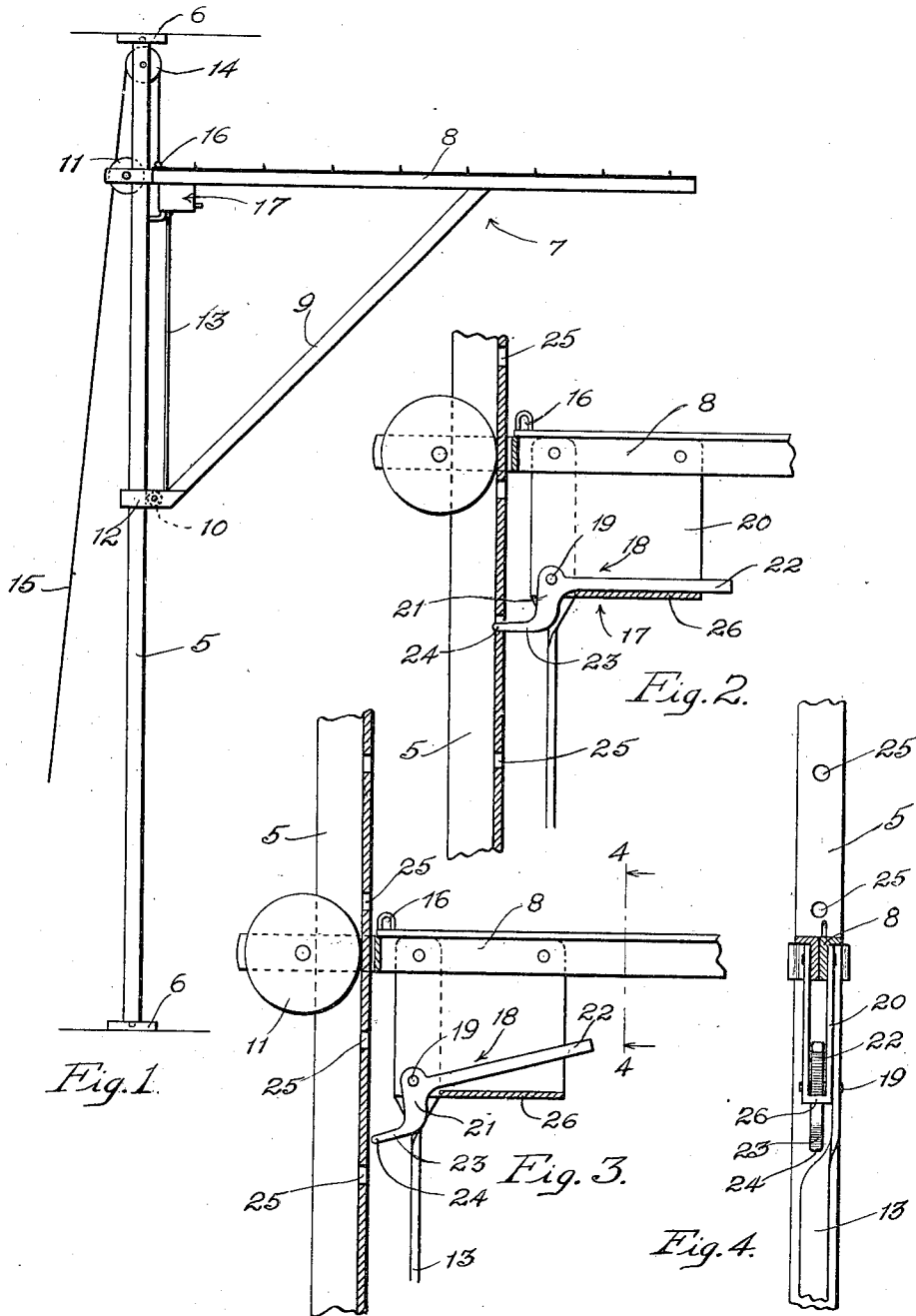


A. T. EDWARDS.
 MERCHANDISE DISPLAY RACK.
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1,006,834.

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Witnesses:
Ephraim Banning.
[Signature]

Inventor:
 Arthur T. Edwards.
 BY *[Signature]* Attorneys.

UNITED STATES PATENT OFFICE.

ARTHUR T. EDWARDS, OF OKLAHOMA, OKLAHOMA.

MERCHANDISE-DISPLAY RACK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ARTHUR T. EDWARDS, a citizen of the United States, residing at Oklahoma, in the county of Oklahoma and State of Oklahoma, have invented certain new and useful Improvements in Merchandise-Display Racks, of which the following is a specification.

This invention relates to an improved construction in merchandise display racks, adapted especially for showing rugs, curtains, etc.

The objects of the present invention are, to provide a rack simple and economical in construction on which articles may be advantageously displayed; to provide means for raising and lowering said rack to remove said articles when they are not needed, and to bring them into convenient position when wanted; and to provide locking means automatically operated which shall maintain said rack at any desired level.

The invention further consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of one form of my improved display rack; Fig. 2 an enlarged detail in section of the locking means supporting the rack; Fig. 3 a view similar to Fig. 2, showing the position of said locking means during adjustment movement of the rack; and Fig. 4 a section on line 4—4 of Fig. 3 looking in the direction of the arrows.

In the display rack of the present invention, there is utilized a vertical support or guide post 5 pivotally secured at its opposite ends to bearings 6 which may be located adjacent the roof and floor of a building or be formed as part of a frame therefor. Slidably mounted upon said guide post is a retaining member 7 comprising a horizontal carrying arm 8 supported by a diagonally disposed brace 9, having at its lower end a roller 10, which travels along the inner face of the guide post.

The arm 8 carries at one end a roller 11 which is adapted to travel along the guide post, when the retaining member is raised or lowered, as indicated. The lower end of the brace 9 is further provided with a strap 12 surrounding the guide post, which together with the roller 11 and its bearings constitute a stop for radial movement of the retaining member, unless at the same time the vertical support is rotated in its

bearings. A vertical brace 13 extends from the arm 8 to the lower end of the brace to maintain said arm and brace in fixed relation to each other. Traveling over a pulley 14 located at the upper end of the guide post 5, is a rope or cord 15, which is connected with the rack as at 16 to enable the operator to raise and lower the same.

The positions in which the display rack is maintained upon the guide post 5 is determined by means of locking mechanism 17, which is shown in detail in Figs. 2 and 3. Said locking mechanism comprises an offset trigger 18, pivotally mounted at 19 in a housing 20, which depends from the arm 8. The said trigger comprises a body portion 21 and oppositely extending arms 22 and 23 which lie in different planes, as shown, the blunt end of the arm 24 constituting an acting end adapted to engage and lock within recesses 25 formed in the guide post 5 at desired intervals. When the trigger is engaged with one of said recesses, the straight arm 22 will bear against the lower side 26 of the housing 20, as indicated in Fig. 2.

The operation of the trigger mechanism is as follows: When the display rack is raised by the operator pulling upon the rope 15, the acting end of the trigger 18, which has been engaging one of the openings 25, will be tripped, and the trigger disengaged therefrom. As the rack is pulled upward by the operator, the acting end of the trigger will bear against the face of the guide post 5, owing to the counterbalancing action of the arm 22, and will swing inwardly at the next higher opening to seat therein to maintain the rack in position at that level. If the operator continues to raise the rack, the acting end of the trigger will tend to seat in each opening 25 as it passes thereby, and when a cessation of movement occurs, said end of the trigger will seat in the next opening therebelow to maintain the rack in position at that level.

The lowering operation of the rack necessitates first of all a disengagement of the trigger from the opening in which it is seated. This disengagement is accomplished by raising the rack a short distance, just sufficient to trip the trigger and cause its acting end to withdraw from the opening and bear against the face of the guide post at a point immediately thereabove. The said trigger being disengaged from the opening,

the rope 15 may be slacked in order to permit the rack to be quickly lowered. As the rack descends, the trigger will tend to re-engage in the opening in which it was
 5 formerly seated, but owing to the speed with which it is moving downwardly, its passage by said opening being almost instantaneous, the blunt acting end of the trigger will have no opportunity to swing inwardly and check
 10 the descent of the rack by engaging in said opening. This downward movement will continue uninterruptedly therefore, the trigger sliding by each succeeding opening too quickly to permit of any engagement there-
 15 in. In order that the rack may be brought to a stop at a desired level, and there held, it is merely necessary to check its descent, and thereafter allow it to slide slowly down-
 20 ward until the trigger is at an engaging level with the next opening; the acting end will readily engage therein because of the fact that its movement thereby is so retarded as to afford it the necessary opportunity in
 25 point of time to swing inwardly and engage in said opening. In order that there may be as little lost motion of the trigger as possible, and that the trigger may slide smoothly along the guide posts, the openings 25 are
 30 formed of a small size, no larger than necessary to admit freely the acting end of the trigger.

It is obvious, of course, that the rack must descend with sufficient speed to carry the trigger past each opening before it can en-
 35 gage therein. When the trigger is disengaged from any opening in the manner described, it is possible, particularly if the openings are spaced closely together, that the rack may not accelerate sufficiently to
 40 enable the trigger to slide by the first opening in its descent. This difficulty may be overcome by first raising the rack quickly to disengage the trigger from the opening
 45 in which it was seated, and causing the acting end 24 by such sudden upward movement to swing outwardly and away from the guide posts so that the rack may descend by
 50 gravity below the level of its previous adjustment before the trigger can swing inwardly again and permit its acting end to reengage in the opening in which it was
 formerly seated.

In order that the locking mechanism may operate automatically, it is necessary that
 55 the trigger should be fashioned in a very particular way. The straight arm 22 on said trigger is utilized as a counterweight therefor; and when positioned against the

lower end of the housing 20, as indicated in Fig. 2, it serves as a stop member therefor. 60
 It should also be noted, that the housing 20 is designed to permit the said arm to swing upwardly a sufficient distance when the rack is quickly raised so that the acting end of the trigger may be swung away from the
 65 guide post 5. In case the rack is very suddenly raised, the arm 22 is likely to be swung upward as far as the arm 8, but there its movement is stopped, and it tends to return by gravity to its normal position. 70
 The acting end of the trigger, as shown in Figs. 2 and 3, is formed some distance below the pivotal point of said trigger, in order that when the arm 22 on said trigger
 75 is upwardly swung, the retraction of the acting end of the trigger from the post 5 will be quicker than if said end were formed in alinement with the arm 22.

In the construction of the display rack of the present invention, attention is particu- 80
 larly called to the fact that its adjustment is entirely controlled by one rope or cord. The operation of the trigger mechanism is by gravity entirely, and does not depend
 85 upon tension means of any kind. Furthermore, the position of said trigger mechanism with respect to the rack as a whole is at the point where it is subjected to the minimum strain. The function of the trigger mecha-
 90 nism is principally to determine the positions in which the rack is to be adjusted, while the real strain of support for the rack is communicated through the diagonal
 brace against the guide post.

I claim:

In a merchandise display rack, the combination of a merchandise retaining member, a support upon which such retaining member is slidably mounted, means for raising and lowering said retaining member 100
 upon said support, and a gravity operated catch member pivotally secured to said retaining member, comprising a fingered end, and an arm-like extension adapted to arrest the movement of the catch in one direction, 105
 and to exert a gravity force to swing the catch into operating position, said supporting member being provided with a smooth flat face having therein a series of pockets of substantially the same area as the end of 110
 said fingered portion, substantially as described.

ARTHUR T. EDWARDS.

Witnesses:

RAY T. TALBOTT,
 HARLAND MORLAN.