

No. 885,457.

PATENTED APR. 21, 1908.

A. R. DU BOISE & L. F. PERRY.

DISPLAY CABINET.

APPLICATION FILED MAY 7, 1906.

2 SHEETS—SHEET 1.

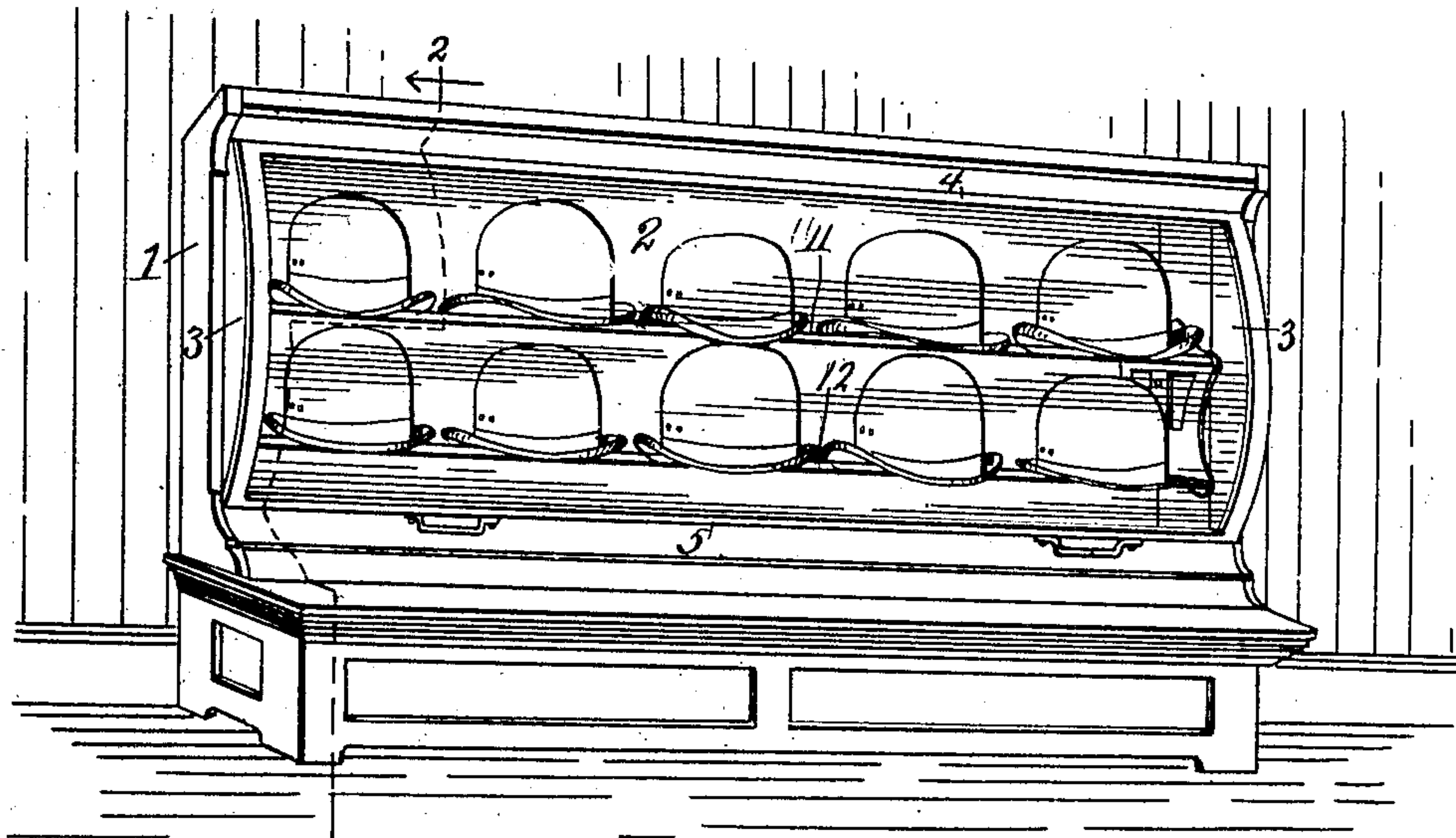


Fig. 1.

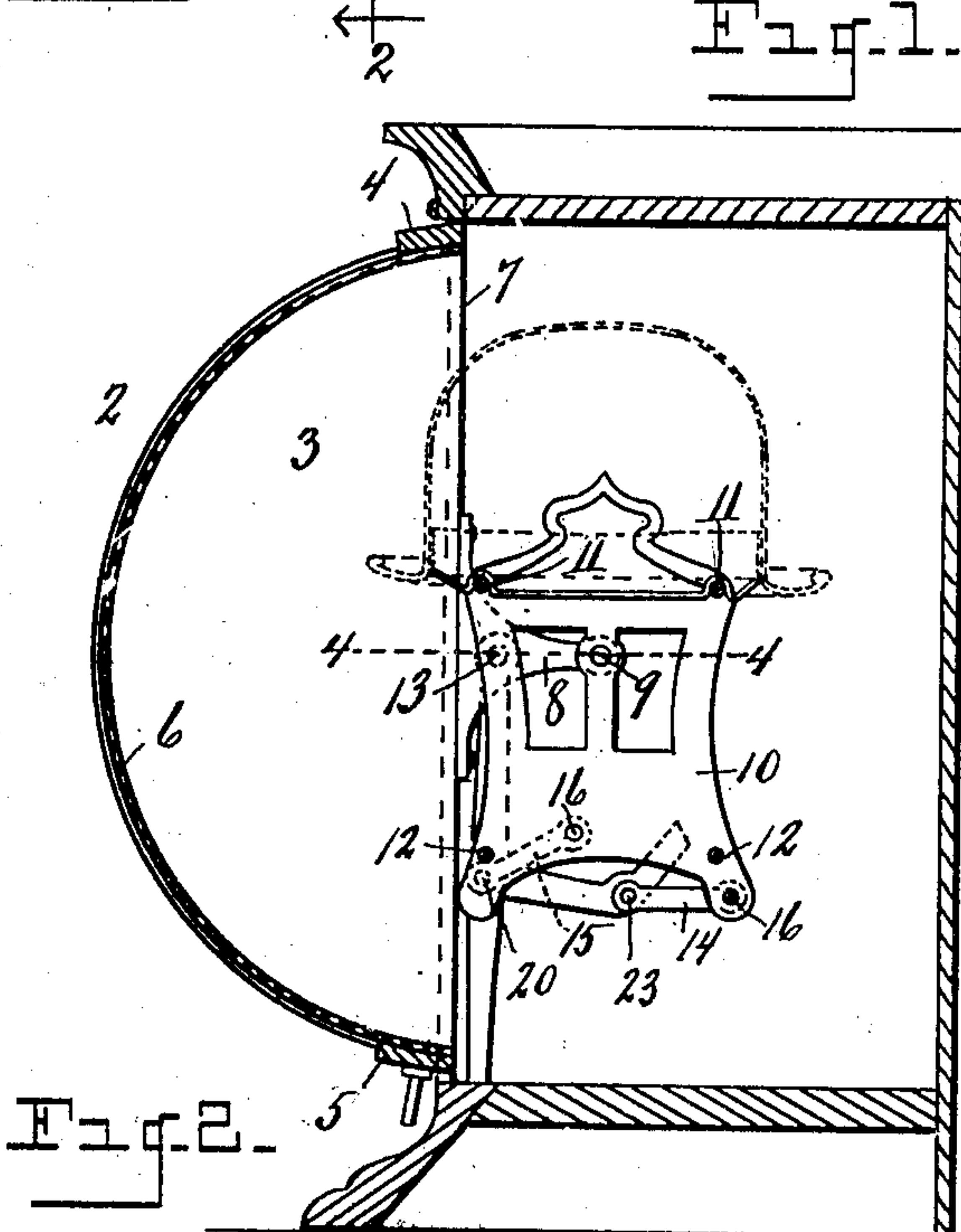


Fig. 2.

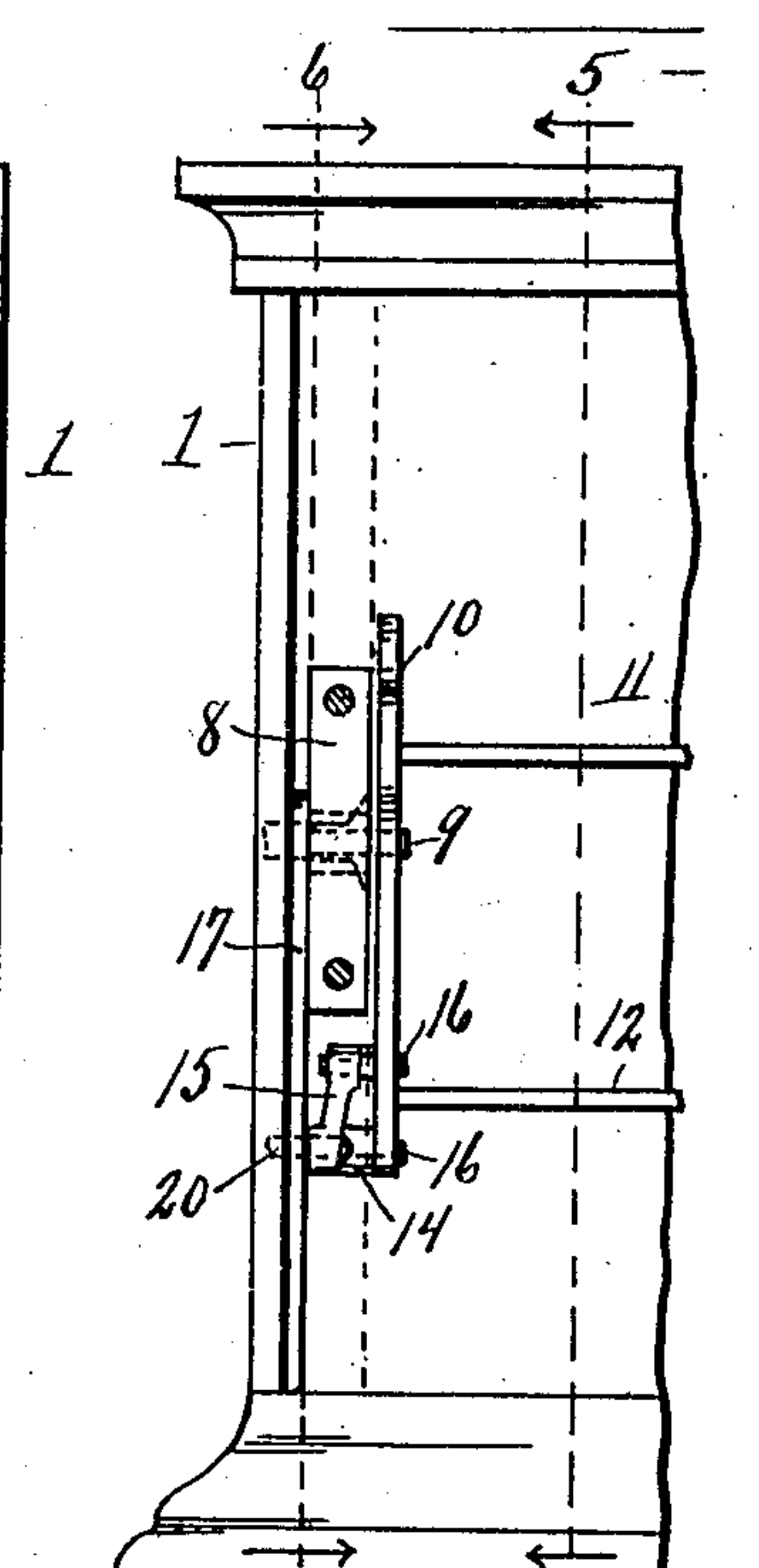


Fig. 3.

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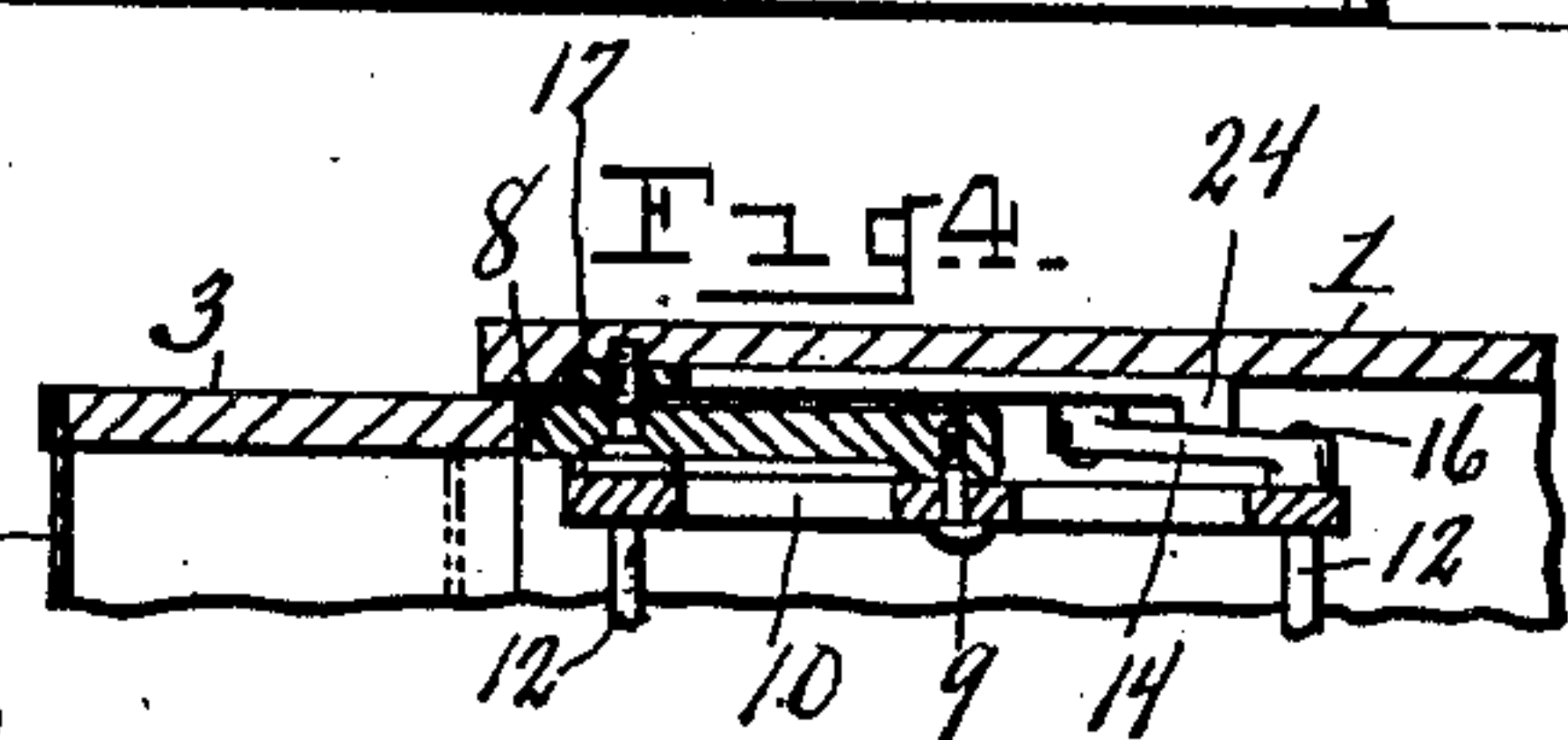


Fig. 4.

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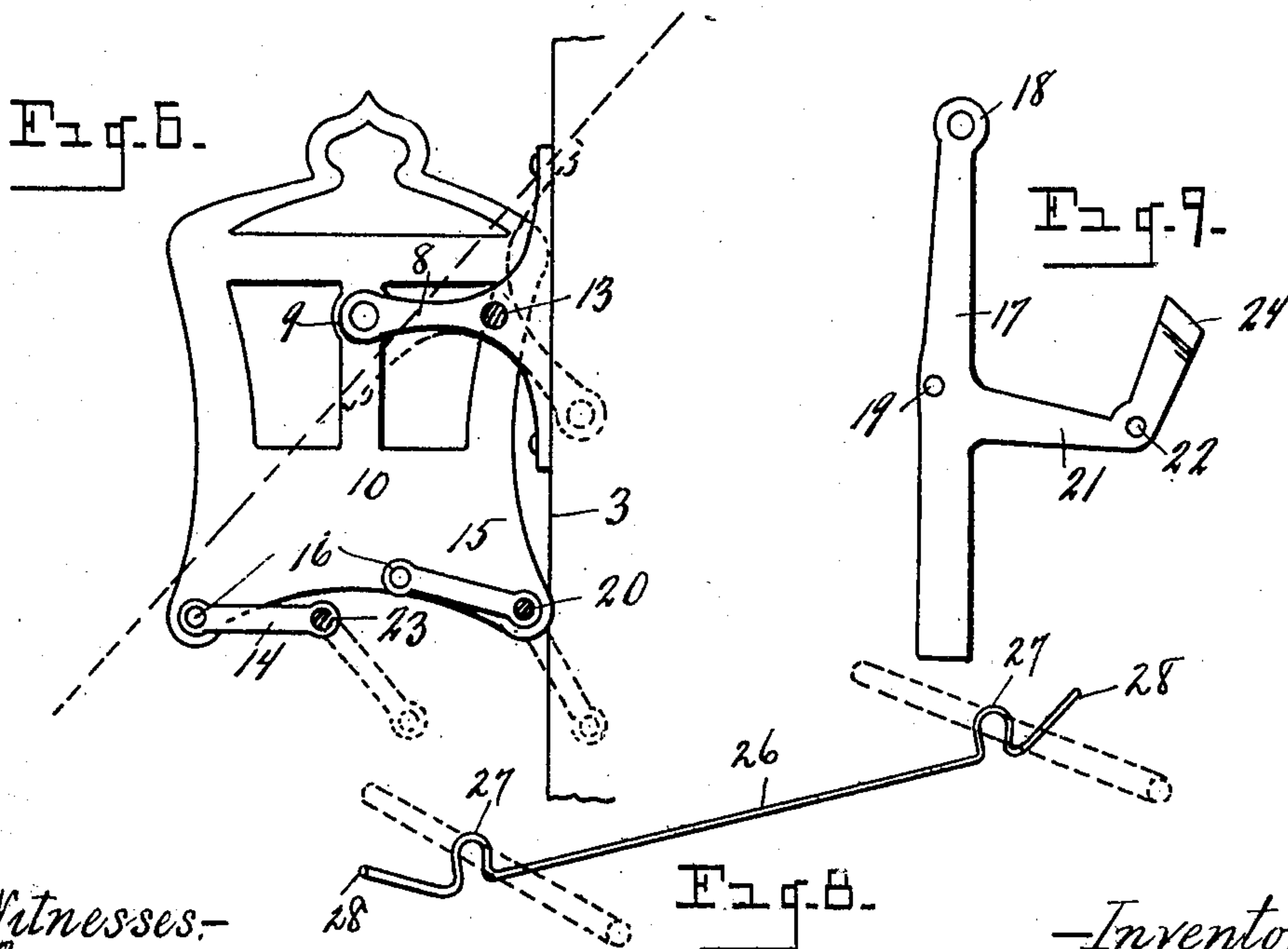
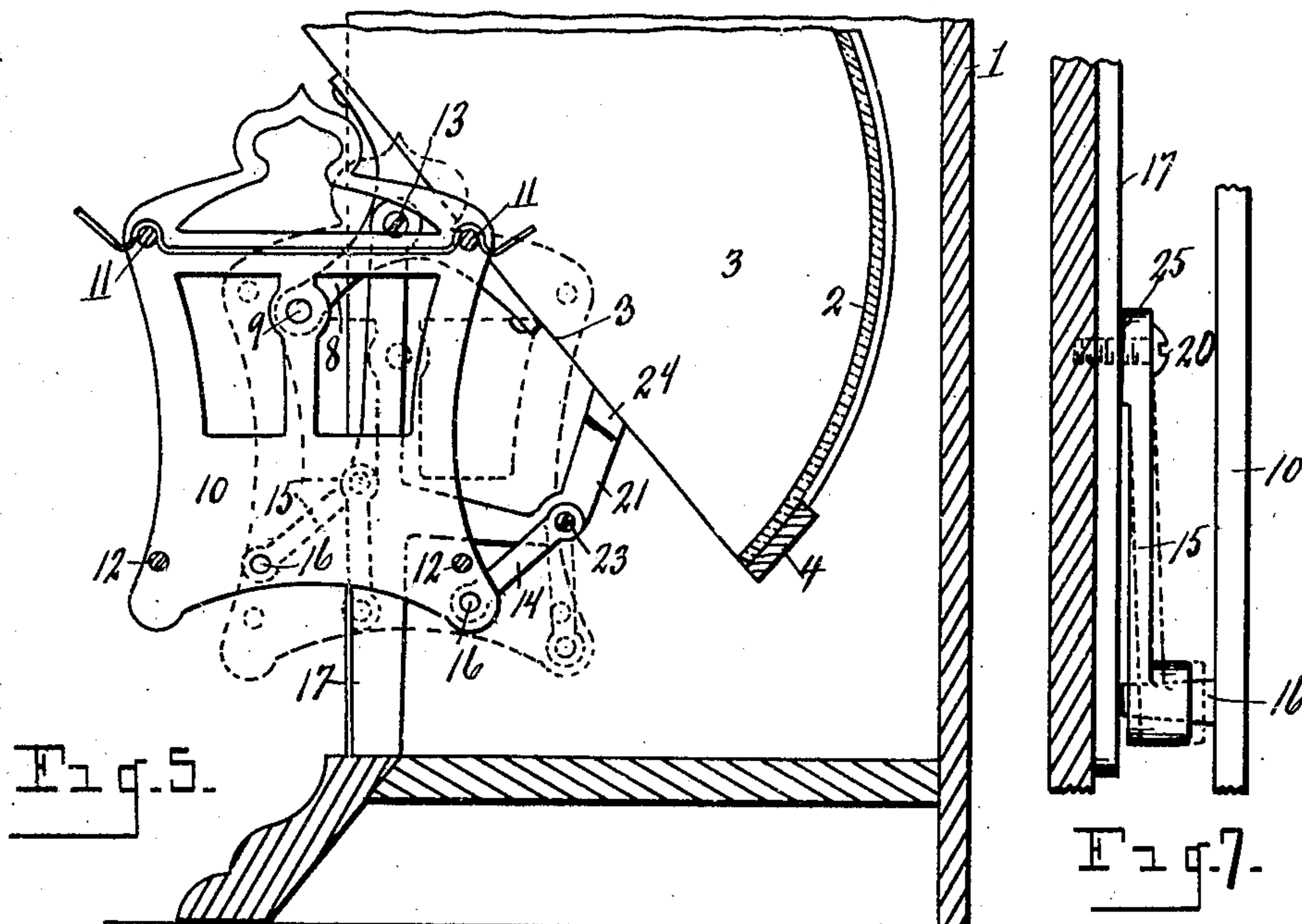
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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DISPLAY-CABINET.

No. 885,457.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed May 7, 1906. Serial No. 315,483.

To all whom it may concern:

Be it known that we, ALFONSE R. DU BOISE and LOUIS F. PERRY, citizens of the United States, residing at Flint, in the county of Genesee, State of Michigan, have invented certain new and useful Improvements in Display-Cabinets; and we do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a display case or cabinet, expressly designed for displaying hats, and consists in the construction and arrangement of parts hereinafter fully set forth and pointed out particularly in the claims.

The object of the invention is to produce a cabinet of the character described, wherein access to the cabinet is afforded by the rotation of a semi-cylindrical door which turns backwardly into the body of the cabinet, and in connection with which a movable supporting rack for the hats is so arranged as to be projected as the door is opened, and retracted as the door is closed, the arrangement being such as to hold the rack at all times in a true horizontal plane during the movement thereof, yet leaving the rack perfectly free to advance or recede accordingly as the door is opened or closed.

A further arrangement provides for taking up the lost motion in the movable parts which support the rack, so as to obviate undue looseness and rattle.

The above stated object is attained by the structure illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of one section of a display cabinet involving our invention. Fig. 2 is a transverse section as on line 2—2 of Fig. 1. Fig. 3 is a front elevation of one end of the cabinet with the door removed. Fig. 4 is a horizontal section as on line 4—4 of Fig. 2. Fig. 5 is an enlarged fragmentary view in section, as on line 5—5 of Fig. 3. Fig. 6 is a similar view as on line 6—6 of Fig. 3. Fig. 7 is a fragmentary view in detail, of one of the pivoted links which support the rack. Fig. 8 is a perspective view of one of the wire hat-retainers mounted upon the bars of the rack. Fig. 9 is an elevation of the an-

gular plate which is secured against the end of the cabinet and which supports the parts that actuate the shelf or rack.

Referring to the characters of reference, 1 designates the cabinet which may be of any suitable construction, and which is closed except at the front. Normally closing the front of the cabinet is a door 2 having semi-cylindrical ends 3 connected by the top and bottom strips 4 and 5. Extending between said ends and confined at its margins by said strips is a semi-cylindrical panel 6 of glass or other transparent material. Mounted upon the straight, inner edge 7 of each of the end pieces 3 of the door is an inwardly extending bracket 8 which is tapering in form. Pivoted at 9 to the extreme inner ends of said brackets are the end plates 10 of the shelf or rack. Extending between and connecting the upper ends of said plates are the parallel rods 11, and connecting in like manner the lower ends of said plates are the parallel rods 12. The upper rods form the upper shelf of the rack and the lower rods the lower shelf thereof upon which the hats are supported, as shown in Fig. 1.

The brackets 8 attached to the ends of the doors lie within the ends of the cabinet, and the door is pivotally mounted upon the ends of the cabinet by means of suitable screws or pins 13 which pass through the brackets 8 and into the ends of the cabinet, whereby the door is pivotally mounted to rotate about its longitudinal axis, while the plates 10 of the rack or supporting shelves are carried in the arc of a circle whose radius is equal to the distance from the pivotal point of the door to the point of pivotal connection 9 between the brackets 8 and the plates 10. When the door is swung backwardly into the cabinet by rotating it upon its axis of oscillation, the free ends of the bracket 8 will swing downwardly in the arc of a circle and project the rack with its shelves thereon in advance of the front line of the case, as shown in Fig. 5, thereby placing the hats within ready reach of the salesman. Upon the closing of the door, the rack is returned to its normal position. During the projection and retraction of the rack incident to the opening and closing of the door of the cabinet, it is necessary to so support the rack during its travel as to maintain the shelves in a perfectly horizontal position so as to keep the hats prop-

erly in place thereon. We accomplish said desired result by means of the links 14 and 15 which are of equal length and which are pivoted at 16 to the lower portion of the plates 10. In one end of the case is employed a plate 17 having at the upper end thereof an aperture 18 for the reception of the pivotal screw or pin 13 upon which one end of the door is hung, and having at a lower point therein an aperture 19 that receives the pivotal pin 20 which secured the end of link 15 thereto. Extending from the plate 17 is a lateral projection 21 having an aperture 22 that receives the pivotal pin 23 which secures thereto the end of link 14. These links correspond in length with the distance between the pivotal points 9 and 13 of the bracket 8, and therefore travel in the same arc described by said bracket in its movement. Because of the fact that the end plates of the rack are pivoted to said links at points some distance apart, they serve at all times to hold the rack and shelves against tilting during the movement thereof, rendering the motion of the rack and shelves free but positive and obviating the tipping of the hats from the shelves by a tilting of the rack frame.

The end of the projection 21 of plate 17 is turned upwardly, as shown at 24, to serve as a buffer which is encountered by the end of the door and serves to arrest the door when reaching the limit of its movement when opened.

On referring to Fig. 7 it will be noted that the pivotal pins 16 which project from the plates 10 are tapered. The apertures in the ends of the links are correspondingly tapered and the opposite end of each link is beveled, as shown at 25, whereby by tightening the pivotal screw which secures the links to the supporting plate 17, the opposite ends of said links will be thrown inwardly, as shown by dotted lines in Fig. 7 and crowded onto the tapered pin 16, thereby taking up lost motion and obviating all rattling of the parts.

To prevent the hats shifting upon the shelves when the door is opened and closed, a retainer 26 is employed in the form of a wire which extends between and is secured upon the supporting bars of the rack by means of the embracing loops 27 formed therein, the extreme end of said wire being turned upwardly, as shown at 28 to engage within the sweat band of the hat, as shown by dotted lines in Fig. 2. When the hat is placed upon said retainer, it can not be shifted out of position by the movement of the rack. Said retainers are adjustable upon the rack so that the hat may be moved to any desired position.

Having thus fully set forth our invention,

what we claim as new and desire to secure by Letters Patent, is:—

1. In a display cabinet, the combination of a case, a semi-cylindrical door journaled to the ends of the case to rotate about its longitudinal axis, a rack mounted on the door to swing in the arc of a circle concurrently with the movement of the door, and movable means between the rack and case for maintaining the shelves of the rack in a horizontal plane during the movement thereof.

2. In a display cabinet, the combination of a case, a semi-cylindrical door journaled therein to rotate about its longitudinal axis, a rack mounted on said door to swing in the arc of a circle as said door is operated and links connecting said rack with the end of the case, whereby it is held against tipping during its period of travel.

3. In a display cabinet, the combination of a case, a door having semi-cylindrical ends provided with a straight edge, brackets mounted on the straight edges of the ends of the door and pivoted to the ends of the case, a rack pivoted to the projecting ends of said bracket to swing as the door turns on its pivot, and a movable connection between said rack and case which permits the rack to travel freely as the door is swung, but holds the rack rigidly against tilting.

4. In a display cabinet, the combination of a case, a door journaled in the case to rotate about its longitudinal axis, a rack pivotally mounted on the door, links pivoted at one end of the rack, and at the other end to the case, whereby the rack is supported in a true horizontal position when actuated through the manipulation of the door.

5. In a display cabinet, the combination of a suitable case, a door pivoted in the case to rotate about its longitudinal axis, a movable rack having shelves thereon consisting of longitudinally extending parallel rods, said rack being pivotally mounted on the door to swing in the arc of a circle concurrent with the movement of the door, and means upon the shelf rods of the rack consisting of a wire extending between said rods having loops intermediate its ends which embrace the rods of the rack and having upwardly turned end portions projecting beyond the rack rods for engaging a hat to hold it in position thereon as the rack is actuated.

In testimony whereof, we sign this specification in the presence of two witnesses.

ALFONSE R. DU BOISE.
LOUIS F. PERRY.

Witnesses:

WILLIAM T. YEO,
COLONEL O. SWAYZE.