Aug. 1, 1950 G. R. DAVIS 2,517,181

STORE WINDOW DISPLAY SYSTEM

Filed Aug. 2, 1948

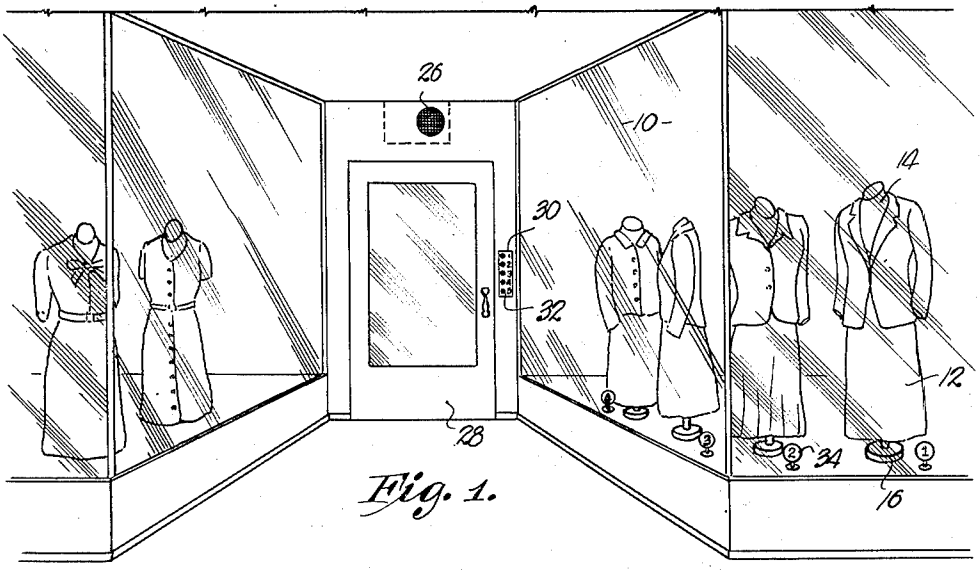


Fig. 1.

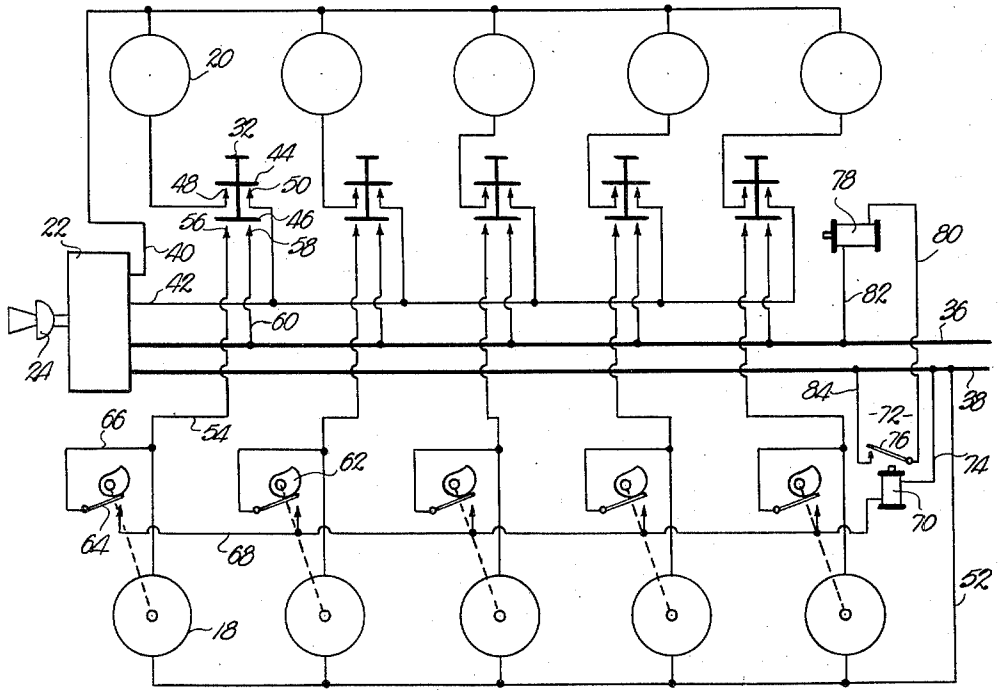


Fig. 2.

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Patented Aug. 1, 1950

2,517,181

UNITED STATES PATENT OFFICE

2,517,181

STORE WINDOW DISPLAY SYSTEM

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Application August 2, 1948, Serial No. 41,938

5 Claims. (Cl. 179—1)

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This invention relates broadly to the field of merchandising and advertising, the primary object being to provide a system for displaying merchandise in a store window whereby to give the same an animated effect thereby attracting passers-by with the over-all result of increased sales.

The most important object of this invention is the provision of a system of store window advertising wherein the displays thereof are mounted for individual rotation and have associated therewith, means for audibly setting forth descriptive advertising matter of the display as the same rotates.

Another important object of this invention is the provision of an advertising system having a plurality of rotatable displays within a store window capable of being set into operation by a prospective customer through the medium of simply pushing a switch button, said system having a special electric circuit capable of simultaneously rotating a selected display and placing a phonograph into operation for audibly advertising the display.

Another object of this invention is to provide in a system as above set forth means for automatically holding a selected switch closed and opening the same to break the cycle of operation after the particular display has rotated one revolution.

Other objects include the way in which the cam element is mounted on each of the displays for closing a normally open switch; the way in which any one of said switches when closed is capable of operating a time delay relay; and the way in which such relay operates to energize a solenoid common to all the switches for opening the same after the said normally open switch is again permitted to return to an open position after the cam element rotates thereby.

In the drawing:

Fig. 1 is a perspective view of a store window showing a plurality of rotatable displays mounted therein together with a loud speaker and a push button plate, all made in accordance with the present invention; and

Fig. 2 is a schematic wiring diagram showing the electrical circuit forming a part of the advertising system.

It is apparent that a store window, broadly designated by the numeral 10 and illustrated in Fig. 1 of the drawing, may vary appreciably from that shown without departing from this invention, the object simply being that of providing a store window capable of receiving a plurality of rotatable displays 12.

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Such displays 12 are each mounted in the usual manner upon a form 14 which is in turn connected to a rotatable standard 16. The particular way in which this standard 16 is mounted for rotation within the store window 10 is of no prime importance and the details of construction thereof form no part of this invention and have, therefore, not been illustrated.

It is well known in the art that such rotatable standard 16 can easily be connected to an electric motor for actuation thereby. Accordingly, in Fig. 2 of the drawing, a plurality of such motors has been shown and the same are all designated by the numeral 18.

It is contemplated furthermore, that a phonograph or a plurality of phonographs, be associated with the displays 12. Such phonographs may be of the conventional character, each being provided with a record disc having advertising matter recorded thereon that is descriptive of the particular display 12 with which it is associated. Such phonographs will be driven by electric motors and in Fig. 2 of the drawing, such motors are all designated by the numeral 20. At least one amplifier 22 is connected with all of such phonographs and amplifier 22 has connected thereto a loud speaker 24 of conventional character.

Such speaker 24 should be mounted where the same faces outwardly and into the street, as clearly shown in Fig. 1 of the drawing, a screen or the like 26 covering the outermost end of speaker 24 for protection thereof. Although this speaker 24 is shown in Fig. 1 as being mounted directly above the store door 28, its precise position is immaterial.

A switch plate 30 is also mounted adjacent door 28 or at another easily accessible point for operation by those who wish to have the displays 12 rotated and the advertising descriptive matter amplified through speaker 24. This switch plate 30 carries a plurality of push button switches 32, each of which should be numbered in association with numbered plates 34 disposed in corresponding relationship with the respective displays 12. It is contemplated that the operator may select by number the display 12 which he desires to be rotated and then push the corresponding button 32 for operation of the system, and it is through the electrical circuit illustrated in Fig. 2 of the drawing, that such operation is made possible. The amplifier 22 is connected directly to a pair of lead lines 36 and 38 and the plurality of phonograph motors 20 are connected through the amplifier 22 in parallel by means of a pair of lines 40 and 42.

There is a switch 32 for each of the motors 20 respectively, said switches 32 being of a dual character and also corresponding respectively with the plurality of display motors 18. Switches 32 are all of identical character and each carry a pair of contact plates 44 and 46. Switches 32 are connected in series with the respective motor 20 and in the instance shown by Fig. 2, such switches 32 are within the line 42 leading from the amplifier 22 to the respective motor 20. Accordingly, actuation of a particular switch 32 will close a pair of contacts 48 and 50 for energizing the corresponding motor 20.

The motors 18 are also connected in parallel with the lead lines 36 and 38 by means of a line 52 leading directly from line 38 and a line 54 for each of the motors 18 respectively. These lines 54 each have a stationary contact point 56 that is bridged with a second stationary contact point 58 by plate 46 of switch 32. This contact point 58 has connection directly to the lead line 36 by means of a wire 60. Accordingly, it is clear that closing of any one of the switches 32 will simultaneously energize the corresponding motor 20 and the respective motor 18 which will in turn cause the corresponding display 12 to be rotated and a phonograph to be operated having a record disc containing descriptive matter of the particular display 12 that is being rotated.

It is contemplated that the switch structure embodying all of the switches 32 and associated with the plate 30, have mechanism therein capable of holding any one of the switches 32 in a closed position once the same has been so actuated. Such structure is of conventional character and forms no part of this invention and, therefore, has not been illustrated. Suffice to say that one type of such structure includes a reciprocable metallic bar having notches formed therein for each of the switches 32 respectively, said switches having a cam member that enters such notch and becomes releasably interlocked therewith. The reciprocable metallic bar is spring-loaded and when the same is moved in one direction against the action of said spring, the switch 32 that is locked closed will be released.

Such switch structures that are obtainable upon the open market are also capable of permitting closing of only one switch at a time. This invention contemplates means for automatically reciprocating such bar to release any one of the switches 32 upon completion of a cycle of revolution of a particular display 12. Such structure includes a cam 62 for each of the displays 12 respectively associated therewith for rotation by means of the shaft of the respective motor 18 as illustrated in Fig. 2. Associated with each of these cams 62 respectively is a normally open switch 64 interposed between a wire 66 having direct connection with the corresponding wire 54 and a wire 68 joined to solenoid 70 of a time delay relay broadly designated by the numeral 72. The opposite side of this solenoid 70 is joined directly to the lead line 38 by means of a wire 74. When the display 12 approaches the end of its cycle of revolution, its cam 62 will be moved to a position where the same closes its switch 64. Such closing of any one of the switches 64 obviously energizes the solenoid 70 of relay 72. Such energization of solenoid 70 closes a switch 76 forming a part of the relay 72, said switch 76 being interposed within a circuit through a solenoid 78. This circuit includes a line 80 joining switch 76 with solenoid 78, a line 82 joining solenoid 78 directly with lead line 36 and a line 84 that joins switches 76 with lead line 38. Obviously, closing of the switch 76 causes energization of the solenoid 78. Solenoid 78 is disposed in close proximity to the aforesaid reciprocable metallic interlocking bar for the switches 32 and when solenoid 78 is so energized, it will attract said bar and automatically release the particular switch 32 that has been closed by the operator.

It is contemplated that the relay 72 have a delay of approximately ten seconds before the same is capable of closing its switch 76. Accordingly, the particular motor 18 and its associated display 12 will continue to rotate even after its cam 62 closes the corresponding switch 64 to a point where cam 62 moves to again open switch 64. As soon as the switch 64 is again opened, the time delay relay 72 will come into operation to cause energization of solenoid 78 and release of the particular switch 32.

Manifestly, all of the switches 64 will always remain open when the plurality of displays 12 are stationary permitting closing of any of the switches 32. In other words, when the displays 12 are all inoperative, the solenoid 78 is deenergized, permitting the reciprocable locking bar of the switch assembly, to function in locking any one of the switches 32 in a closed condition after the same has been actuated by a prospective customer.

It is obvious from the foregoing that many details of construction may be included and modified over and above that which has herein been disclosed and described without departing from the spirit of this invention and it is, therefore, desired to be limited only by the scope of the appended claims.

Having thus described my invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a store window advertising system having at least one display rotatably mounted in said store window, a phonograph provided with a record disc having advertising matter descriptive of said display recorded thereon, an amplifier, means connecting said amplifier with said phonograph, a speaker connected with said amplifier, and a manually operable switch having releasable means for automatically locking the switch against movement after the same is closed; an electric circuit; an electric motor for the phonograph and for the display respectively interposed in said circuit, means whereby said switch will simultaneously close the circuits through both motors when the switch is closed; and structure having parts mounted for rotation by said display for releasing said means for automatically locking the switch after one cycle of rotation of the display.

2. In a store window advertising system having at least one display rotatably mounted in said store window, a phonograph provided with a record disc having advertising matter descriptive of said display recorded thereon, an amplifier, means connecting said amplifier with said phonograph, a speaker connected with said amplifier, and a manually operable switch having releasable means for automatically locking the switch against movement after the same is closed; an electric circuit; an electric motor for the phonograph and for the display respectively interposed in means whereby said circuit, said switch will simultaneously close the circuits

through both motors when the switch is closed; and structure having parts mounted for rotation by said display for releasing said means for automatically locking the switch after one cycle of rotation of the display, said releasable means including a metallic bar, said structure having electromagnetic means controlled by said parts for attracting said bar to a position releasing the switch.

3. In a system as set forth in claim 2 wherein said electromagnetic means is provided with an electric circuit having a normally open switch movable to a closed position by said parts.

4. In a system as set forth in claim 2 wherein said structure includes a circuit for said electromagnetic means, a time delay relay in said last mentioned circuit for closing the latter through the electromagnetic means, and a normally open switch movable to a closed position by said parts for operating said relay.

5. In a system as set forth in claim 2 wherein

said structure includes a circuit for said electromagnetic means, a time-delay relay in said last mentioned circuit for closing the latter through the electromagnetic means, and a normally open switch movable to a closed position by said parts for operating said relay, said parts including a cam for closing said last mentioned switch.

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