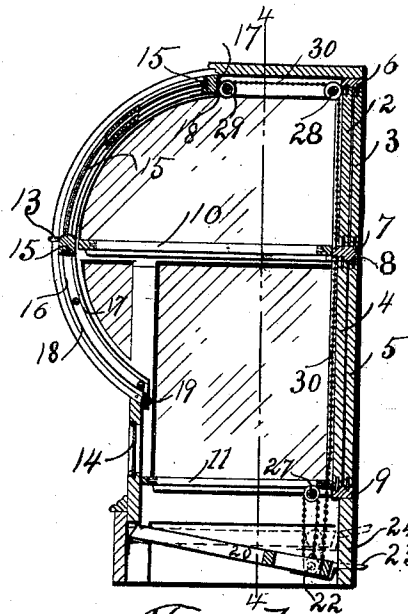
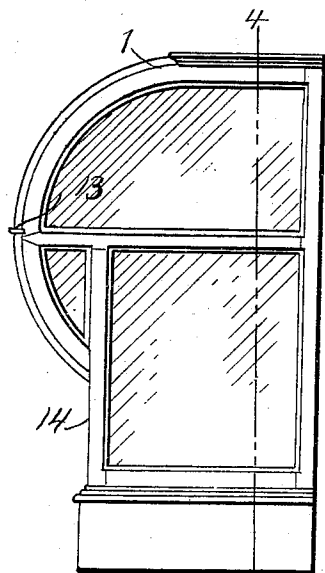
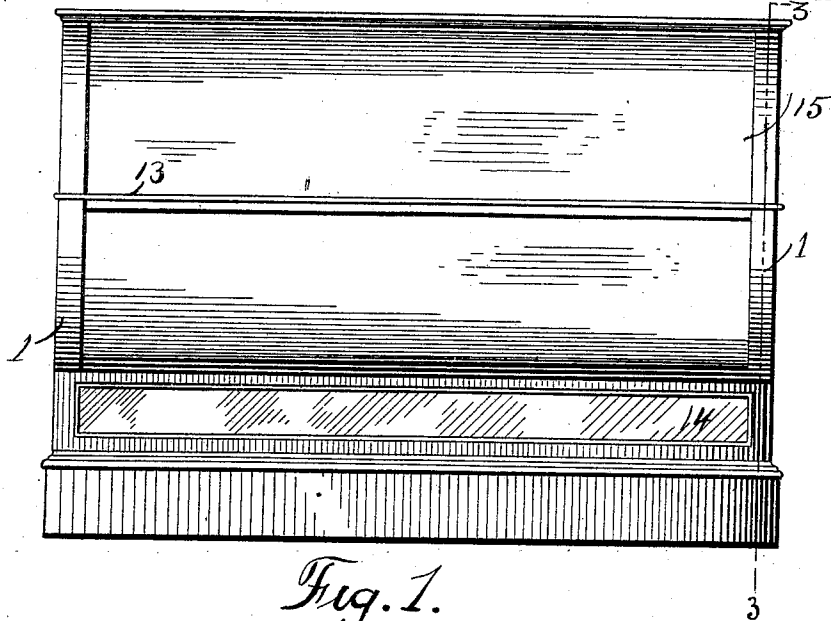


B. W. LUDEMAN.
 SHOW CASE.
 APPLICATION FILED MAY 6, 1909.
 933,570.
 Patented Sept. 7, 1909.
 2 SHEETS—SHEET 1.



Witnesses
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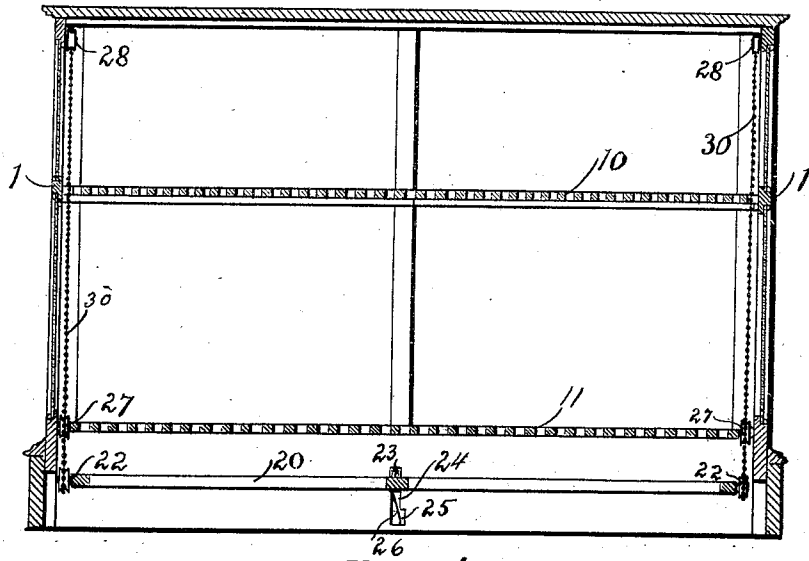


Fig. 4.

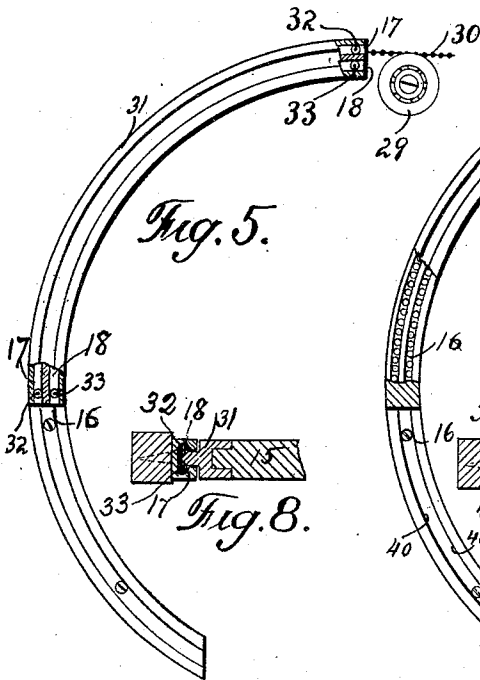


Fig. 5.

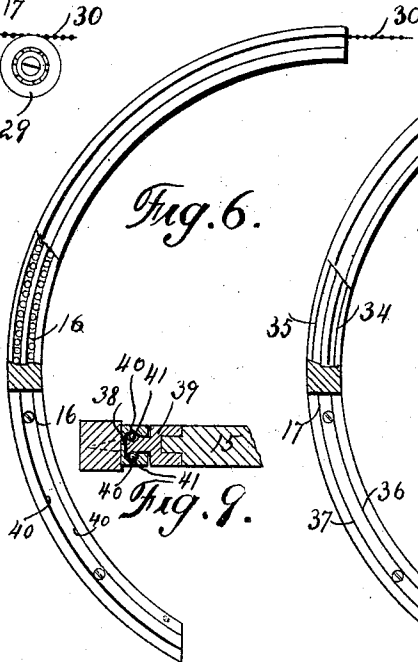


Fig. 6.

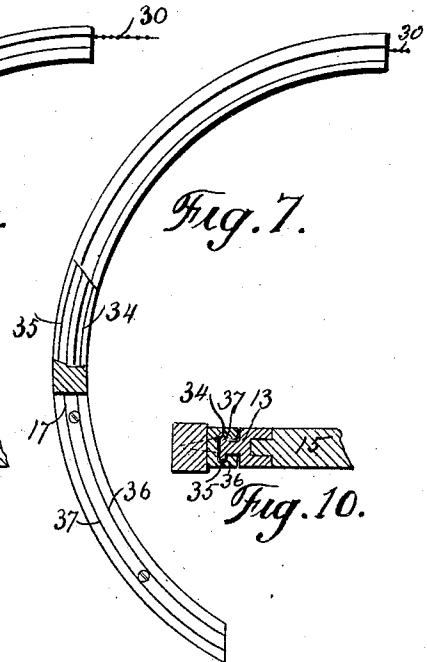


Fig. 7.

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UNITED STATES PATENT OFFICE.

BERNARD W. LUDEMAN, OF EL CAMPO, TEXAS.

SHOW-CASE.

933,570.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed May 6, 1909. Serial No. 494,323.

To all whom it may concern:

Be it known that I, BERNARD W. LUDEMAN, a citizen of the United States, residing at El Campo, in the county of Wharton and State of Texas, have invented certain new and useful Improvements in Show-Cases; 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.

This invention relates to show cases and particularly to that kind of show case having a revolving front door. Its object is to obviate the necessity of having to remove the goods from the case, as in the case of cigars, etc., spread them on the top of said case and then replace them inside the case. This operation is very damaging to some classes of goods.

Another object of this invention is to facilitate service upon customers. This and other objects are all accomplished by the construction and combination of parts, hereinafter set forth and claimed.

In the accompanying drawings, in which like characters designate like parts throughout, Figures 1 and 2 represent respectively a front and end elevation of a device embodying my invention; Fig. 3 represents a longitudinal vertical sectional view on the line 3—3 of Fig. 1; Fig. 4, a vertical sectional view on the line 4—4 of Figs. 2 and 3; Figs. 5, 6 and 7 represent detail views of three forms of the door guiding devices; Figs. 8, 9 and 10, represent cross-sectional views on Figs. 5, 6 and 7 respectively and part of the frame door.

1 designates the frame of said case which may be of wood, metal or any other suitable material. Said frame has sliding doors, 2, 3, 4 and 5, mounted upon tracks 6, 7, 8 and 9 running lengthwise of the back of the case and said doors moving upon said tracks in a longitudinal direction. Shelves 10 and 11 are mounted within said case for supporting the wares displayed therein, only one of said shelves, however, being accessible by means of the sliding door 15 herein-after referred to. The top part of the front of said case is made in the form of a semi-circle 13 in cross section and has a bar 13, dividing said top part into two equal parts from end to end. A glass window 14 is mounted in the lower half of said top part, while the upper half is left open, being

provided with the sliding door 15 to close it. This door slides through part of a revolution. The ends of the semi-circular part 13 of said case are provided with groove tracks or guide ways 16, which in turn have grooves 17 and 18 on the internal faces of their front and rear walls. These tracks 16 may be made integral with the show case, or they may be made separately and fastened in said case as shown in the drawings. A rubber stop 19 is mounted on the inner lower edge of said semi-circular part, midway its length. A rocking-frame 20 is mounted in the bottom of the case, below the bottom shelf, by hinges and has a roller 22 mounted near its rear on each end and a pivoted pedal 23 mounted in the middle part of the length of its rear. 24 designates a vertical slot in the middle of the lower back part of the case, through which said pedal 23 works, and having a lateral extension 25, with its top at or near right angles to the side of the said slot 24, at or near its bottom, and a spring 26 mounted upon its opposite side, and extending from near the top to the bottom of said slot. 27 designates a ball-bearing pulley mounted on the inside of each end of said frame 1 of the case a little above the rocking-frame 20 when in its highest position. 28 designates a similar ball-bearing pulley mounted on the inside of each end at the top near the rear, and 29 a similar pulley mounted on the inside of each end of the frame, a little to the rear of the top of the semi-circular formed part 13, the groove of the said pulley 29 being directly behind and in line with the grooves 17 and 18 in the groove track 16.

30 designates a steel tape or cord, fastened near each end of the rear of the rocking frame 20. This cord 30 is then passed up forward over pulley 27, down rearwardly over pulley 22, up to the rear of pulley 27, over pulley 28, then over forward pulley 29, and is then fastened in any suitable manner to the revolving door 15. This door 15, above mentioned, is so curved that its ends will slide in the groove tracks 16. Plates 31 having wheels 32 and 33 mounted near each of their ends, are screwed or otherwise fastened to the ends of the said door 15, said wheels being so mounted that wheels 32 (Figs. 3, 5 and 8) will operate in groove 17 and wheels 33 in groove 18 of the said groove track 16. I may have projections 34 and 35, instead of the wheels 32 and 33 to work in

the grooves 17 and 18 respectively, (see Fig. 10) or I may have yet another form (see Fig. 9) in which the plates 31 are provided with grooves, 36 and 37, in the front and rear respectively, said grooves when in operative position being directly opposite the grooves 17 and 18 respectively in the groove tracks 16. Lugs 38 project across the bottom of said grooves from the bottom of the grooves in plate 31 and lug 39, provided with slots 40, attached to said plate 31, project across the top of said grooves. The steel tapes or ropes 39 are to be fastened in slots. The grooves 17 and 18, the grooves 36 and 37 and the lugs 38 and 39, when in combination will form two ball-bearing castings for each end of said door 15. 41 designates the ball-bearings to fit in said casing. This last is the preferred form. When it is desired to open the sliding door, the pedal 23 is pressed down and toward the spring, then the pressure is relaxed, and this relaxes the steel tapes or ropes 30, passing over the roller bearing pulleys 22, 27, 28 and 29. Such relaxation of pressure allows the door 15, which drops by reason of its own weight, to drop to its lowest position. When it is desired to close the door the pedal 23 is pressed down until below the top of the lateral extensions 25, when the spring will shift it to the side into said lateral extensions where it will bind against the top of, and be held in locked position by the lateral extension. When pressed down the space between the pulleys will be increased and as the tape loops these two pulleys, the length of tape thus taken up will be two and one half times the distance covered by the movement of the rocking frame, this will, of course, increase the power given to said pedal 32 by 2, therefore when the pedal has reached its lowest position, the door 15 will have covered in the same time, and by the same action a space two and one half times the space covered by the movement of the pedal 23 aforesaid.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A door sliding in a curvilinear path, in combination with a pedal, a rocking frame carrying said pedal, a series of pulleys, flexibly connecting parts extending from said frame over said pulleys to said door, for operating the latter, and a show case inclosing said frame and pulleys and supporting said rocking frame, pulleys and door, said show case being provided with curved guideways for the ends of said door, said pulleys being located in the operative line of connection between said rocking frame and said sliding door, substantially as set forth.

2. A show case provided with curvilinear guideways, having grooves in their front and rear faces, in combination with a sliding door having ends provided with parts which

slide in the said guideways, lateral parts which run in said grooves, a part provided with a pedal and pivoted to said case, and flexible means of connection between said pivoted part and said door, in order that the latter may slide upward as the pedal descends, substantially as set forth.

3. A show case provided with curvilinear guideways having grooves in their front and rear faces, in combination with a sliding door having ends provided with parts which run in said guideways and lateral parts which run in said grooves, a frame pivoted to said case, a pedal pivoted to said frame, a stop which said pedal is adapted to engage at will and flexible connections from said pedal to said sliding door in order that said door may rise as said pedal is depressed, substantially as set forth.

4. A depressible pedal, in combination with a door sliding in a curvilinear path, connections between said pedal and said door whereby the depression of said pedal raises said door and a show-case frame provided with curved guideways for the ends of said door, the said guideways being provided with grooves in their front and rear faces and the ends of the door being provided with rollers running in said grooves as the door moves up and down, substantially as set forth.

5. A show case frame, a rocking-frame, a pedal, pulleys and a sliding door sliding in a curvilinear path in combination with a chain or steel tape, fastened to said pedal passing up forwardly over a pulley, down rearwardly over a pulley, then up back of the first-mentioned pulley, over several more pulleys and fastened to the upper edge of the said door.

6. A depressible laterally movable pedal and a stop therefor adapted to engage said pedal when thus shifted laterally, in combination with a door sliding in a curvilinear path, connections between said pedal and said door whereby the depression of the former raises the latter, guideways for said door and parts on the ends of said door adapted to run in said guideways, substantially as set forth.

7. An inclosing case or frame, in combination with a pivoted frame arranged within and extending across the same, a door for said case sliding in a curvilinear path, two sets of pulleys, or rollers within said case, a pair of chains or equivalent flexible connections passing up from said pivoted frame over said rollers to said door, a pair of guideways attached to said case receiving the ends of said door and having grooves in their front and rear faces and revolving parts attached to the ends of said door and traveling in said grooves, substantially as set forth.

8. A sliding door adapted to be mechanic-

ally lifted but to descend by its own weight, in combination with a show case provided with guideways for said door, a rocking frame within said case, chains or tapes connecting said frame to said door, a pedal pivoted in said frame and adapted to be shifted sidewise, a stop provided to engage said lever when thus shifted and lock said lever and frame against rising and a spring acting to force said pedal laterally, the said case being provided with an opening to allow the protrusion of said pedal and to provide such a stop, substantially as set forth.

9. A sliding door adapted to be mechanically lifted but to descend by its own weight, in combination with a show-case provided with guideways for said door, a rocking part within said case, flexible devices connecting said part to said door in such manner as to raise the latter on the depression of said part, a pedal pivoted to said part and laterally movable, a fixed stop and automatically operating means for moving said pedal into position for engagement with said stop, substantially as set forth.

10. A sliding door adapted to be mechanically lifted but to descend by its own weight, in combination with a show-case provided

with guideways for said door, a rocking part, flexible devices connecting said part to said door in such manner as to raise the latter on the depression of said part, a pedal attached to said part and having same independent motion, a fixed stop and a spring tending to move said pedal into engagement with said stop, substantially as set forth.

11. A sliding door adapted to be mechanically lifted, but to descend by its own weight, in combination with a pivoted device, a show case provided with guideways for said door, flexible means of connection between said device and said door, a pair of pulleys attached respectively to said door and to the fixed part of the case above it and having said flexible means passed around them to increase the action of said door, and additional pulleys of the top of the case guiding said flexible means to said door, substantially as set forth.

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

BERNARD W. LUDEMAN.

Witnesses:

G. W. RIVES,
L. H. BEAL.