July 11, 1939. C. B. REYMERS 2,165,727

DISPLAY STORE FRONT

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Fig. 1

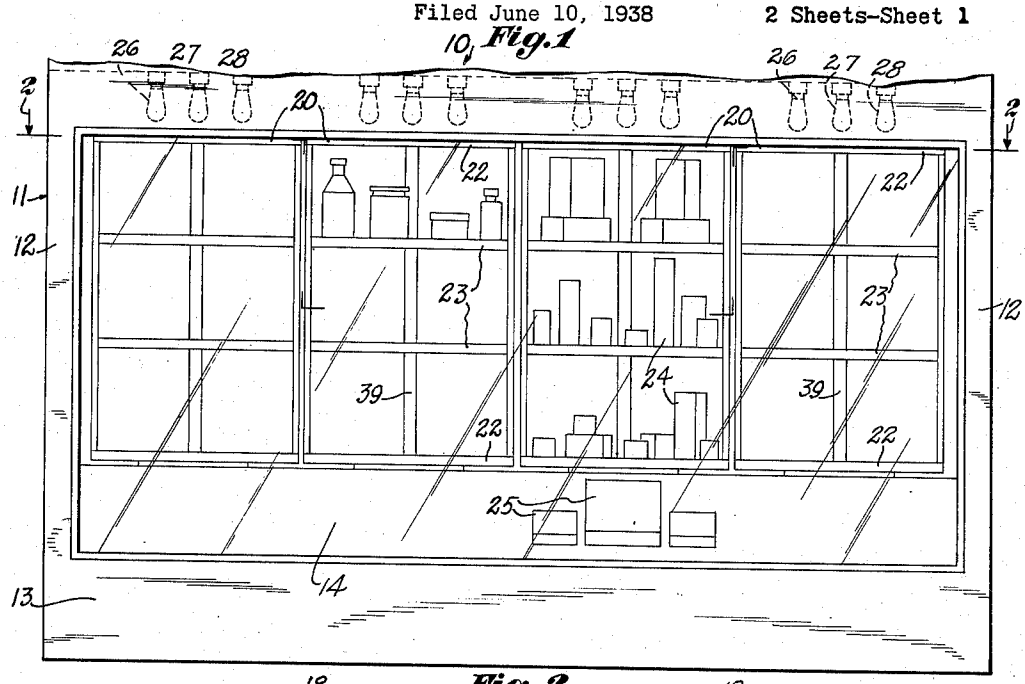


Fig. 2

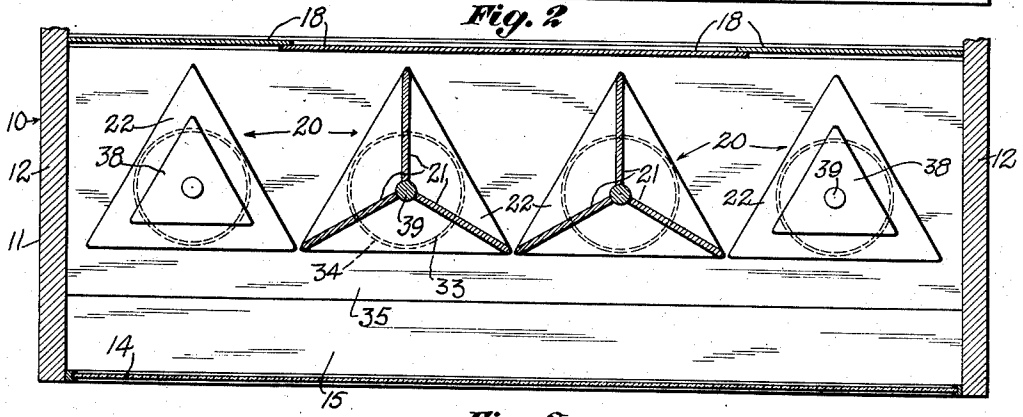
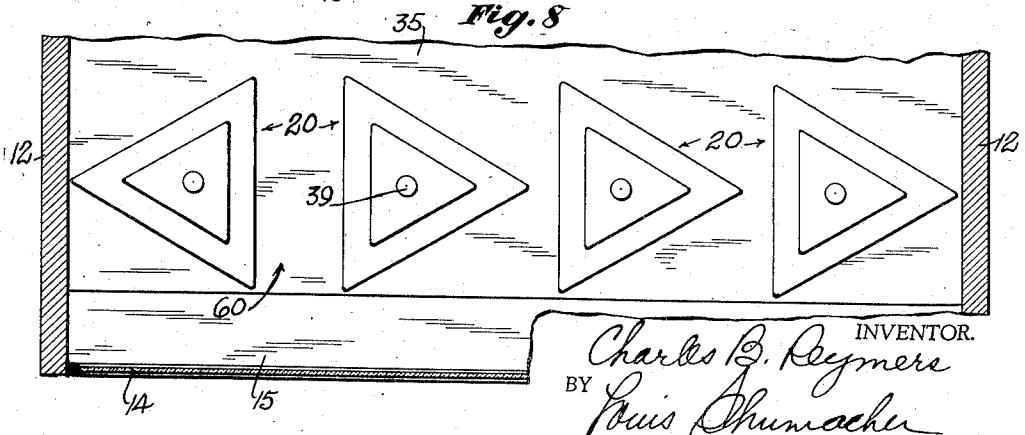


Fig. 8



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Fig. 3

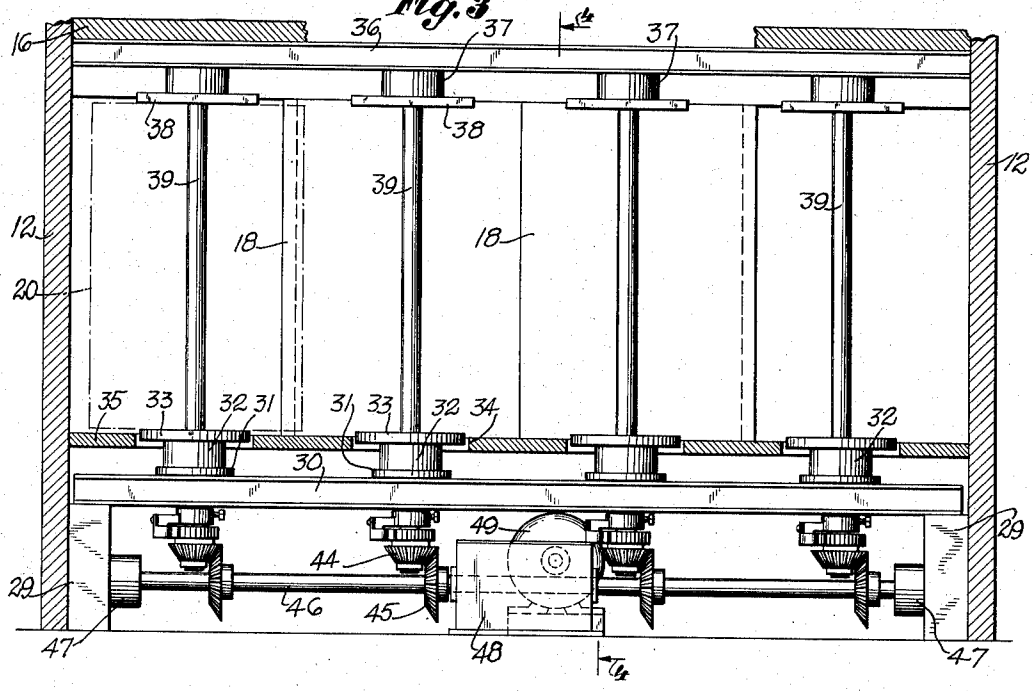


Fig. 4

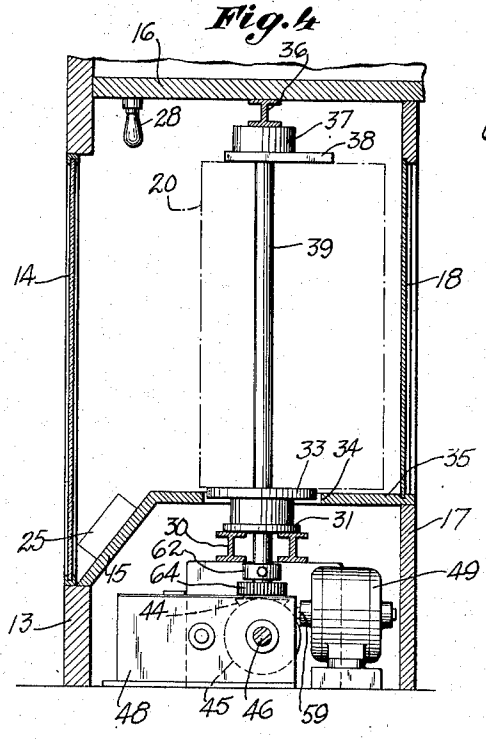


Fig. 6

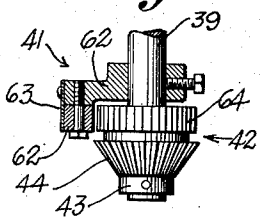


Fig. 5

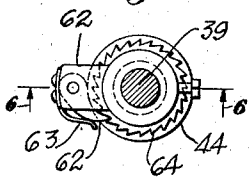
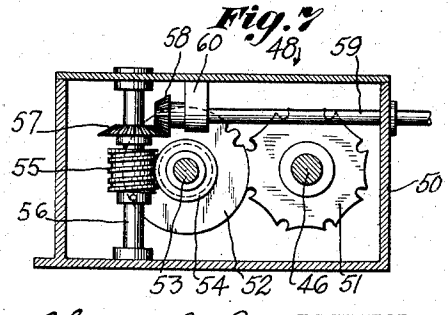


Fig. 7



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Patented July 11, 1939

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UNITED STATES PATENT OFFICE

2,165,727

DISPLAY STORE FRONT

Charles B. Reymers, Jackson Heights, N. Y.

Application June 10, 1938, Serial No. 212,896

1 Claim. (Cl. 211—1.6)

This invention relates to movable advertising devices of the general type used in store windows.

One object of the invention is to provide an improved device whereby a complete store front display can be automatically changed to suit, as for example, at definitely recurring intervals of time.

Another object of the invention is to provide a device of the character described whereby rotatable display elements are conveniently accessible from the rear of the display front, for the artistic arrangement of articles to be displayed.

Another object of the invention is the provision of a device of the nature set forth having improved means to rotate display elements operated in unison for a desired complete display for the entire store window, with the display elements being differently individually operable for convenient access to the window glass for cleaning the same and arranging auxiliary displays, and for other purposes.

Another object of the invention is to furnish a device of the class alluded to wherein different color or illuminating effects are obtained in an improved manner to enhance the display effect.

A further object of the invention is the provision of a device of the type mentioned having relatively few and simple parts, and which is inexpensive to manufacture and set up, and which is compact, durable, reliable and efficient in use.

Other objects and advantages of the invention will become apparent as the specification proceeds.

With the aforesaid objects in view, the invention consists in the novel combinations and arrangements of parts hereinafter described in their preferred embodiments, pointed out in the subjoined claim, and illustrated in the annexed drawings, wherein like parts are designated by the same reference characters throughout the several views.

In the drawings:

Figure 1 is a view in front elevation showing a device embodying the invention.

Fig. 2 is a sectional view thereof taken on the horizontal broken line 2—2 of Fig. 1.

Fig. 3 is a vertical sectional view of the drive and frame structure.

Fig. 4 is a sectional view taken generally on the vertical line 4—4 of Fig. 3.

Fig. 5 is a top plan view of a one way rotating clutch.

Fig. 6 is a view in elevation thereof with parts in section.

Fig. 7 is a plan view of an intermittent drive mechanism.

Fig. 8 is a view of the units so arranged as to provide an aisle between two of the units.

The advantages of the invention as here outlined are best realized when all of its features and instrumentalities are combined in one and the same structure, but, useful devices may be produced embodying less than the whole.

It will be obvious to those skilled in the art to which the invention appertains, that the same may be incorporated in several different constructions. The accompanying drawings, therefore, are submitted merely as showing the preferred exemplification of the invention.

Generally described, the invention provides an advertising means such as an intermittently changing device which is distinctive from prior advertising devices in that it affords a changeable complete front. In other words, when my display means is at rest, the store window appears entirely conventional, so as to meet the requirements of the most fastidious window display men. Nevertheless, my window display changes intermittently, whereby a much greater range and variety of merchandise can be displayed than was heretofore possible. It is another feature of the invention that a completely different background or color may form a part of each display. It is another feature of the invention that since only one display is exhibited at one time, the others being temporarily completely excluded from view, a greater variety of contrasting effects is possible as between the different displays, and the attention of the observer is wholly concentrated upon one display at a time, so that the advertising scheme or ensemble becomes effective in the highest degree.

Referring in detail to the drawings, 10 denotes a device, such as a store front display, embodying the invention. The same may include any enclosure 11, which may form a part of a building, and which may be of generally rectangular shape. Thus said enclosure may comprise side walls 12, a front wall 13 having a window 14, a sill 15 at the base of the window, and a ceiling 16 for the enclosure. It is thus seen that the window is approximately coextensive in size with the enclosure. At the rear of the latter, the same may have a wall 17 and slidable closure panels 18.

Mounted within the enclosure 11 is a display means 19 which is substantially coextensive in size with the window and extends from one side wall to the other and from the sill 15 substantially to the ceiling 16. This display means 19 may include a plurality of elements 20 having

vertical walls 21 equally angularly spaced from each other. Interconnecting said walls 21 are the top and bottom walls 22, while between the latter are vertically spaced horizontal shelves 23 mounted on the walls 21 detachably or otherwise. It is thus seen that when the elements 20 are at rest they provide a substantially continuous display wall opposite to the window 14, said wall having reentrant spaces for the individual elements 20, and the shelves being horizontally alined to form a neat conventional appearing display which can be used for a great variety and quantity of merchandise. For example, some articles of display are indicated at 24, and other articles 25 may be positioned on the sill 15 to form a supplemental stationary display.

Accordingly, upon rotating the elements 20 to different display positions, successive different displays are provided. The effect thereof may be enhanced by painting the different faces of the walls 21 and their corresponding shelving in different colors. In harmony with the latter, various color illuminating effects may be provided, one set of lamps 26 for one display front, a second set of lamps 27 for a different display front, and a third set of lamps 28 for the third display front. These lamps may be mounted in a reentrant space at the ceiling 16, and may be automatically operated upon rotation of the elements 20.

Any suitable frame means may be used to mount the display elements 20, for example, a pair of standards 29 carrying spaced I-beams 30 that are interconnected by plates 31 which carry suitable conical or other thrust bearings 32. Resting on the latter are metallic reenforcement plates 33 secured to the bottom walls 22 of the elements 20, with these plates 32 lying in holes 34 formed in a floor 35 that leads horizontally from the sill 15, so that the elements 20 appear to rest on said floor. Suitably mounted on the walls 12 and ceiling 16 is an H-beam 36 carrying bearings 37 connected to reenforcement plates 38 that are secured to the elements 20. Shafts 39 extending centrally through the latter may be affixed to the walls 21, 22 and to the plates 33, 38 and journaled in the bearings 32 and 37. To conceal the top frame structure, a front strip member 40 may extend from one wall 12 to the other, and to the ceiling 16.

Any suitable drive means may be used to cause intermittent rotation of the display elements 20 for the different display positions thereof. For example, a clutch 41, provided for a purpose hereinafter stated, may rotatably engage with an idler means 42 journaled in each shaft 39 and retained thereon as by a collar 43. Each idler means 42 may include a bevel gear 44, engaged with a similar gear 45, all of the latter mounted on a shaft 46 journaled in bearings 47 affixed to the standards 29. Said shaft 46 may be connected to any intermittent speed reduction drive 48 operated by a motor 49.

By way of illustration, the drive 48 may include a casing 50 through which extends the shaft 46. The latter may carry a star wheel 51 intermittently turned by a cam wheel 52 which serves to otherwise lock the wheel 51 against rotation to prevent overrunning. A shaft 53 mounted on the casing 50 carries the cam wheel 52, and also a spiral gear 54 which meshes with a worm wheel 55 fixed on a shaft 56 that is journaled on the casing. Secured to the shaft 56 is a bevel gear 57 engaging a bevel gear 58 on the motor drive shaft 59, journaled in a bearing 60. Thus continuous rotation of the motor 49 causes intermittent rotation of the shaft 46 and hence of the display elements 20. It will be noted that the gear ratio at 44, 45 will permit the required angular movement to be obtained.

If access be desired to the display 25 or to the window 14 as for the purpose of cleaning the same, I perceived that there is insufficient space for any practical purpose, unless the elements 20 are moved to the position shown in Fig. 8. Accordingly I have provided the one way clutch means 41 whereby any element 20 may be individually rotated to thus afford a passageway whereby a person may gain direct easy access to the space at the window. By way of example, the clutch means 41 may include a carrier member 61 secured to the shaft 39 to carry a pawl 62 and a spring 63 for actuating the pawl. Affixed to the bevel gear 44 is a ratchet wheel 64 engageable by the pawl, so as to permit free manual rotation of each element 20 in the forward direction. Thus a passageway such as 60 can be provided between any two of the elements 20. Moreover, different display faces of the individual elements 20 can be interchangeably coordinated to form a further variety of displays.

It will now be perceived that the invention is applicable for the display of groceries, notions and novelties, dresses and other wearing apparel and a multitude of other articles. If it be desired to display garments some or all of the shelves 23 may be removed. Further the invention can be utilized without necessarily requiring carrier elements such as 20 that are of triangular form. And finally, the device can be used to advantage with indoor as well as with window displays.

I claim:

In a window display device adapted to provide a continuous display to extend across the entire width and height of an unobstructed show window, a plurality of carrier elements having different vertical axes of rotation, each element having three upright equally angularly spaced walls, said elements being in such close side by side relation that the different walls of the elements successively coact with each other to afford a continuous display upon intermittent rotation of the elements, each pair of walls of each element having triangular shelf members adapted to horizontally aline with each other in the different positions of the elements, and a unitary, wholly rotary drive means to cause intermittent rotation of the elements, the drive means including a plurality of one way clutches for the individual elements to turn the same in one direction, the clutches including drive members continuously engaged with each other during normal operation of the device, the clutches coacting with the elements so that desired elements can be manually turned in a reverse direction to lie with their adjacent walls approximately parallel to afford an aisle between the elements for access to the window.

CHARLES B. REYMERS.