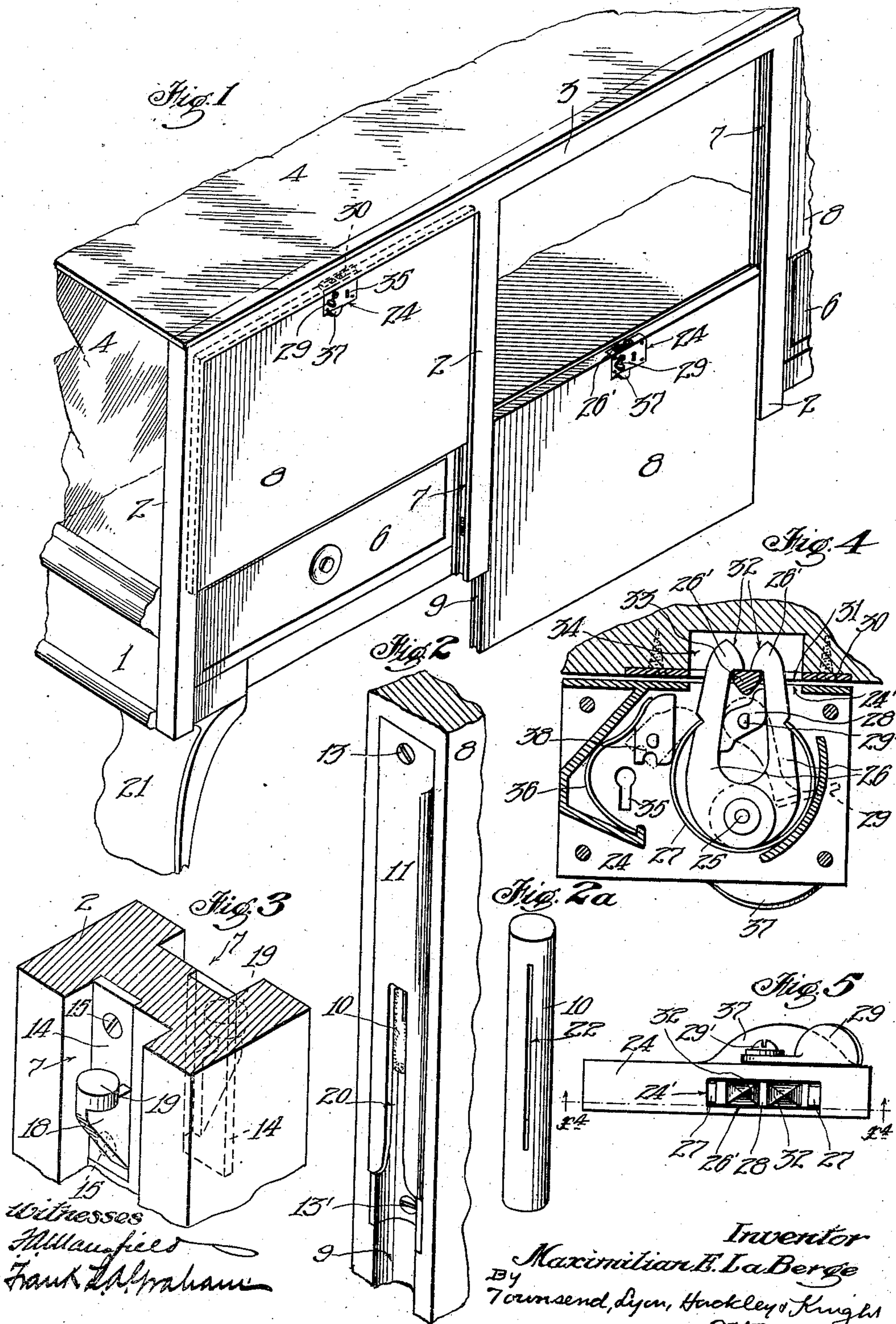


No. 845,729.

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M. E. LA BERGE.
SLIDING DOOR CONSTRUCTION FOR SHOW CASES.
APPLICATION FILED APR. 12, 1906.



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UNITED STATES PATENT OFFICE.

MAXIMILIAN E. LA BERGE, OF LOS ANGELES, CALIFORNIA.

SLIDING-DOOR CONSTRUCTION FOR SHOW-CASES.

No. 845,729.

Specification of Letters Patent.

Patented Feb. 23, 1907.

Application filed April 12, 1906. Serial No. 311,295.

To all whom it may concern:

Be it known that I, MAXIMILIAN E. LA BERGE, a citizen of the United States, residing at Los Angeles, county of Los Angeles, State of California, have invented a new and useful Sliding-Door Construction for Show-Cases and the Like, of which the following is a specification.

This invention relates particularly to a sliding-door construction for show-cases such as are used by jewelers and others where the rear of the show-case has a number of vertically-sliding doors that can be let down to give access to the case or can be raised to close the case; and the main object of the invention is to provide means for convenient operation of the door, for locking the door in closed position, and for obviating any lateral wear on the guideways for the door.

The invention further relates to means for arresting the downward movement of the door in such manner as to avoid any jar or wear on the door and other parts and to avoid the friction of the usual side springs.

While particularly intended for use with show-cases as described, the invention is not limited to such invention and may be used in other constructions.

Another object of the invention is to enable the sliding door to be dropped as far as desired, even to or below the floor of the case, which is not possible with the usual stop.

The accompanying drawings illustrate the invention. Figure 1 is a perspective of a portion of the show-case, showing the sliding doors applied thereto. Fig. 2 is a perspective of a portion of one edge of the door, showing the arresting buffer or stop therein. Fig. 2^a is a perspective of the buffer. Fig. 3 is a perspective of a portion of the guide for the edge of the door, showing the stop to engage said buffer. Fig. 4 is a vertical section of the lock for the door on the line $x^4 x^4$, Fig. 5. Fig. 5 is a plan of the lock.

The show-case comprises a base portion 1, from which extends posts or standards 2, connected by top rail 3, glass plates 4 being supported by these parts in the usual manner. In the base portion 1 of the case are mounted drawers 6, sliding in guideways between the respective posts 2. Said posts 2 are formed with vertical grooves 7, in which slide the doors 8, of which there may be any desired number. Each door is formed at each edge or end with a groove 9, preferably semicircular, to receive a buffer device con-

sisting of a rubber plug or cushion 10, contained in a cylindrical case or shell 11, fitting in said grooves and flattened at its upper end to receive a screw 13, whereby it is fastened to the door, a screw 13' being used to fasten the lower end. A plate 14, secured by screws 15 in the guide groove or way 7, has extending therefrom a bracket or rib 18, formed with a circular enlargement 19, adapted to enter and traverse the cylindrical bore of the shell 11 and to engage the buffer 10 therein, the said shell having a vertical slot 20 for the passage of the rib 18. The buffer preferably consists of a cylindrical plug of soft rubber suited, as shown at 22, to enable the plug to yield more readily in the endwise compression thereof.

The lower ends of the guideway-grooves 7 are open at the bottom, so that on removing the stops 14, &c., the door can be slid down and removed from the case. The drawers 6 are mounted in the case in such manner that when pushed in they will clear the vertically-sliding door, so that the latter can slide down in front of or outside of them, the show-case base 1 being mounted on legs or supports 21, so that the sliding doors can move below the bottom of the case.

In a sliding-door device of this nature the single-jaw locking or catch devices have generally been such as to produce lateral pressure on the door when the jaw strikes the door-plate and even when locked or caught in its closed position, giving an uneven wear on the running edges of the door and tending to cant the door, so that it is more liable to bind in the guideway. To obviate these difficulties, I provide a catch which operates without any lateral strain and supports the door by direct vertical suspension. The lock or catch comprises a case 24, in which are pivoted at 25 catch-arms 26, which extend upwardly and project through a slot 24' in the upper end of the case 24, the upper ends of said arms being hooked, as shown at 26', on their adjacent sides. A spring 27 acts on said arms to throw their hooked ends toward one another, and a cam device 28, mounted on an arbor 29', extending through the case 24 and provided at its outer end with a handle 29, operates to separate said arms to withdraw the hooks from one another. On the upper rail 3 of the show-case frame is provided a hasp-plate 30, having openings 31 for the passage of the hooked arms 26, and an intermediate wedge portion

33 between said openings, said plate being fastened to the said rail by screws and a recess 34 being provided in said rail to receive the upper ends of the hooked arms 26. Said upper ends of hooked arms 26 are beveled or rounded on their adjacent faces, as shown at 32, to engage with the wedge projection 33 on the hasp-plate and cause the arms to separate in the upward movement thereof, so as to enable them to slide into the respective openings 31.

In case it is desired to lock the show-case to prevent access thereto the lock-case 24 may have a key-slot 35 to receive a key for engaging a locking-detent 38, which when operated by the key moves from the full-line position shown in Fig. 4 to the dotted-line position to engage and hold one of the hooked arms 26 from operation, so that it cannot be disengaged from the hasp, a spring 36 engaging said arm 38 to hold it in either locking or unlocking position.

When the door is raised, as by means of a finger-piece 37 on the lock-case, the beveled faces 32 of arms 26 strike the wedge portion 33 of the hasp-plate, said arms being thereby deflected and separated to cause them to enter the respective openings 31. As soon as the hooks 27 on said arms have passed the hasp-plate they will be thrown inward by the spring 28 and will engage above the top of the hasp-plate, so that when the operator leaves go of the handle 37 the door will be caught in its raised position and will

hang from its point of support on the hasp. This catch device being located centrally of the width of the door, it follows that when the door is suspended in this manner there is no endwise cant or strain on the parts of the door and frame, with the result that not only is the wear due to such sidewise strain done away with, but the door is left in position to drop freely and without binding as soon as the catch is released. Such release is effected by operation of the handle 29, supporting the hooked arms, as above set forth, and the door falling freely is caught when it reaches the lower limit of its movement by means of the elastic buffer device 10.

What I claim is—

A frame having vertical grooves forming a guideway, a door mounted to slide vertically in the guideway with its edges engaging in said grooves, said edges being vertically grooved, a case secured in each vertical groove of the door, said case having a vertical slot, a vertically-slit rubber buffer-plug mounted in each case, and a fixed stop secured in each guideway-groove to extend in the adjacent door-groove and buffer-case, and to engage the buffer therein.

In testimony whereof I have hereunto set my hand, at Los Angeles, California, this 5th day of April, 1906.

MAXIMILIAN E. LA BERGE.

In presence of—

ARTHUR P. KNIGHT,
VERNA A. TALBERT.