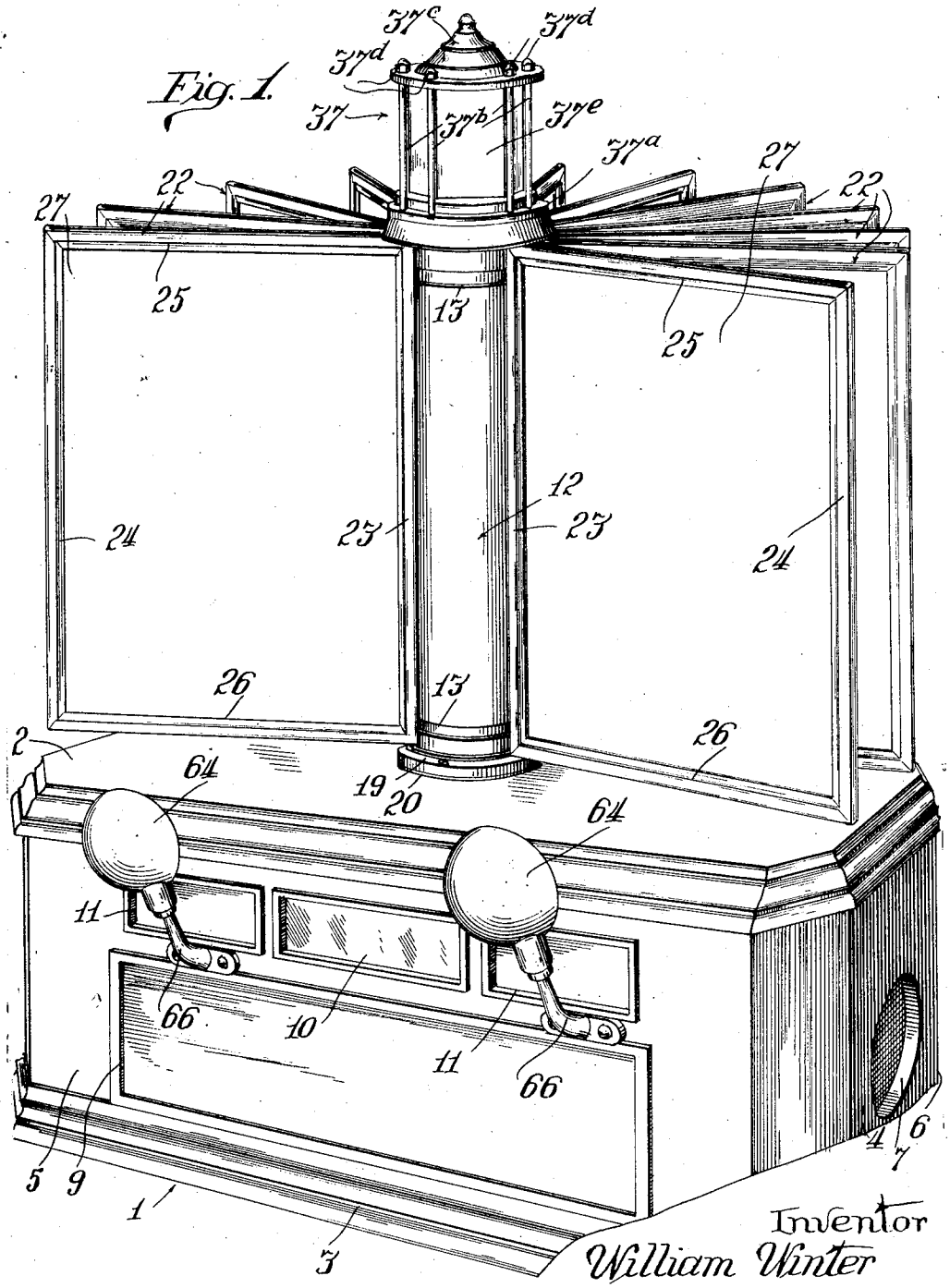
Oct. 29, 1929. W. WINTER 1,733,176

ADVERTISING DEVICE

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Fig. 1.




Inventor
William Winter
By Arthur Wm. Nelson
Attorney

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Fig. 2.

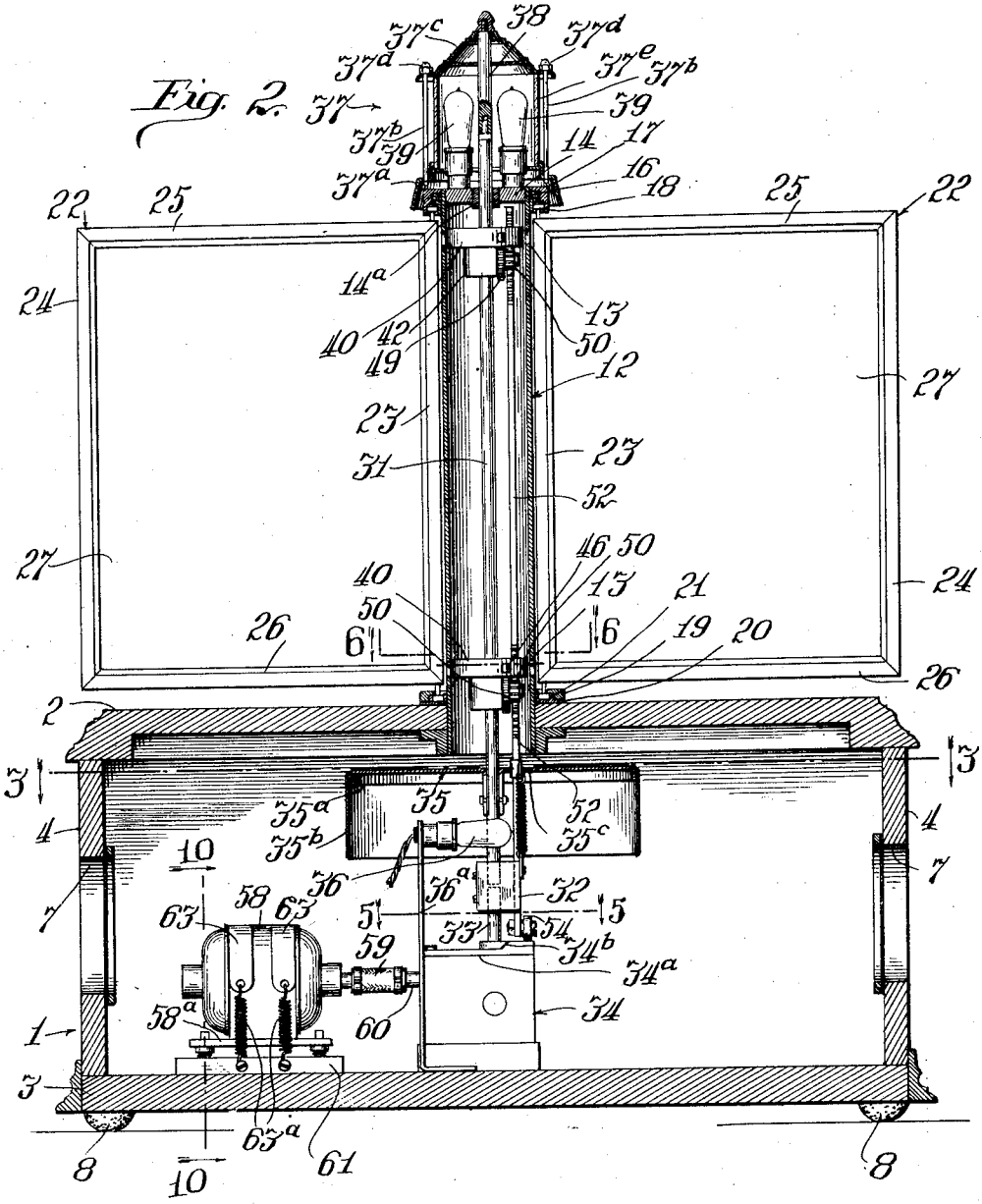
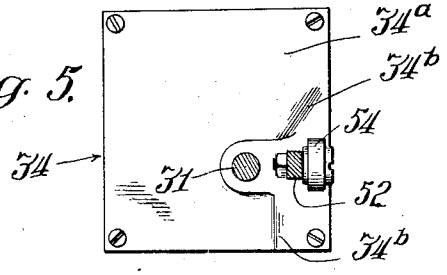



Fig. 5.




Inventor
William Winter
By Arthur Mc Wilson
Attorney.

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Fig. 3.

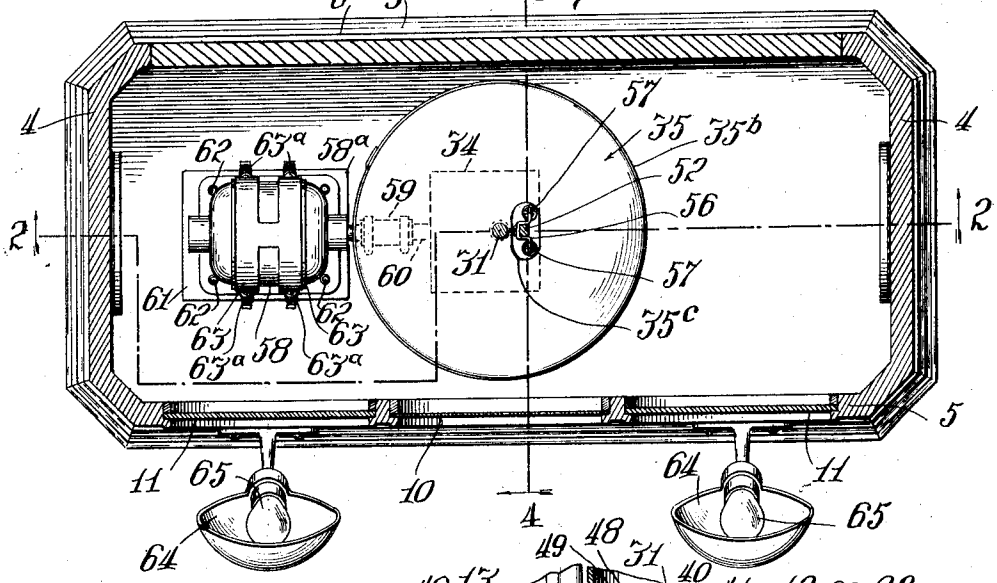
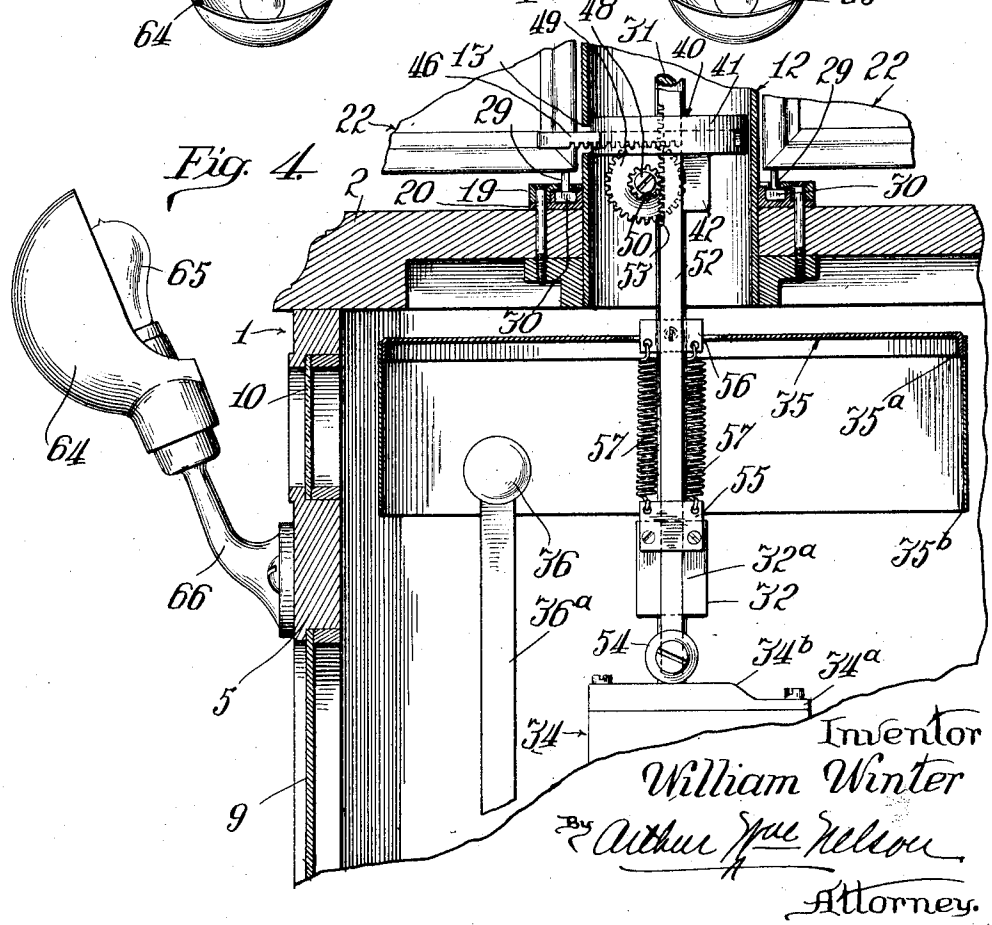



Fig. 4.



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Fig. 6.

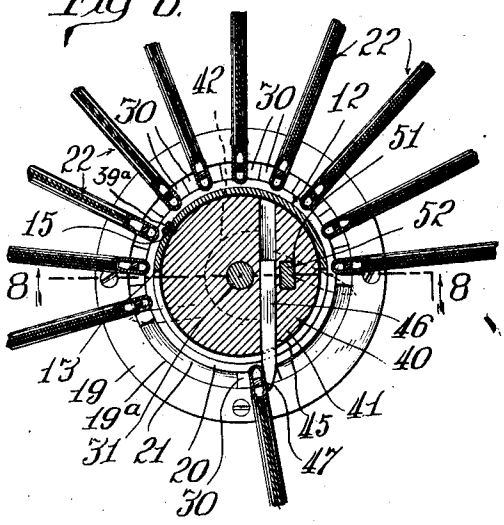



Fig. 7.

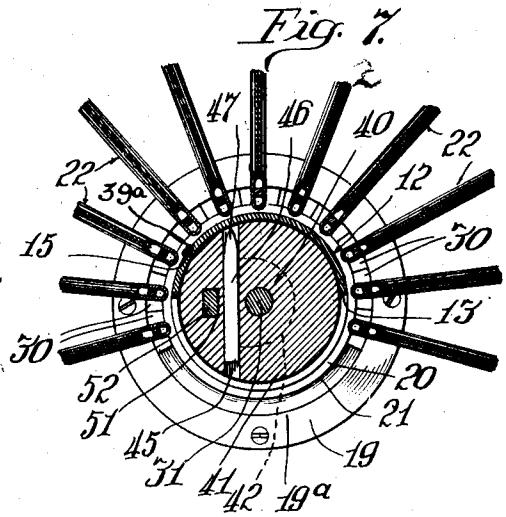



Fig. 8.

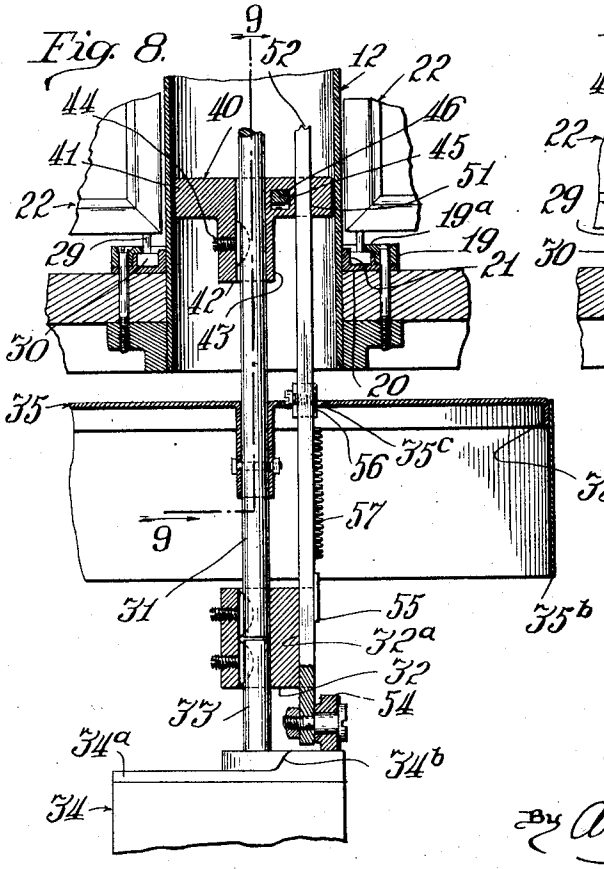



Fig. 9.

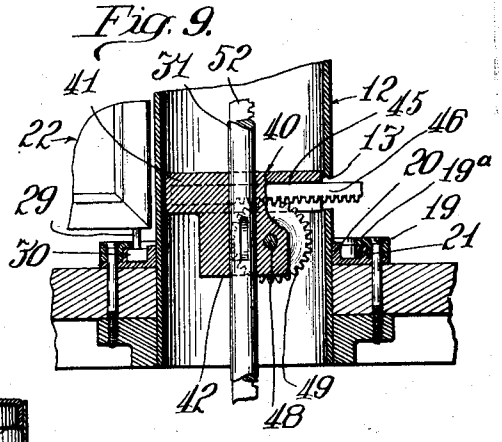
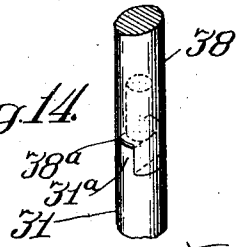



Fig. 14.




Inventor.
William Winter
By Arthur M. Nelson
Attorney.

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ADVERTISING DEVICE

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Fig. 11.

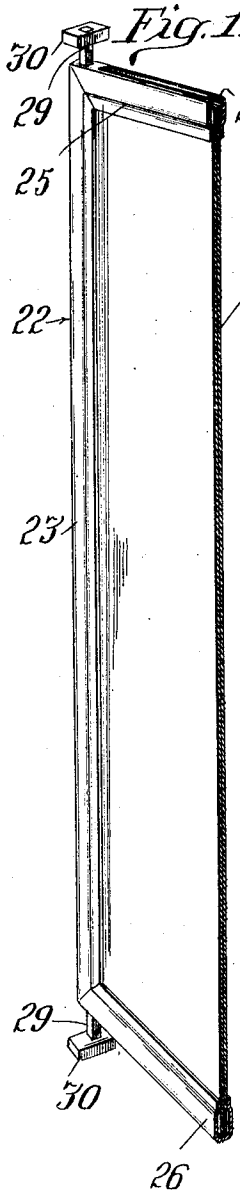



Fig. 12.

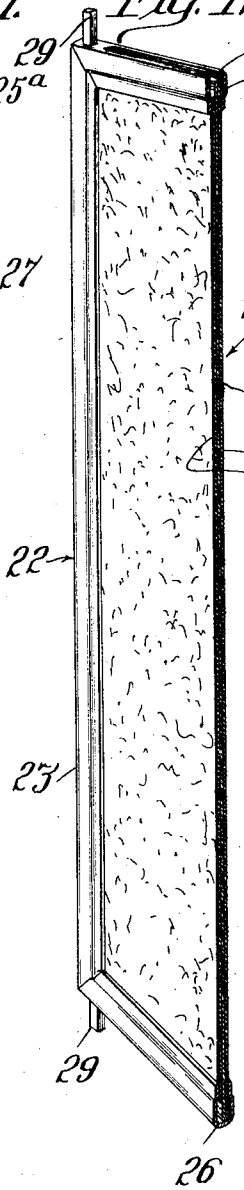
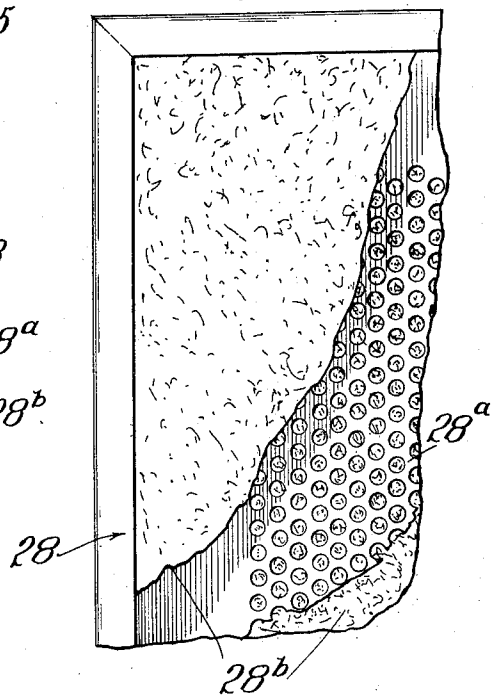



Fig. 13.



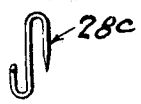
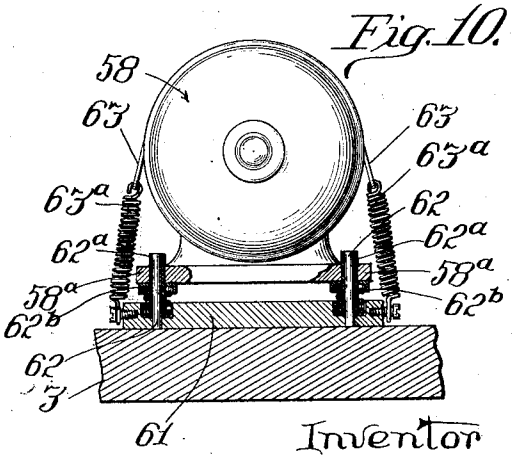




Fig. 15.

Fig. 10.




Inventor

William Winter

By Arthur Wm. Nelson

Attorney.

Patented Oct. 29, 1929 1,733,176

# UNITED STATES PATENT OFFICE

WILLIAM WINTER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO ALFRED H. BAKKE, OF CHICAGO, ILLINOIS

## ADVERTISING DEVICE

Application filed October 31, 1927. Serial No. 229,813.

This invention relates to improvements in advertising devices or apparatus and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The primary object of the invention is to provide means for periodically presenting to the view, the opposed sides of a plurality of associated panels bearing advertising or other display matter, which will readily attract and hold the attention of the passersby.

Another object of the invention is to provide such a means wherein the panels are periodically turned about a supporting column on the top of a cabinet or other support to present at least two of the panels in substantially opposed relation, one on each side of the column.

A further object of the invention is to provide an advertising device or apparatus of this kind embodying a simplified form of actuating mechanism which is positive and quiet in operation and which cannot readily get out of order.

These objects of the invention, together with others, as well as the many advantages thereof, will more fully appear as I proceed with my specification.

In the drawings:—

Fig. 1 is a perspective view of an advertising device embodying the preferred form of my invention.

Fig. 2 is a longitudinal vertical sectional view through the same as taken on the line 2—2 of Fig. 3.

Fig. 3 is a horizontal sectional view through the device as taken on the line 3—3 of Fig. 2.

Fig. 4 is a vertical detail sectional view on an enlarged scale as taken on the line 4—4 of Fig. 3.

Fig. 5 is a horizontal detail sectional view as taken on the line 5—5 of Fig. 2.

Fig. 6 is a detail horizontal sectional view on an enlarged scale as taken on the line 6—6 of Fig. 2.

Fig. 7 is a view similar to Fig. 6 with the parts in a changed relation.

Fig. 8 is a detail vertical sectional view as taken on the line 8—8 of Fig. 6.

Fig. 9 is another detail vertical sectional view as taken on the line 9—9 of Fig. 8.

Fig. 10 is a detail vertical sectional view showing a motor mounting embodied in the device or apparatus, the plane of the section being indicated by the line 10—10 of Fig. 2.

Fig. 11 is a perspective view, partly in vertical section of one of the panel holding frames.

Fig. 12 is a similar view of a modified form of panel holding frame.

Fig. 13 is a view in elevation of a fragment of the frame shown in Fig. 12.

Fig. 14 is a detail perspective view of a certain shaft coupling employed in my improved apparatus and which will be more fully referred to later.

Fig. 15 is a perspective view of a certain pin hook by which smaller articles of merchandise may be attached to one of the panels for display purposes.

In general my improved device or apparatus includes a box like cabinet, casing or support upon which is centrally arranged an upright tubular column with an illuminated dome at the top thereof. Operatively connected to the column and actuated by means within the same is a plurality of radially disposed display panel frames with two of said frames arranged substantially at 180° apart when viewed from the front of the column and with the others disposed between said two frames at the rear of the column. In the cabinet which has a suitable sight opening in its front face, is a driving motor and gearing for the frame actuating means in the column. Said means includes a continuously rotating shaft upon which is disposed a display cylinder visible through the sight opening and suitably illuminated by a lamp in the cabinet, while other suitable means on the front of the cabinet, illuminates said two of the display frames mentioned; there being screened ventilation openings in the ends of the cabinet to rid the cabinet of the heat generated by the parts therein.

Referring now in detail to that embodiment of the invention illustrated in the accompanying drawings, 1 indicates as a whole, the rectangular cabinet or casing of the ap-

paratus, which is of a suitable height and is of a width greater than its depth from front to rear. Said casing comprises top and bottom walls 2 and 3 respectively, end walls 4—4, a front wall 5 and a rear wall 6 arranged in the manner of a door to permit access to the interior of the casing for inspection or other purposes. In the end walls of the casing are suitable screened ventilating openings 7 and on the bottom wall are suitable rubber feet 8. On the front wall of the casing along the bottom is a suitable means 9 for holding a placard and above said means, centrally of said wall, is a glassed sight opening 10 through which a rotary device within the cabinet or casing hereinafter described is visible; there being suitable placard holding means 11 in line with and on each side of said sight opening.

Suitably fixed at its bottom end centrally in the top wall of the cabinet or casing is an upright tubular column 12 having two arcuate slots 13—13 therein at the front, one near each end and in the top end of said column is a disc 14 while to the rear side of said column, is formed a longitudinal groove 15, the purpose of which will appear later. On the top end of the column are coacting rings 16 and 17 providing a downwardly facing, annular groove like track or raceway 18 while on the top wall of the casing about the column are coacting rings 19 and 20 respectively providing an upwardly facing annular groove like track or raceway 21 in line with the track or raceway 18. The ring 19 in this instance is provided with a flange $19^a$ which overhangs the track or raceway as best shown in Figs. 8 and 9 to prevent displacement of certain parts arranged therein as will later appear. Associated and arranged radially with respect to the column thus described is a plurality of display frames 22—22. Each frame is rectangular and comprises vertically disposed inner and outer side members 23 and 24 respectively and horizontally disposed top and bottom members 25 and 26 respectively, suitably secured together. All of said members are substantially U shaped in cross-section and the top member 25 is provided with a slot $25^a$ through which a panel like display support 27 may be introduced into the desired frame. As best shown in Fig. 11, this panel may be a sheet of heavy paper board to which display advertisement placards may be directly fixed. In case it is desired to display articles of merchandise, I provide a panel 28 such as best shown in Figs. 12 and 13 comprising a perforated panel body $28^a$ covered on both sides with a cloth $28^b$ of the desired color. Suitable pin hooks $28^c$, one of which is illustrated in Fig. 15, are provided to engage the article to be displayed and the pin part thereof is inserted through the cloth and panel body by which the article is hangingly supported from the panel in a manner displaying the article to the best advantage.

Along the inner side of each frame and preferably within the inner frame member thereof is fixed a rod 29 the top and bottom ends of which extend above and below the top and bottom members of each frame. On each end extension is secured an arcuate shoe 30 adapted to engage within and curved in accordance with the tracks or raceways 18 and 21, said shoes also acting to space the frames the desired distance apart when in grouped relation at the rear of the column as best shown in Figs. 6 and 7.

Coaxially within the tubular column is a continuously rotating upright drive shaft 31 and the top end of said shaft has bearing in a bushing $14^a$ in the disc 14 at the top of the column 12 and extends a suitable distance above the same and the extremity thereof is flattened on opposite sides to provide a tongue $31^a$ as best shown in Fig. 14. The bottom end of this shaft which extends into the interior of the cabinet or casing 1, is detachably connected by a coupling block 32 to the top end of an upright stub shaft 33 journalled in a gear box 34 having suitable speed reduction gearing therein but not shown and driven by a motor as will later appear. In one face of the coupling block 32 is an upright groove $32^a$ (see Fig. 8) and on the top wall $34^a$ of the reduction gear box which is suitably secured to the bottom wall 3 of the casing, is a stationary cam $34^b$ best shown in Figs. 2 and 5. Fixed to the shaft 31 just below the top wall of the casing is a horizontally disposed disc 35 having a depending flange $35^a$ to which is removably secured a depending annular band $35^b$ preferably of a translucent material, having suitable advertising matter depicted thereon. This band is so arranged as to line up with the sight opening 10 in the front wall of the cabinet or casing to be visible therethrough and to increase this visibility I provide an illuminating device 36 between said band and the shaft 31, said device being supported from the bottom of the casing by an upright bracket $36^a$.

Associated with the top end of the column 12 is an interiorly illuminated dome indicated as a whole by the numeral 37. Said dome comprises a bottom ring $37^a$ of such diameter as to embrace and substantially conceal the track members 16 and 17 on the top end of the column and to overhang the inner ends of the various frames 22. Spaced above said ring by means of a plurality of upright rods $37^b$ is a cone shaped top $37^c$, nuts $37^d$ on said rods holding the top in place. Between said ring and top is a plurality of glass panes $37^e$ which are arranged within the circle of the rods $37^b$. Depending axially from the dome top and fixed thereto is a shaft section 38, the bottom end of which is transversely grooved as at $38^a$ to receive the extremity

31[a] of the shaft 31. In the dome is one or more illuminating devices 39 in the form of electric lamps to which current is applied by wires 39[a] arranged in the groove 15 of the column and which lead upwardly from the interior of the cabinet or casing 1. By the arrangement described, it is apparent that said dome will rotate with the shaft 31 and when necessary may be removed, simply by lifting it upwardly to disengage the shaft section 38 from the shaft 31. The dome may be replaced in a reverse manner.

On the shaft 31 within the column 12 are fixed top and bottom discs 40—40 one arranged in the plane of each of the transverse grooves 13—13 in said column. As each disc and the mechanism associated therewith is alike, a detailed description of one will suffice for both. Each disc includes a flat body 41 with a hub 42 on the bottom thereof and one side of said hub is flattened as at 43 while the other side has a key and set screw 44 by which the disc as a whole is secured in position upon the shaft. Extending laterally through the disc body tangentially with respect to but adjacent the shaft 31 is an opening 45 of rectangular cross section and in which a rack bar finger 46 has sliding guiding movement. The teeth of said finger are disposed on the bottom side thereof and one end of said finger is tapered on opposite sides as at 47 as best shown in Figs. 9 and 7 respectively. Journalled on a suitable stud 48 projecting from the flat face of the hub 42 and arranged at a right angle to the rack bar finger 46 is a composite gear comprising inner and outer gears 49 and 50 respectively. The inner gear which is of a diameter greater than that of the outer gear, meshes with the rack bar finger 46. Extending parallel with the axis of each disc body and hub but spaced outwardly from and adjacent the rack bar finger 46 is a second rectangular opening 51 and in said openings of both disc bodies a flat bar 52 has sliding guided bearing for a short reciprocating movement. In one edge of said bar, in the vicinities of the disc bodies through which they pass, are formed rack teeth 53 which as best shown in Fig. 4 mesh with the smaller gears 50 of the composite gears before mentioned.

The bar 52 carries at its extreme bottom end a roller 54 which is adapted to travel upon the top wall 34[a] of the gear box 34 and the cam 34[b] thereon as a track as said discs or plates rotate with the shaft 31. That part of said bar just above said roller has sliding bearing in the groove 32[a] of the coupling block 32 and a transverse plate 55 is fixed to that face of the coupling block in which the groove 32[a] is formed to prevent displacement of said bar. A short distance above said plate 55 is a second transverse plate 56 which is fixed to said bar 52 and a pair of springs 57—57 connect the coupling block plate with the plate on said bar to normally urge or pull said bar downwardly. It is herein pointed out that said bar passes through the flanged disc 35 and for that purpose a suitable opening 35[c] is provided in said disc.

The speed reducing gearing in the gear box 34 is driven by a suitable motor 58 arranged within and toward one end of the casing 1. I find a convenient way to connect up said motor and gearing is to provide a short length of rubber hose 59, clamped in any suitable manner to the armature shaft of the motor and to a shaft 60 projecting from one side of the gear box 34 as best shown in Fig. 2. I also provide a simple and efficient mounting for the motor whereby noise and vibration is eliminated. To this end I secure a base board 61 to the bottom wall of the cabinet or casing and rising from said board are four studs 62 each surrounded by a rubber tubing 62[a]. These studs and tubings pass up through suitable openings in the base flange 58[a] of the motor and a spring 62[b] surrounds each rubber covered stud between the base board and base flange of the motor as best shown in Fig. 10.

On the motor casing I provide two connected stirrups or inverted U shaped members 63 the legs of which are connected by springs 63[a] to said base board. In this manner the motor is flexibly supported and held in position so as to be silent in operation.

To illuminate the two panel supporting frames 22—22 exposed to view and arranged in substantially opposed relation at the front of the casing, so as to make them more visible and attractive in appearance I provide a pair of reflectors 64—64 at said front of the casing, one in the vertical median plane of each of said opposed frames. Each reflector which carries an illuminating device 65 is mounted on the top end of an inclined bracket arm 66, the bottom end of which is fixed to the front wall of the casing between the panels 9 and 11 thereof as best shown in Fig. 1, said illuminating devices being fed by current conductors leading down through said brackets into the casing where they are connected up with the other conductors of the apparatus as will be apparent.

Assume that the motor 58 is running and is driving the shafts 33 and 31 through the suitable speed reducing gearing in the gear box 34. As the shaft 31 is rotating, it is apparent that the bar 52 will rotate with the shaft. During this rotation of the shaft and bar, the roller 54 on the bottom end of the bar will travel, first upon the flat surface of the top wall 34[a] of the gear box and then upon the cam 34[b] thereof and back upon said flat surface as is apparent to impart a reciprocating movement to said bar of a length approximating the height of the cam. It is also apparent that as said roller climbs up one side of the cam, an upward movement is im-

parted to the bar and as said roller leaves the other side of the cam, the springs 57—57 will impart the downward movement thereto.

In the upward movement of the bar 52 as the roller 54 climbs the cam and during turning of said bar with the disc bodies 41—41, the rack teeth of said bar which are in mesh with the gears 50 will rotate said gears together with the gears 49. As said gears 49 are in mesh with the rack bar fingers 46 in said disc bodies, said fingers are projected outwardly and through the slots 13—13 to engage behind that frame 22 at the right hand side of Figs. 1 and 2 and will swing it clockwise until the shoes 30 thereof engage the like shoes of the frame 22 at the left hand side of Figs. 1 and 2 and will move all of the frames simultaneously until said frame occupies the position formerly occupied by the frame on said left hand side. When this position is reached the roller 54 leaves the cam and travels upon the flat surface of the top wall of the gear box so that under the action of the springs 57, a downward movement is imparted to said bar to turn the gears 49 and 50 in the opposite direction and to retract the rack bar fingers 46 into the disc body and out of engagement with said frame. Thus in each rotation of the shaft, the frames are shifted to bring opposed faces of adjacent frames into the positions shown in Figs. 1 and 2, the faces of said frames being illuminated as before described.

Should it be desired to change the panels 27 in the frames 22 for others bearing different subject matter, the dome 37 is first removed and said panels may then be withdrawn from their associated frames, through the open tops thereof and new ones substituted therefor after which the dome is replaced.

The device is capable of presenting the many different faces of the frame panels to the front in successive order and has a large capacity for the limited amount of space it occupies. It is attractive and indeed silent in operation. It is simple in construction and the parts are strong and rugged and cannot get out of order.

While in describing my invention, I have referred in detail to the form and arrangement of the parts thereof, I do not wish to be limited thereto except as may be pointed out in the appended claims.

I claim as my invention:

1. A device of the kind described embodying therein, a support, an upright tubular member thereon, a continuously rotating shaft in said tubular member, a plurality of substantially radially disposed panel members grouped about said upright tubular member at the rear thereof to present at least two of them in substantially opposed relation adjacent the front of said upright tubular member and capable of a step by step rotative movement about the axis of the same, and means rotative with said shaft for engaging at least one of said last mentioned panel members to move it into the position occupied by the other and to move a third one into the position formerly occupied by said one of said last mentioned panel members.

2. A device of the kind described embodying therein, a support, an upright tubular member thereon, a continuously rotating shaft in said tubular member, a plurality of substantially radially disposed panel members grouped about said upright tubular member at the rear thereof to present at least two of them in substantially opposed relation adjacent the front of said upright tubular member and capable of a step by step rotative movement about the axis of the same, coacting means on said upright member and panel members providing a guided movement and spacing for said panel members and means rotative with said shaft for engaging at least one of said last mentioned panel members to move it into the position occupied by the other and to move a third one into the position formerly occupied by said one of said last mentioned panel members.

3. A device of the kind described embodying therein, a support, an upright member thereon, a plurality of substantially radially disposed panel members grouped about said upright member at the rear thereof to present at least two of them in substantially opposed relation adjacent the front of said upright member and capable of a step by step rotative movement about the axis of the same, and means providing opposed endless track members at spaced points on said upright member, means carried by said panel members engaging in said track members for spacing said panel members apart and providing a guided movement therefor and means for imparting movement to said panel members.

4. A device of the kind described embodying therein, a support, an upright member thereon, a plurality of substantially radially disposed panel members grouped about said upright member at the rear thereof to present at least two of them in substantially opposed relation adjacent the front of said upright member and capable of a step by step rotative movement about the axis of the same, means providing opposed endless tracks at spaced points on said upright members, arcuate shoes fixed with respect to the inner ends of said panel members and engaged in said tracks to guide said panels in their movement and to space them apart and means for imparting movement to said panel members.

5. A device of the kind described em-

bodying therein, a support, an upright member thereon, a plurality of substantially radially disposed panel members grouped about said upright member at the rear thereof to present at least two of them in substantially opposed relation adjacent the front of said upright member and capable of a step by step rotative movement about the axis of the same, means providing opposed endless tracks at spaced points on the outside of said upright member, devices providing end extensions on said panel members, at the inner side thereof, arcuate shoe blocks fixed to said extensions and engaged in said tracks and to space them apart and means for imparting movement to said panel members.

6. A device of the kind described embodying therein a support, a tubular upright member having openings therein, mounted on said support, a plurality of substantially radially disposed panel members grouped about said upright member at the rear thereof to present at least two of them in substantially opposed relation adjacent the front of said upright member, coacting means on said upright member and panel members respectively, providing a guided path of movement for said panel members, a continuously rotating shaft in said upright member and means actuated by said shaft and capable during a part of a revolution thereof, of being projected through said openings in said tubular member to engage one of said panels to impart movement thereto and then retracted into said upright member to release said panel member.

7. A device of the kind described embodying therein a support, a tubular upright member thereon, a plurality of substantially radially disposed panel members grouped about said upright member at the rear thereof to present at least two of them in substantially opposed relation adjacent the front of said upright member, coacting means on said upright members and panel members respectively providing a guided path of movement for said panel members, a continuously rotating shaft in said upright member, a disc like member carried by said shaft, a latterally reciprocating finger slidable in said disc like member and adapted to be projected to engage one of said panel members to move the same and then retracted to release the same, and means also carried by said disc like member and actuated in the rotation of said shaft to impart reciprocating movement of said finger.

8. In a device of the kind described, an upright tubular member having at least one horizontal slot therein, a continuously rotating shaft in said member, a disc fixed to said shaft, a finger slidable in the disc at a right angle to said shaft and means operable in a part of a revolution of the disc to project and retract the finger through said slot.

9. In a device of the kind described, an upright tubular member having at least one horizontal slot therein, a continuously rotating shaft in said member, a disc fixed to said shaft, a finger slidable in the disc and having rack teeth on one side, gearing journalled on said disc and meshing with the rack teeth of said finger and means engaged with said gearing for imparting movement thereto first in one direction and then the other to project and retract the finger through said slot.

10. In a device of the kind described, an upright tubular member having at least one horizontal slot therein, a continuously rotating shaft in said member, a disc fixed to said shaft, a finger slidable on the disc, a reciprocating bar journalled in said disc parallel with said shaft and means connecting said bar and finger for translating the vertical reciprocation of said bar into horizontal reciprocation for said finger.

11. In a device of the kind described, an upright tubular member having at least one horizontal slot therein, a continuously rotating shaft in said member, a disc fixed to said shaft, a finger slidable on the disc, a reciprocating bar journalled in said disc parallel with said shaft, and gearing connecting said bar and finger for imparting a reciprocating movement to said finger.

12. A device of the kind described embodying therein, a cabinet, an upright tubular member thereon, a plurality of upright panel frames arranged radially about said tubular member which has a horizontally disposed slot therein, an upright shaft in said tubular member, a motor driven speed reducing gear box in said cabinet, operatively connected to said shaft and having a cam on its top wall, a disc like member fixed to said shaft in the plane of the slot in said upright tubular member, a finger arranged at a right angle to the shaft and slidable in the disc like member for movement in and out through said slot to engage and release one of said panel frames, a reciprocating bar journalled in said disc like member parallel and rotative with said shaft and operable in one direction by said cam, means operatively connecting said bar and finger and means for moving said bar in the other direction.

13. A device of the kind described embodying therein, a cabinet, an upright tubular member thereon, a plurality of upright panel frames arranged radially about said tubular member which has a horizontally disposed slot therein, an upright shaft in said tubular member, a motor driven speed reducing gear box in said cabinet and including a stub shaft in line with said first mentioned shaft, a cam on the top wall of the gear box, a member for coupling said shafts together, a disc on said first mentioned shaft, in the

plane of said slot, a finger in said disc capable of being reciprocated in and out of said slot to engage and release one of said panel frames, a reciprocating bar journalled in said disc and coupling respectively and operatively connected to said finger, a roller on said bar travelling on said top wall and cam for moving the bar in one direction and a spring connecting said bar and coupling member for moving the bar in the other direction when leaving the cam.

14. A device of the kind described embodying therein a support, a tubular member rising therefrom, a plurality of panel frames each open at its front and rear as well as the top, grouped in radial arrangement about said tubular member, means in said tubular member including a continuously rotating shaft for engaging and releasing one of said panel frames for imparting a step by step movement thereto, and an illuminated dome detachably connected with the shaft to rotate therewith and of a diameter overhanging the inner ends of the open tops of said panel frames.

15. A device of the kind described embodying therein a cabinet having a sight opening in its front wall, an upright tubular member rising from the cabinet, a continuously rotating shaft in said upright member extending into said cabinet, means in said cabinet operatively connected to said shaft for driving the same, a plurality of panel members grouped about the upright tubular member in substantially radial arrangement for a step by step movement about the same, means in said tubular member and actuated by the shaft for imparting such movement to said panel members, and a band holding means fixed to said shaft within said cabinet to rotate therewith and to present said band in the plane of said sight opening in said cabinet.

In testimony whereof, I have hereunto set my hand, this 27th day of October, 1927.

WILLIAM WINTER.