

No. 697,665.

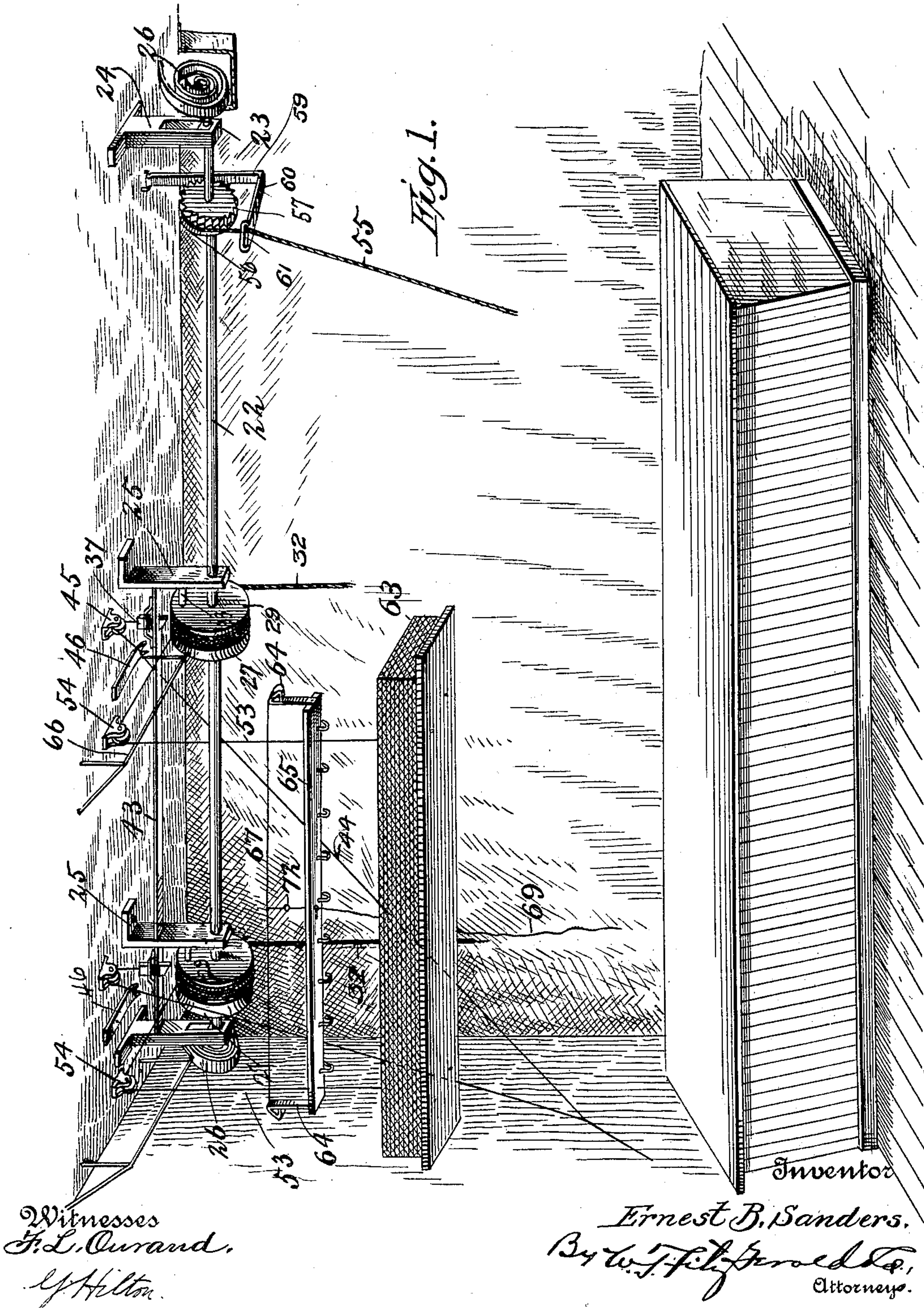
Patented Apr. 15, 1902.

E. B. SANDERS.  
STORE FIXTURE.

(Application filed July 14, 1900.)

(No Model.)

2 Sheets—Sheet 1.





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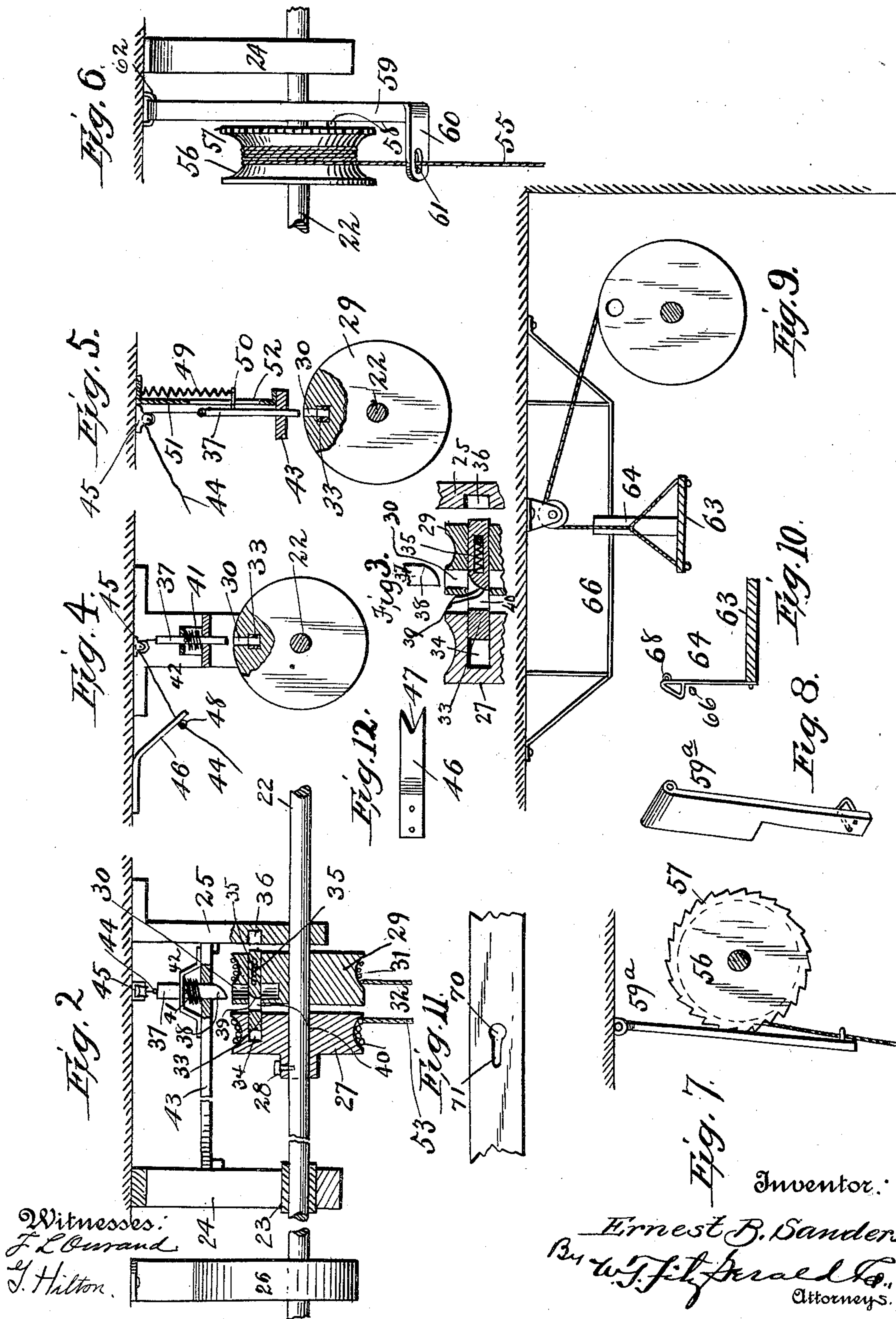
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2 Sheets—Sheet 2.





# UNITED STATES PATENT OFFICE.

ERNEST B. SANDERS, OF OAKGROVE, LOUISIANA.

## STORE-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 697,665, dated April 15, 1902.

Application filed July 14, 1900. Serial No. 23,666. (No model.)

*To all whom it may concern:*

Be it known that I, ERNEST B. SANDERS, a citizen of the United States, residing at Oakgrove, in the parish of West Carroll and State of Louisiana, have invented certain new and useful Improvements in Store-Fixtures; 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 what may be termed an "advertising or display rack or cabinet;" and it has for its object, among others, to provide a novel construction by means of which the rack or cabinet may be retained in an elevated position and held against being lowered by means which will prevent the lowering and tampering with the rack or the goods thereon by unauthorized persons, but always under the control of the clerk or other person having knowledge of the manner in which it may be unlocked and operated.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view upon a larger scale showing provision for more than one supporting-rack. Fig. 2 is a detail, partly in section and partly in elevation, illustrating the means provided for controlling one or more racks upon the shaft shown in Fig. 1. Fig. 3 is an enlarged view showing the means provided for controlling the descent of the rack. Fig. 4 is an end view showing the shaft in section and illustrating a portion of one of the pulleys broken away to show the seat of the bolt employed to lock the pulleys against rotation. Fig. 5 illustrates another form of controlling device for the locking detent or wedge illustrated in Figs. 2 and 3. Fig. 6 illustrates the means for locking the shaft in the desired position. Figs. 7 and 8 illustrate other forms of locking detent which may be employed to lock the pulleys shown in Fig. 6. Fig. 9 illustrates an end view of the pulley seen in Fig. 3 and showing also how the rope connected to said pulley may be extended over the pulley-wheel attached to the ceiling in order to enable a number of racks located

side by side to be controlled by the same shaft and spring. Fig. 10 is a detail view of an end of the supporting-rack, showing said end provided with means whereby the weight of the rack may be suspended upon a convenient wire or other support. Figs. 11 and 12 show different forms of securing devices for the rope.

In order to conveniently designate the several parts of my invention and their cooperating accessories, numerals will be employed, the same numeral corresponding to a similar part throughout the several views.

In the drawings I have illustrated a form of construction which may be adopted in carrying out my invention in such a manner that a plurality of display-racks may be suspended from the ceiling, and in order that the rack or racks may not be lowered by maliciously-inclined persons or others unauthorized to have access thereto I have devised the means seen in Figs. 2, 3, 4, and 5, whereby when in its elevated position the rack is held against all tendency to lower it until the cord is manipulated in a certain manner, knowledge of which is possessed only by the authorized persons in the store or other place where the improved advertising rack or cabinet is provided.

Referring then to Figs. 1, 2, 4, and 5, 22 is a shaft rotatably suspended parallel with the ceiling by means of suitable bearings 23, provided in the brackets 24, located at each end of the shaft and intermediately supported at proper intervals by the brackets 25, all of which may be attached in any preferred way to the ceiling or to the wall of the room. The brackets 25 also serve another purpose, which will be hereinafter clearly set forth. In Fig. 1 I have illustrated the shaft 22 as being provided with a sufficient number of pulleys and controlling devices therefor to operate one display-rack, it being understood that any desired number of said pulleys may be provided upon said shaft in accordance with the number of racks to be controlled thereby. The shaft 22 is controlled by the springs 26, one near each end, and one end of the spring may be connected directly to the wall or ceiling, as may be preferred, the tension of the springs being so disposed that when the racks are lowered the springs will be wound, thus leav-



ing said springs with a tendency to restore the racks to their elevated position when operating devices carried by the shaft are released, as will be fully hereinafter set forth.

5 27 is a pulley properly keyed to the shaft 22, as by the set-screw 28 or any other preferred way. Located adjacent to the pulley 27 is the controlling-pulley 29, which is provided upon its upper side with a vertically-  
10 disposed recess 30 and with a circumferential groove 31, in which the controlling-rope 32 is disposed. The pulley 29 is also provided with a horizontally-disposed opening in which the locking-bolt 33 is located, the outer end of  
15 said bolt being adapted to be received by an opening 34, provided in the pulley 27. The bolt is mounted in the opening formed in the pulley 29 and is provided with the controlling-spring 35, which is designed to throw the  
20 bolt normally into engagement with the pulley 27. A recess 36 is provided in the contiguous bracket 25 at a point where the bolt will enter it when said bolt is thrust to the right by the cam controller or wedge 37, as  
25 shown in Fig. 2.

The cam-controller 37 is beveled at its lower end, as indicated by the numeral 38, and is adapted to bear against the beveled face 39, forming one of the walls of the aperture 40 in said bolt 33, and since said cam-  
30 controller will be thrust downward by the spring 41 the face 39 will be contacted with the beveled end of the controller, and thereby cause the bolt 33 to enter the recess 36 in the  
35 bracket 25 and incidentally withdraw the end of the bolt from the aperture 34 in the pulley 27 and release said pulley and leave it free to turn with the shaft 22.

When the cord 44 is pulled upon, it releases  
40 the cam-controller 37 from the recess 30 in the pulley 29, and consequently releases the bolt 33 from the aperture 36 in the bracket 25, and immediately its spring 35 forces the said bolt into engagement with the aperture 34 in  
45 the pulley 27, thus locking the pulleys 27 and 29 together, so they must rotate as one. Now a pull upon the cord 32 will cause the pulley 29 to rotate, and the pulley 27 being fast thereto must rotate therewith, and the shaft  
50 22 is thus rotated against the tension of the spring, and the racks are lowered. It will thus be understood that this construction is provided in order that it may be possible to utilize the tension of the spring or springs 26  
55 to raise the suspended rack or racks.

It will be understood that a pulley 27 and 29 is necessary to support one end of the rack, the other end being supported by an ordinary pulley rigidly keyed to the shaft 22, though  
60 in Fig. 1 I have illustrated two pairs of pulleys designed for this purpose.

The spring 41 and the cam-controller 37 are held in their operative position by the yoke 42, which is provided with a suitable slot  
65 adapted to loosely receive the controller 37, while the lower end of said controller passes loosely through an aperture provided in the

support 43, which may be secured in any preferred way, as by the brackets 24 and 25.

Connected to the upper end of the cam-controller 37 is the controlling-cord 44, which extends upward into engagement with a pulley 45, connected at a convenient point to the ceiling, as shown in Figs. 4 and 5, the rope 44  
70 being then extended downward to a point convenient to the operator.

The cam-controller 37 being held normally downward by the spring 41, it becomes necessary to provide convenient means for holding  
80 the same in an elevated position when withdrawn from the opening 30, and this I accomplish by the bracket 46, attached to the ceiling and provided at its free end with the notch 47, adapted to receive the cord 44 and prevent the knot 48 thereon from passing  
85 through the same until a downward pull is made upon said cord, as will be readily understood.

In Fig. 5 I have illustrated another means for controlling the cam 37, which consists of  
90 the spring 49, one end of which is connected to a convenient point on the ceiling, while the lower end thereof is adapted to bear against the finger 50, secured to said cam, a suitable bracket 51 being provided to hold the parts  
95 in their operative positions, said bracket being provided with the slotted opening 52 to receive the finger 50.

By the construction and combination of parts just described it is obvious that the  
100 rack cooperating with the shaft 22 may be readily lowered as desired, the operation thereof being as follows: When it is desired to lower the rack, the controlling-cord 44 cooperating with the rack is pulled downward,  
105 which results in elevating the cam-controller 37 and withdrawing it from the opening 30 in the pulley 29, thereby permitting the bolt 33 to fly into the aperture 34 provided in the pulley 27, the bolt incidentally moving out  
110 of the recess 36 in the bracket 25, thereby causing the pulleys 27 and 29 to be securely locked together and causing the pulley 29 to rotate with the pulley 27 and the shaft 22. After the cam-controller 37 has been with-  
115 drawn and the pulleys 27 and 29 connected together in the manner stated and after the detent 58 has been released by means of the rope 55 a pull upon the cord 32 will cause the pulley 29 to rotate, thereby rotating the pul-  
120 ley 27 and the shaft 22 against the tension of the spring and causing the racks to be lowered downward to a convenient point where the goods thereon may be readily inspected.

The rope 53 may extend directly downward  
125 over its respective pulley, as in case of the first rack, or said rope may pass into engagement with a pulley-block 54, attached at a convenient point upon the ceiling. After the rack has been lowered to the desired point it  
130 may be readily secured in such position by releasing the rope 55 cooperating with the pulley 56, which latter is keyed fixedly to the shaft 22, as shown in Fig. 6, said shaft 22 be-



ing regarded as a continuation of the shaft 22. (Shown in Fig. 2.) One edge of the pulley 56 is provided with a series of teeth 57, designed to cooperate with the finger or detent 58, carried by the arm 59, the latter having a right-angled extension 60, provided with the aperture 61, through which the rope 55 is adapted to extend. It is obvious, therefore, by reference to Fig. 6 that since the arm 59 is pivotally suspended, as by the staple 62, at a point which will insure that the detent 58 will swing normally into engagement with one of the ratchets or teeth 57 it follows that by properly manipulating the rope 55 the swinging arm may be moved out of the way of the pulley 56, thereby permitting said pulley to freely turn.

As is clearly shown in Fig. 6, it will be understood that the detent 58 on the arm 59 normally engages by gravitation or by the natural tendency of the arm to assume its vertical position with the ratchets or teeth 57 on the periphery of the pulley 56, and it will also be readily seen that the movement of the rope 55, which would tend to throw said arm 59 out of its normal position, would move the arm so as to cause the detent to disengage the ratchet or teeth, and thus leave the pulley 56 free to rotate.

When the rack has been lowered and it is desired to lock the same until the goods thereon have been inspected, all that is necessary to be done is to swing the arm 59 toward the pulley 56, which may be readily accomplished by releasing the hold on the rope 55, as will be readily understood.

In order to insure that the weight of the racks 63, carried by the ropes 53, may not rest wholly upon said ropes when in an elevated position, I provide the spring-catches 64, which are connected to each end of the auxiliary rack 65, said catches being adapted to hook over the wire or rope 66, properly secured to the ceiling and located at a convenient point to engage said hooks. When, therefore, the racks have been elevated to the desired height, the spring-hook 64 will snap over the wires 66 and insure that the weight will be disposed on said wires instead of the ropes carrying the racks and the goods thereon, it being understood that there is one rod 66 for each hook 64, and since said rods may be properly located and extended entirely across the ceiling of the store-room a large number of racks may be accommodated thereby.

In order to disengage the spring-catches 64 from the wires or rods 66, I connect said parts together, as by the wire or cord 67, which may be readily secured to an eye 68, carried by said catches, and to the middle portion of said wire or rod 67 I attach the controlling-cord 69, which extends downward through an aperture provided in the auxiliary rack 65, said aperture having one end engaged, as indicated by the numeral 70, while the other end thereof, 71, is of reduced size, the object of said aperture being to permit the small ball or knot 72,

secured to the cord 69, to freely pass through the enlarged end 70, when by moving the cord laterally the ball or knot will be extended under the narrow end 71, thereby drawing the spring-catches 64 toward each other and locking them in such position. The spring-catches may be readily unlocked from their inwardly-inclined position by a slight downward pull upon the cord 69 and moving the knot or ball 72 so that it will pass upward through the enlarged opening 70, when the spring tension of said hooks will restore them to their normal position, ready for again engaging with the rods 66.

In Figs. 7 and 8 I have illustrated a slightly-different form of detent 59<sup>a</sup> and controlling-arm therefor, said detent being designed to engage the ratchet edge 57 of the pulley 56, and they both correspond in function to the detent and arm 58 and 59, as shown in Fig. 6.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a display-rack for merchandise, the combination with a suitable supporting rack or cabinet provided with supporting ropes or cables, of a shaft provided with a pair of pulleys keyed to said shaft and cooperating with said ropes, one of said pulleys having a recess and an auxiliary controlling-pulley having a bolt horizontally movable therein and adapted to engage one of said fixed pulleys, means to normally throw said bolt into engagement with the recess in said fixed pulley, a fixed bracket upon the opposite side of the movable pulley having a recess corresponding to the location of said bolt and additional means to overcome the normal tendency of said bolt and thrust it into the recess in said bracket as desired by the operator all combined substantially as specified and for the purpose set forth.

2. The herein-described controlling mechanism for display-racks comprising a shaft 22, a pair of fixed pulleys keyed thereon, one of said pulleys having a recess, racks supported from said pulleys, an auxiliary pulley having a bolt adapted to normally engage the recess in said fixed pulley, a bracket having a recess opposite said bolt and a cam-controlling bolt, means for moving the same at right angles to said first-mentioned bolt whereby the said auxiliary and fixed pulleys may be locked together substantially as described.

3. In a display-rack, the combination with a rotatable shaft, a pulley fixed thereon and having a recess parallel with its shaft, a bracket with a recess in alignment with that of the pulley, a pulley loose on said shaft and having a recess in alignment with the recess of the fixed pulley and a recess at right angles thereto, a bolt movable in the first-mentioned recess, a bolt movable at right angles thereto, a fixed support for the last-mentioned bolt and a spring acting on said bolt and a rack suspended from said pulleys substantially as described.

4. The combination with a spring-actuated shaft and a pulley thereon having an aperture,



of a bolt adapted to engage in said aperture,  
a spring-actuated rope-controlled bolt, mov-  
able at right angles to said first-mentioned  
bolt, a fixed support therefor, a bracket hav-  
5 ing an aperture in line with the aperture of  
the pulley, a spring seated in the pulley and  
acting on the first-mentioned bolt and a con-  
trolling-rope and hoisting and lowering ropes

for the rack wound upon said pulleys, all sub-  
stantially as herein shown and described. 10

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

ERNEST B. SANDERS.

Witnesses:

GEO. S. LEWIS,  
W. L. MCCAN.