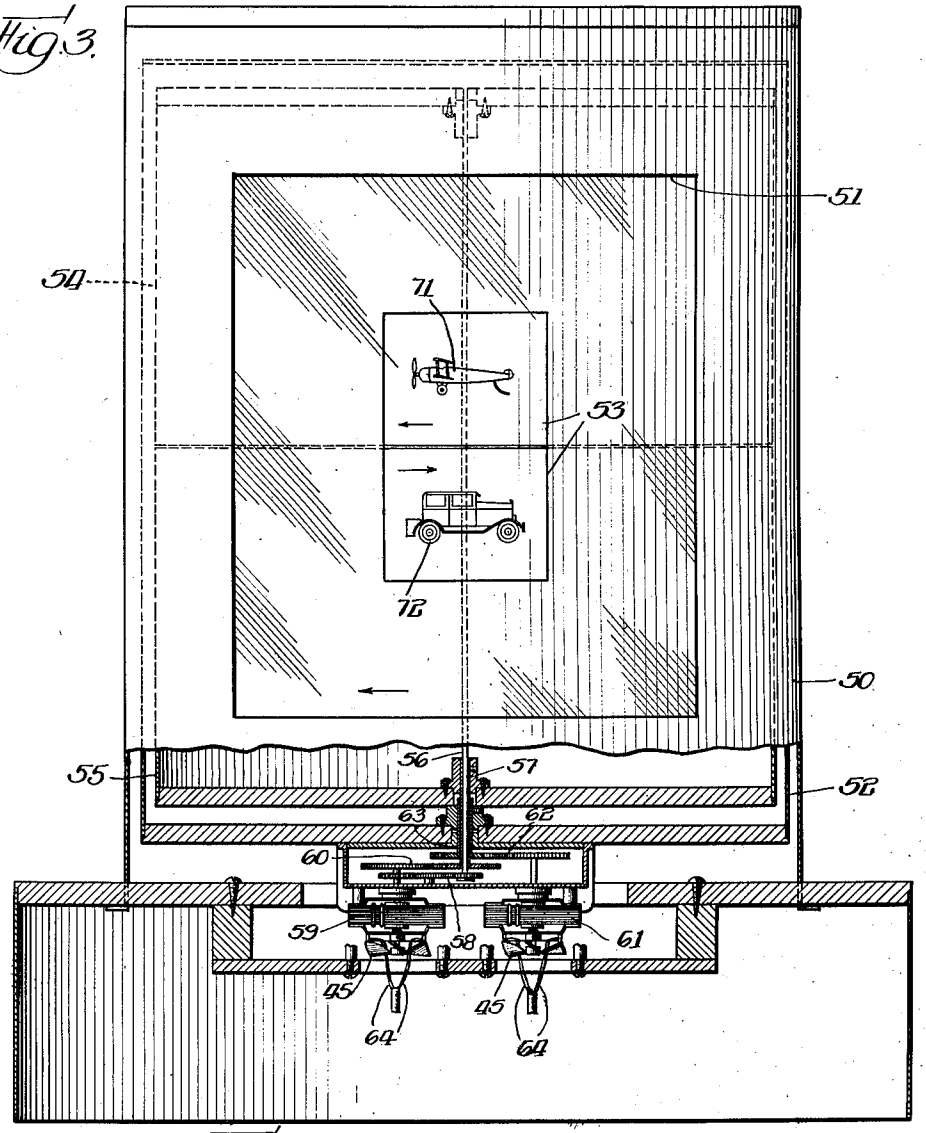


Fig. 4.

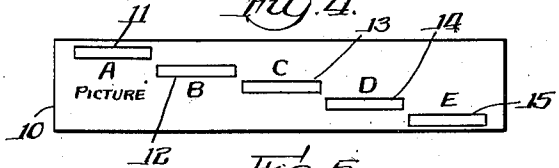


Fig. 5.



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UNITED STATES PATENT OFFICE

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ADVERTISING DISPLAY

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Application February 3, 1934, Serial No. 709,546

7 Claims. (Cl. 40—33)

This invention relates in general to an advertising display in which there are one or more movable parts either or both having illustrations or advertising thereon and one having an opening through which the other or others are visible and the parts being regularly movable so that the illustrations and messages will appear in proper sequence or order.

An important object of the invention is in the provision of an apertured member movable either intermittently or continuously and preferably having a succession of openings and a continuously movable member having portions which are visible in regular succession through the openings of the other member.

A further object of the invention is in the provision of rotatable sign members disposed one within the other and the outer one having an opening or openings through which messages or illustrations on the inner members are visible.

A still further object of the invention is in the provision of a rotary circular display sign having a succession of openings at different heights and one or more circular rotary members within the other display member having messages or illustrations which are brought successively into view through the openings of the outer member.

A further object of the invention is in the provision of rotatable circular members one within the other, one bearing a series of illustrations or openings, and the other having a series of messages or illustrations visible through the openings and the members being movable to coordinate the messages and illustrations of one member with the display matter or illustration of the other member.

A still further object of the invention is in the provision of rotary circular display members, one having an opening or openings through which display matter on the other member or members is visible, and the members having means for rotating them intermittently and continuously in the same or opposite directions.

A still further object of the invention is in the provision of a complete advertising or display device including an outer fixed circular casing having a window or opening therein, an inner, intermittently or continuously rotatable member within the casing having an opening or a series of openings therein visible through the window of the casing, and an inside rotatable circular member or members which contain a series of messages or illustrations which are moved to appear through the openings of the next outer member and to coordinate with advertising or illustrations appearing in conjunction with the successive openings of the said next outer member.

Other objects of the invention will appear hereinafter, the accompanying drawings showing only preferred embodiments illustrative of the invention.

In the drawings, Fig. 1 is an elevation with parts shown in section of a display device embodying the principles of this invention;

Fig. 2 is a detail view of intermittent gears which may be used in the driving mechanism of Fig. 1;

Fig. 3 is a view similar to Fig. 1, of a modification in which display members are driven in opposite directions but are visible through the same opening; and

Figs. 4 and 5 are reduced developments of outer and inner display members respectively, representing the outer display member as having a series of openings at different heights, and the inner display member as having a series of messages which may appear through the openings of the outer member as one or both of the members are moved or rotated.

In display advertising it is desirable to provide movable display or advertising material and to present such matter in an attractive way and preferably in regular order or succession in order to tell a complete story and to continuously attract the attention of an observer in order to clearly present the idea or display. It is also a well known fact that for display purposes a movable sign or display which presents a part only of the advertising material followed in series by other related material is much better for attracting the attention of an observer than if the matter is presented all in one view or with a single illustration or message.

The present invention is designed and intended to provide a display device either of an educational or advertising nature in which a continuous illustration or message is intermittently or continuously submitted for the attention of an observer in a succession of views either movable intermittently or continuously in presenting the material of both movable members.

Referring first to the more or less diagrammatic representation of the invention as shown by Figs. 4 and 5, it will be apparent that an outer member 10 may be provided with a series of openings 11, 12, 13, 14 and 15, each of which has a corresponding picture or advertising message A, B, C, D and E respectively. The openings are at different heights and if the member 10 is arranged in cylindrical form the openings will appear in suc-

cession either continuously or intermittently as the member is rotated.

An inner member 16 has a series of messages F, G, H, I, and J which may either be separate or continuous in effect and visible through the openings A, B, C, D and E of the member 10 respectively. If desired these messages may be short and divided at their centers 17 or at different points in their length, the members 10 and 16 being movable relatively to bring the messages either successively into view through the openings in the member 10 or bringing a portion of the entire message F into view through the opening 11 and then changing the member 10 so that the next time the opening 11 appears a different portion of the message F will be shown therethrough. It will thus be obvious that a great variation of illustrations and presentation of the messages is possible through the openings. It is also understood that the arrangement thus presented is only by way of example as any number of openings, pictures and advertising matter may appear upon one of the members, corresponding messages or illustrations may appear on the other of the members, and the effects may be greatly varied by changing the relative speed of the two display members.

Referring now more particularly to the construction shown in Fig. 1, an outer fixed circular casing 20 is mounted at its lower end upon a base 21 having an outer supporting shell 22 and is provided with an opening 23 preferably visible from one side only of the casing.

Within the casing is the member 10 arranged in circular form upon a base 24 and having a series of openings 11, 12, 13, 14 and 15 as represented in Fig. 4, with corresponding pictures or advertising material for each opening.

Disposed within the member 10 is the member 16 also arranged in circular form and secured to a supporting base 25 and the messages appearing thereon being visible in succession through the openings 11, 12, 13, 14 and 15 of the outer member 10 as these messages are brought to register with the openings in the member 10 and as they appear through the window 23 of the outer casing member 20.

In order to operate these display members 10 and 16 an electric motor 30 is carried by a support 31 secured to the base 21 which has a central opening 32 through which a gear casing 33 connected with the motor extends and forms a bearing for the central portion of the base 24 which is supported thereby above the base 21. Within the gear casing 33 are meshing gears 34 and 35 suitably driven by the motor and the gear 35 having a sleeve 36 to which it is attached extending upwardly through the base 24 and connected to this base by means of a bearing collar 37 and a set screw 38 and fastening devices 39.

Extending through sleeve 36 is a shaft 40 actuated by the driving motor through gears 41 and 42 of which one is secured to the shaft, and the shaft being secured to the base 25 by a collar 43 and a set screw 44 and fastening screws 39, the base 25 resting upon the bearing collar 37 and being rotatable with the shaft 40. The driving motor is commonly provided with a cooling fan 45 at its lower side, with supports 46 (broken off) for attaching it to the support 31 and with conductors 47 for actuating the motor as desired. The specific construction of this motor and the driving gearing constitutes no part of the present invention and is substantially shown in the application of B. J. Merkle, Serial No. 678,825, filed July 3, 1933.

With the above construction it is intended that either one or both of the members 10 or 16 may be driven continuously but at different speeds and one of them, preferably the outer one, may be driven intermittently, in which case the gears 34 and 35 will cause an intermittent operation, as shown.

In the form of the invention shown in Fig. 3, the outer casing 50 has an opening 51, an inner member 52 has an opening 53 and within it are two rotatable members 54 and 55, the former secured to the upper end of a shaft 56 and extending downwardly from the top of the opening 53, and the bottom member 55 being secured to a sleeve 57 surrounding the shaft 56 at the bottom and the member 55 extending upwardly from the bottom of the opening 53. The shaft 56 is connected by a train of gearing 58 with a motor 59 for rotating it in one direction and the sleeve 57 is connected by a train of gearing 60 with the motor 59 for rotating it in an opposite direction. If desired a separate motor 61 may be connected by a gearing 62 to a sleeve 63 and the sleeve connected to the outer member 52 for driving it intermittently or continuously at a still different speed. These motors 59 and 61 may be connected by conductors 64 to the same source of current supply and may be jointly or separately operated by the same or different switches (not shown).

With these constructions a great variation of display is possible without materially altering the display. The outer movable cylinder may be intermittently or continuously movable; it may contain a series of pictures or messages or it may contain a continuous panorama in addition to the successive openings; the inner cylinder may contain a continuous message which appears in section through the openings of the cylinder 10 as they appear in series; or the messages may be separate and distinct for each of the openings in the next outer cylinder. An example of such operation might consist of a continuous panorama of pictures in the outer movable cylinder with one portion relating to each of the four seasons and containing a message or a portion of a message relating thereto and the inner cylinder may contain a message which is continuous with respect to the entire product but each portion of the message which appears thereon in the different sections of the outer cylinder relates specifically to the illustration for that section.

A particular advantage of the form shown in Fig. 3 is that a further attractive display is produced by rotating the upper and lower cylinder members 54 and 55 in opposite directions. This may be graphically represented by an airplane 71 on the upper cylinder and an automobile 72 on the lower cylinder traveling in opposite directions. Other variations and combinations of the intermittent and movable parts may be made without departing from the spirit and scope of this invention.

I claim:

1. A display device comprising cylindrical members one within the other, and the outer one having a succession of windows through which display material on the inner member is visible, and means for actuating the members at different speeds whereby the outer member is rotated intermittently and the inner member continuously.

2. A display device having an outer casing with a display opening, a pair of cylindrical members rotatable one within the other, the outer member having a succession of openings through which the inner member is visible, and a single driving motor having intermittent and continuous drivers connected to the outer and inner members for correspondingly moving them.

3. In a display device, an enclosing casing having a display window, a cylindrical member with a series of openings at different heights movable to bring them in succession to the window, and an inner movable member visible through the openings and also through the window.

4. In a display device, an enclosing casing with a display window, cylindrical members movable therein one within the other, the outer member having a series of openings through which the inner member is also visible through said window, both the outer and inner members having a series and a succession of related display material which is presented in related sequence as the members are rotated.

5. A display structure in accordance with claim 4, including related driving means for both of said members to rotate them at differential speeds, the inner one rotating relatively faster than the outer one.

6. In a display structure, an inner cylindrical member having a succession of displays each extending substantially around the member and at a different height, an outer cylindrical member having a succession of displays and openings at different heights extending only part way around the member, and an outer casing for the members having a window through which the openings and displays of the outer and inner members are visible.

7. A display structure comprising outer and inner rotatable members, the outer member having an opening through which inner members are visible, means for mounting an inner member to extend downwardly from the top into the opening of the outer member, means for mounting an inner member to extend upwardly from the bottom into the opening of the outer member, means for rotating the outer member to bring its opening into view, and means for rotating the inner members in directions opposite to each other and both visible through said opening.

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