

A. VANDERVELD.
BOLT FOR SHOW CASE DOORS.
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972,949.

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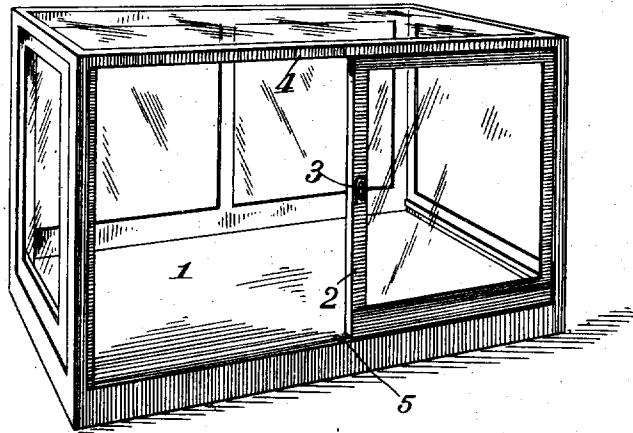


FIG. 1.

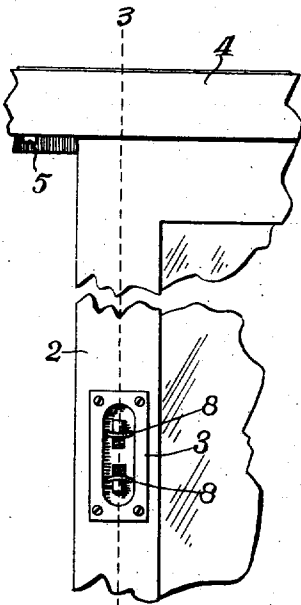


FIG. 2.

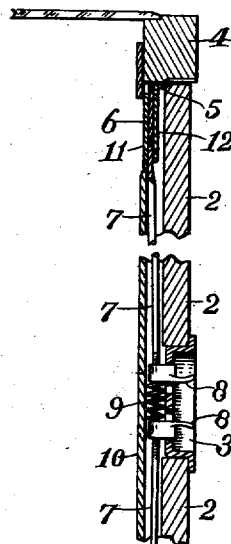


FIG. 3.

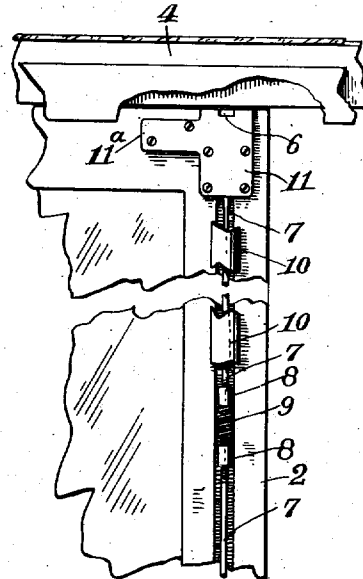


FIG. 4.

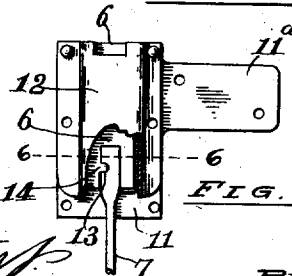


FIG. 5.

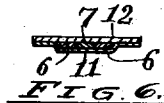


FIG. 6.

Witnesses
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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.

BOLT FOR SHOW-CASE DOORS.

972,949.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ANTHONY VANDERVELD, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Bolts for Show-Case Doors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in bolts for show case doors, and more particularly to bolts suitable for disappearing doors of show cases, and its object is to provide a device having various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings in which:

Figure 1 is a perspective of a show case having my device applied thereto; Fig. 2 a detail in front elevation on an enlarged scale; Fig. 3 the same in vertical section on the line 3—3 of Fig. 2; Fig. 4 an elevation shown in reverse of Fig. 2 with parts broken away; Fig. 5 an enlarged detail of a portion of the device shown in elevation; and, Fig. 6 a horizontal section of the same on the line 6—6 of Fig. 5.

Like numbers refer to like parts in all of the figures.

1 represents a show case of any convenient construction and dimensions and preferably having a disappearing door 2 adapted to turn at right angles to its closed position and to run inward within the case. However, the device will obviously operate the same on a door hinged in the usual way.

3 is a recessed plate midway of the stile of the door 2, within the recess of which are the thumb pieces 8.

4 is the front upper rail of the frame to the show case on which is mounted a detent 5 to engage the flat bolt 6 and hold the door in closed position. A like detent 5 is also provided at the bottom of the case to engage a corresponding bolt 6, it being understood that the device is in duplicate at the top and bottom of the door, the top portion complete and a part of the lower portion only being shown.

7 is a rod connected at the upper end to the

bolt 6, as illustrated in Figs. 5 and 6. For this purpose the upper end of the rod is flattened, provided with a lateral recess 13, and inserted in an opening in the lower end of the bolt provided with a projection 14 in the opening to engage the recess in the rod.

The bolt 6 is slidable between a base plate 11 and a cap plate 12. The base plate 11 is secured to the stile of the door and has an arm 11^a secured to the top rail of the door, whereby the corner of the door is strengthened by this plate. The cap plate 12 has its middle portion spaced apart from the plate 11, and the bolt 6 and upper end of the rod 7 are slidable in this space between these plates. The upper ends of these plates are also recessed to permit them to pass the detent 5.

The stile of the door 2 is preferably grooved to receive the rod 7, and the device extends from top to bottom of the same.

The adjacent ends of the rods 7 are provided with thumb pieces 8 projecting through slots in the plate 3 in which they are movable toward and away from each other.

9 is a spring between the thumb pieces which yieldingly forces the same apart and the bolt 6 into engagement with the detents 5.

10 is a strip on the inner surface of the stile of the door 2 to cover the rods and spring and the rear of the thumb pieces.

What I claim is:—

1. In a bolt for show case doors, a bed plate, a cap plate superposed on the bed plate and having its middle part spaced apart from the same, a flat bolt slidable between the plates having a recess and a projection extending into the recess, and a rod having a flat end provided with a lateral recess to receive the projection, said flat end of said rod being inserted in the recess of the bolt and retained therein by the plates.

2. In combination with a door having a groove extending throughout one side of its stile, bed plates covering the respective ends of the groove, cap plates covered by the bed plates, a flat bolt slidable between each pair of plates and having a recess provided with a lateral projection, a rod for each bolt having a flat end inserted in the recess of the bolt and provided with a lateral recess to receive the said projection and also

extended in said groove to near the middle thereof, a recessed plate in the stile opposite the adjacent ends of the rods and having slots, thumb pieces movable in the slots
5 and attached to the respective rods, and a spring in the groove between the thumb pieces.

In testimony whereof I affix my signature in presence of two witnesses,

ANTHONY VANDERVELD.

Witnesses:

GEORGIANA CHACE,
LUTHER V. MOULTON.