A. VANDERVELD.

SHOW CASE.

APPLICATION FILED SEPT. 2, 1911.

1,103,230. **Patented July 14, 1914.**

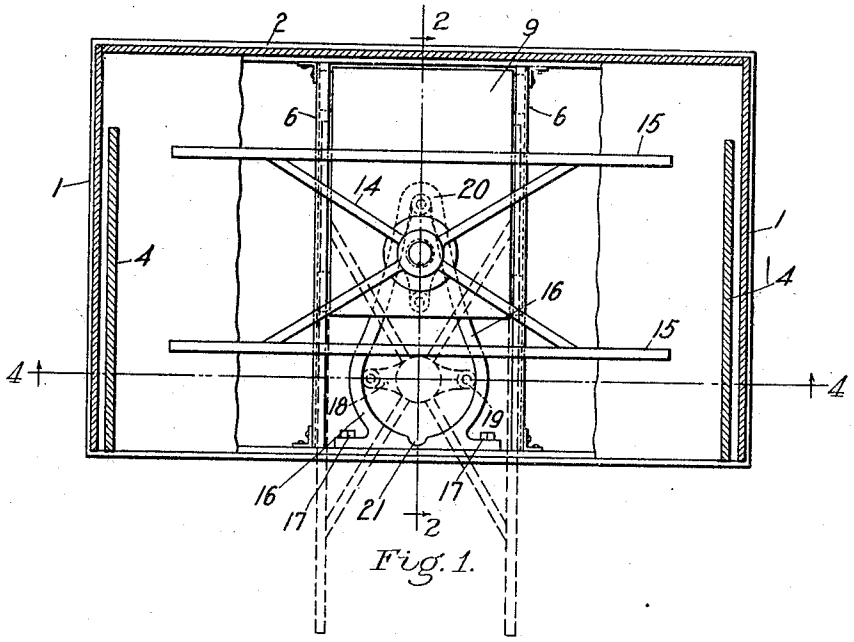


Fig. 1.

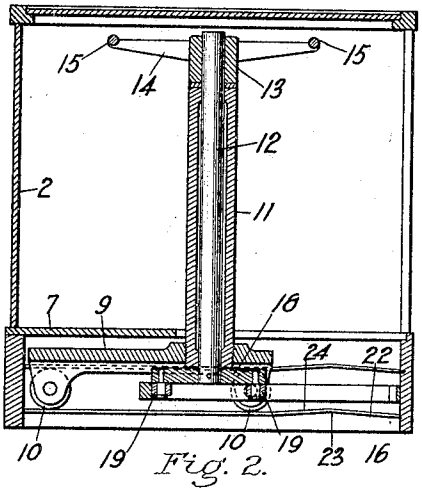


Fig. 2.

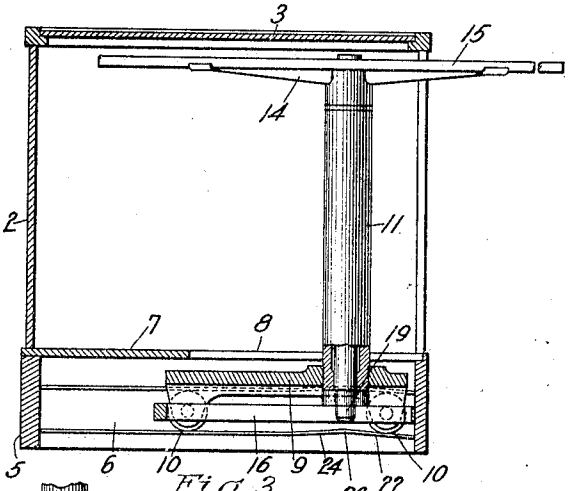


Fig. 3.

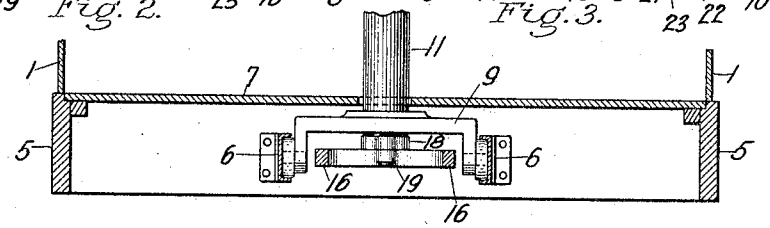


Fig. 4.

Witnesses.
Amelia M. Ross
Carrie L. Barker

Inventor:
Anthony Vanderveld
by Robt. P. Hains.
Attys.

UNITED STATES PATENT OFFICE.

ANTHONY VANDERVELD, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO GRAND RAPIDS SHOW CASE COMPANY, OF GRAND RAPIDS, MICHIGAN, A CORPORATION OF MICHIGAN.

SHOW-CASE.

1,103,230. Specification of Letters Patent. Patented July 14, 1914.

Application filed September 2, 1911. Serial No. 647,340.

To all whom it may concern:

Be it known that I, ANTHONY VANDERVELD, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented an Improvement in Show-Cases, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The invention to be hereinafter described relates to show cases more particularly designed for the display of goods in a store. In a device of this character where a rotatable rack is movable to and from a position within the case, it is desirable that the rotatable rack be prevented from striking the case as the rack is moved to and from its inner position, and yet the rack be capable of rotative movement when at the front of the case, as more fully set forth in my prior Patent No. 987,183, dated March 21, 1911.

With these facts in mind, the aims and purposes of the present invention will best be made clear from the following description and accompanying drawings of one form of means for carrying the invention into practical effect, it being understood that the invention in its true scope is pointed out by the claims.

In the drawings:—Figure 1 is a plan view, parts being shown in section, showing one form of the present invention; Fig. 2 is a section on the line 2—2, Fig. 1, the rotatable rack being shown as at its inner position; Fig. 3 is a like sectional view showing the rack in outer position; and Fig. 4 is a section on the line 4—4, Fig. 1.

The case or compartment may be of any usual or desired character and, as shown, comprises the sides 1, back 2 and top 3, said parts being preferably formed either wholly or partly of glass. The base portion of the case comprises a suitable foundation for sustaining the sides, back and top of the case, the front of said case being preferably closed by sliding doors 4. In the present form of the invention the base portion 5 of the case has secured thereto the tracks 6, Fig. 4, and preferably formed of angle iron, as indicated, and affording a guiding trackway for a suitable rack supporting carriage. Above the base 5 there is a false bottom 7 which is slotted at 8 for a purpose that will hereinafter more fully appear.

Mounted to slide in the trackways 6 secured to the base 5 is a rack supporting carriage 9 provided with rollers 10 which ride between the flanges of the trackways 6. This carriage may be of any usual or preferred design suitable for the purpose, the construction being such as to permit the carriage 9 to be moved to and from a position within the case. Secured to and rising from the carriage 9 is a tubular upright 11 which affords an extended bearing for a rotatable shaft 12 surmounted by a collar 13 having the spider arms 14 which carry suitable rack bars 15, the construction being such that the rack bars 15 and their supporting shaft 12 may be rotated under conditions to be hereinafter described to present either side or any portion of the rotatable supporting rack in position for inspection of the goods carried thereby.

With respect to the parts thus far described, various modifications may suggest themselves to those skilled in the art, the essentials being that a suitable case be provided and that a garment supporting rack may be movable to and from a position within the case and be rotatable to present garments at either side of the rack to the front, as will be presently described, the details of these parts being immaterial to the true scope of the present invention which is pointed out in the claims.

The present invention contemplates means whereby as the rack is moved to and from its position within the case, its rotative movement may be so controlled that the rack will not strike or injure the case; that is, the rack is permitted to freely turn more or less on its vertical axis as it is moved to and from its position within the case, but such free turning movement is limited or controlled so that the rack will not strike or break the case as it is bodily moved to or from its position within the case. In the form of the invention shown, the rack is permitted to turn on its vertical axis when it is at its front position so that the garments hung on either of the supporting bars of the rack may be turned to the front for inspection, and said rack is permitted to turn more or less on its vertical axis as it is bodily moved to or from its position within the case, but this rotative capacity of the rack as it is being bodily moved to and from its position within the case is limited and con-

trolled so that the rack and its connected parts cannot strike the case and cause injury thereto. When the rack is at its inner position within the case, the invention contemplates that it shall be prevented from free rotative movement, and in the form of the invention to be described it further contemplates that the supporting bars on which the garments are hung shall be positioned parallel with the back wall of the case when the rack is at such inner position.

As one convenient form of means for carrying the invention into practical effect, a flange or guide 16 is secured to a convenient part of the case, and since said part serves to limit or control the rotative capacity of the rack as it is being moved to and from its position within the case, and when it is in position within the case, it may, for identification, be designated a controller.

The form of the controller 16 may be variously devised and its location in the case may be variously changed, but a good practical form of the invention is indicated in Fig. 1, wherein the controller 16 is secured to the case below the false bottom 7 by means such as the securing bolts 17. Co-acting with the controller 16 is means connected to the rotatable rack which, by engagement with the controller as the rack is moved bodily toward and from its position within the case, prevents the rack from contacting with the case as it is thus moved to and from its inner position, as indicated in Fig. 1.

In the present form of the invention, said means which co-acts with the controller is formed as an arm 18 having a roller or projection 19 at each end, said arm being, in the present form of the invention, secured to rotate with the shaft 12 connected with the rack. The disposition of the controller which is secured to the case and the part which is connected to the rack for co-acting therewith below the false bottom 7 of the case obscures these mechanical parts, but it is obvious that they might be placed above the floor 7 and yet perform their functions equally as well. From the drawings it will be apparent that the general form of the controller 16 is such that when the rack is being moved rearwardly or to its position within the case, one of the rollers or projections 19 connected to the rotatable rack will co-act with the controller 16 so that as the rack is moved toward and from its inner position, it will be prevented from striking the case and will finally come to rest in its rear position with the rack bars substantially parallel to the back wall of the case, as clearly indicated in Fig. 1. From the construction described, it will be clear that the degree to which the rack may be turned or rotated as it is being moved to and from its position within the case will depend, of course, upon the particular shape or form of the controller 16, but regardless of its particular shape, the controller 16 acts in conjunction with a part connected to the rotatable rack to insure the rack shall be turned in such position when it is moved inwardly of the case that it will not strike the latter and cause injury thereto. The construction is such that should the rack bars 15 when the rack is in its outer position be parallel to the rear wall of the case, the rack could be moved directly into the case to its inner position without rotative movement, but should the rack bars 15 be non-parallel with the rear wall of the case, in which position they would be liable to strike and break the rear wall of the case should the rack be moved into the case at such time, then if the rack is moved toward its inner position, the controller will insure that the rack shall be rotated as it is moved bodily into the case.

When the rack is at its inner position, the controller acts to prevent rotative movement of the rack, and only permits such rotative movement when the rack is moved away from its inner position, and then confines such rotative movement to limits which will not cause injury to the case. In the particular form of controller shown, it may be provided with a contracted bearing, such as 20, to co-act with one of the projections or rollers 19 to prevent rotative movement of the rack when it is at its inner position, although it will be obvious that different forms of controllers might be used within the true scope of the present invention to secure this end in conjunction with a part connected to the rack.

From the position within the case, the rack may be drawn directly to the front and the guide controller 16 is provided with an interlocking slot 21 so that when thus moved, one of the rollers 19 will engage the slot 21 to retard free rotative movement of the rack. While such retardation to rotative movement of the rack is thus effected, when the rack is in front position, yet by slight force the rack may be rotated when in front position, as will be clear to those skilled in the art.

When the rack is moved to front position, it is desirable that it shall not move backward in the case by unintentional force exerted to that end as the rack is rotated. As one means to this end, the present invention contemplates gravity retarding means to free bodily movement of the rack to its inner position. In the present form of the invention this is secured by giving to the trackways 6 a downwardly inclined portion 22, Figs. 2 and 3, so that when the roller 10 at the front portion of the carriage moves from the apex 23 and down the incline 22, the carriage, and perforce the rack, will be held in its outer position against any incidental or unintentional force tending to move the rack

inward with reference to the case. On the other hand, when it is intentionally desired to move the rack inward, the attendant can by exerting force upon the rack move the roller 10 up the incline 22 and cause the carriage to move backward or into the case. Likewise when the rack is within the case it is desirable that it shall not be too freely movable toward the front of the case, and to this end the trackways 6 are provided with another incline 24 leading backwardly into the case, so that when the front roller 10 of the carriage is passed inwardly over the apex 23 of the trackways 6, the carriage will tend to move inwardly of the case to its inner position and will remain there.

From the construction described, it will be apparent that the present invention affords means whereby a rotatable rack may be moved to and from a position within the case and be more or less turned as it is thus moved, the construction being such that such turning movement is controlled by the controller so that the case shall not be injured by contact between it and the rack. Furthermore, when the rack is moved to its inner position, it will tend to remain there due to the action of the incline 24, and, when moved to its outer position, will tend to remain in such position by virtue of the incline 22 of the trackways 6. Obviously, when the rack is moved to its inner position, one of the rollers 19 secured to the rotatable rack will seat itself in the seat or contracted portion 20 of the guide controller, and when moved directly outward, one of said rollers may likewise contact with and be seated in the recess 21 of the track controller, said recess, however, acting only to retard too free rotative movement of the rack which, by suitable force applied, may be rotated, the rack under such conditions retreating slightly to disengage the roller 19 from the recess 21. Likewise it will be obvious that the guide controller, while permitting rotative movement of the rack as it moves inward and outward of the case, will guide such rotative movement to the end that the rack will not contact with or break the case.

While the details hereinbefore pointed out serve as a convenient form of the present invention, it is obvious that the controller and the part of the rack coacting therewith may be variously formed, the essentials being that these two parts shall co-act and prevent contact of the rack bars with the case while the rack is moved to and from its inner position, said parts permitting rotative movement of the rack within prescribed limits determined by objectionable contact of the rack bars with the case. It will likewise be clear to those skilled in the art that the controller and the part connected to the rack and coacting therewith may be otherwise disposed with reference to each other and the case or carriage, said details being capable of variation within the knowledge of those skilled in the art.

I believe I am the first in the art to provide a store display device wherein a rotatable rack is movable to and from a position within a case, and is rotatable when at the front of the case to present goods at all sides of the rack, and wherein means are provided to insure rotative movement of the rack into a position of non-injurious contact with the case as it is bodily moved into the case.

What is claimed is:

1. In a display device, the combination of a case or compartment, a rotatable rack movable to and from a position within the case or compartment and capable of being rotated when in outer position, and a controller and a member co-acting therewith, one secured to the case and the other to the rotatable rack to permit rotative movement of the rack and prevent contact with the case as the rack is moved to and from its position in the case or compartment.

2. In a display device, the combination of a case or compartment, a rotatable rack movable to and from a position within the case or compartment and capable of rotative movement when in outer position, a controller connected to the case and having a curved side portion, and a member secured to the rotatable rack and riding said curved portion of the guide controller to permit limited rotative movement of the rack as it is moved to and from position within the case or compartment.

3. In a display device, the combination of a case or compartment, a rotatable rack movable to and from a position within the case or compartment and capable of rotative movement when in outer position, a controller secured to the case and having a curved side portion, and a member secured to the rotatable rack and riding along said curved portion of the controller to permit limited rotative movement of the rack as it is moved to and from position within the case or compartment, said controller and member having engaging portions to prevent rotative movement of the rack when in inner position.

4. In a display device, the combination of a case or compartment, a carriage movable to and from a position within the case or compartment, a rack free for rotative movement and mounted for movement with the carriage, a controller secured to the case, and a member rotatable with the rotatable rack and engaging said controller to permit rotative movement of the rack and prevent contact with the case as the rack is moved in and out of the case.

5. In a display device, the combination of a case or compartment, a rack free for rotative movement and movable to and from a

position within the case or compartment, a controller secured to the case or compartment and having a curved side portion, and a member secured to the rotatable rack and movable with relation to the controller as the rack is moved to and from position within the case or compartment, said controller and member acting to permit rotative movement of the rack as it is moved to and from position within the case and permitting the rack to be rotated when in front position.

6. In a display device, the combination of a case or compartment, a rotatable rack movable to and from a position within the case or compartment and capable of being rotated when in outer position, a controller and a member co-acting therewith, the one secured to the case and the other to the rotatable rack to permit rotative movement of the rack and prevent contact of the rack with the case as the rack is moved to and from its position in the case or compartment, and acting when the rack is in position within the case to prevent rotative movement of the rack.

7. In a display device, the combination of a case or compartment, a rack rotatable to present all parts of the rack for inspection when in outer position, a controller secured to the case, and an arm freely rotatable with the rack when in outer position and adapted to engage said controller as the rack is moved into the case to insure rotative movement of the rack into a position to prevent contact of the rack with the case, said controller having stops to engage said arm and prevent free rotative movement of the rack when in inner or outer position.

8. The combination with a case or cabinet, of a rack having a rotatable member, said rack movable to and from a position within the case or cabinet, of means guarding the case or cabinet from contact with the rotatable member of the rack, said means permitting complete rotation of the rotatable member of the rack when the rack is in its front position in the case or cabinet, and partial rotation at the positions of the rack between its front and rear positions in the case or cabinet.

9. In a display rack, the combination with a case, of a rack mounted to reciprocate therein and provided with a rotatable member, and a guide engaging said rotatable member to prevent rotation thereof when within the case, the sides of said guides being divergent toward the outer end and disposed to permit rotation of the rack when in the outer position, and to guide the same to its inner position and limit its rotation to prevent contact of the rack with the walls of the case.

10. The combination with a case or compartment, of a rotatable rack, a carriage for carrying said rack to and from a position within the case or compartment, a cross bar carried by said rotatable rack, and a guide with sides diverging at the front of the case, disposed to permit rotation of the rack when in the front position and to engage and guide said rack to the inner position and limit its rotation to prevent contact of the rack with the walls of the case.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ANTHONY VANDERVELD.

Witnesses:

DOUGLAS M. RAY,

PAUL T. SHADE.