A. VANDERVELD.

ROTARY DISPLAY RACK.

APPLICATION FILED OCT. 18, 1913. RENEWED JUNE 10, 1916.

1,243,014.

Patented Oct. 16, 1917.

2 SHEETS—SHEET 1.

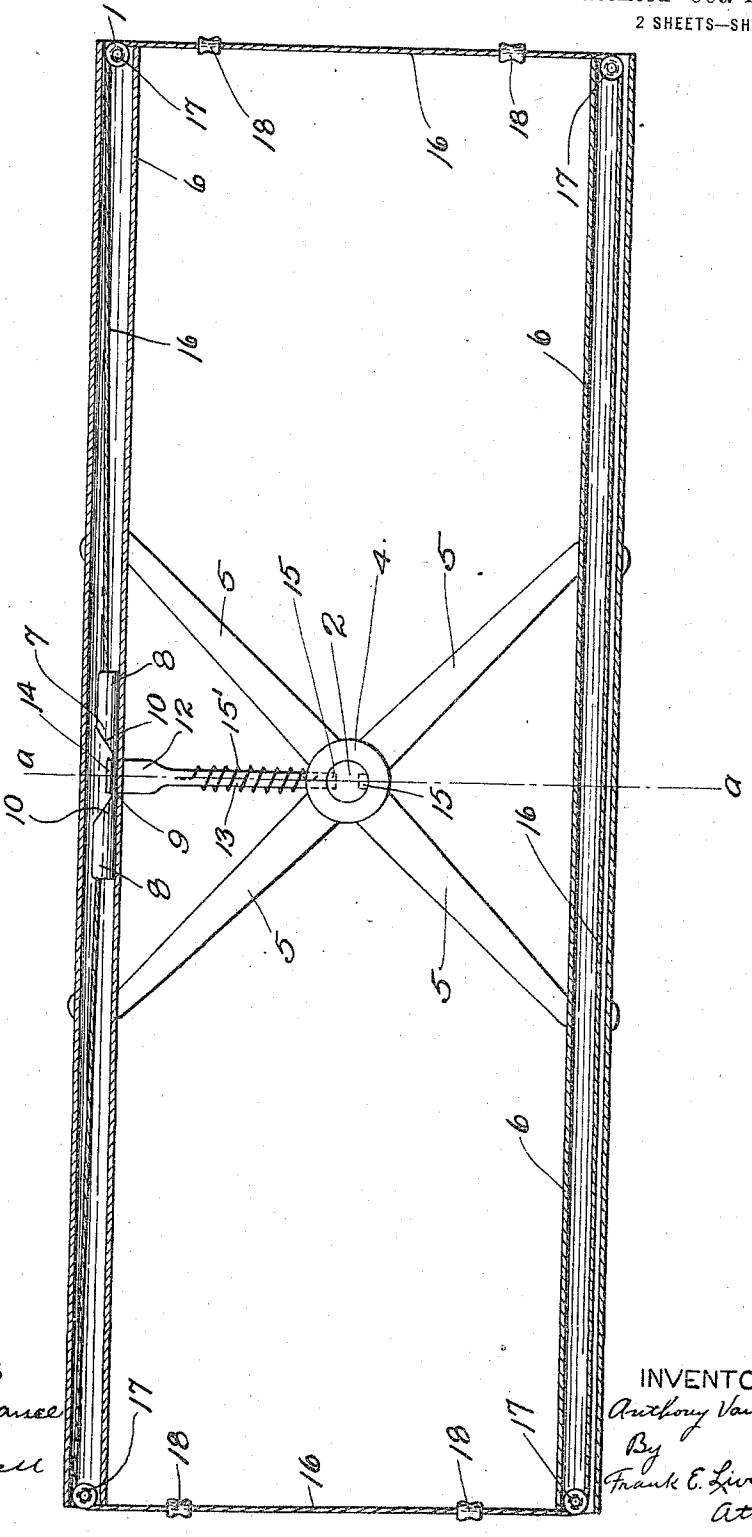


Fig. 1.

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2.

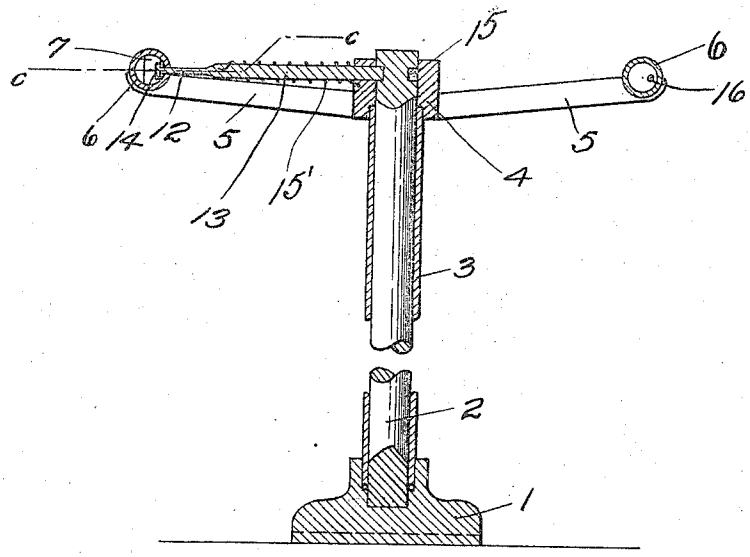


Fig. 3.

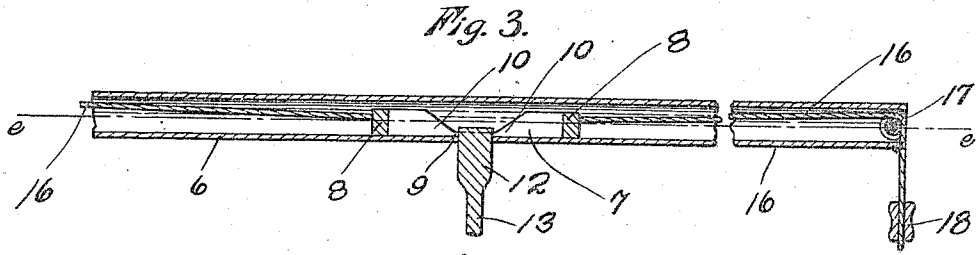
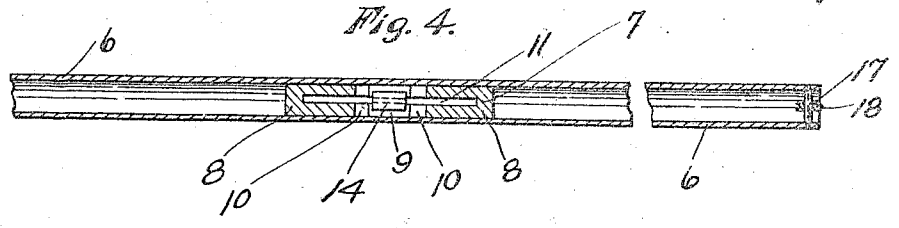


Fig. 4.



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ROTARY DISPLAY-RACK.

1,243,014. Specification of Letters Patent. Patented Oct. 16, 1917.

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To all whom it may concern:

Be it known that I, ANTHONY VANDERVELD, a citizen of the United States, and a resident of the city of Grand Rapids, in the county of Kent and State of Michigan, have invented a certain new and useful Rotary Display-Rack, of which the following is a specification fully disclosing a complete and operative embodiment of the same, such as will enable others skilled in the art to make and practise the same.

This invention relates to display racks that are mounted so as to present different supporting portions thereof to front position for display of and access to goods carried thereby, the supporting elements of the rack having rotation about a comparatively fixed supporting means. It is the object of this invention to provide the rotary rack structure with means to lock and hold it in place when a goods supporting part thereof is presented to front position best to display the goods carried thereby, such locking means, however, being manually operable for unlocking and freeing the rack for rotation that other supporting portions may be brought to front position and locked therein. More specifically, the rack includes supporting parts embodied as rods or bars located in parallelism and the locking thereof in fixed position is accomplished when the bar in front position becomes located directly in front of and in a plane which is perpendicular to the line of vision of a customer standing before the central support of the rack so that all goods carried by the rack are presented for inspection at substantially equal advantage; and the unlocking of the rack is accomplished by the operator thereof from either end of the rack bars or rods. It is a feature of this invention that on operating the unlocking means and using the necessary force to accomplish it, the rack will immediately rotate as soon as the unlocking is accomplished so that the one operation is effective to both unlock and rotate the rack. The specific structure by which this is accomplished together with the other features enumerated and many others of minor importance not specifically pointed out is disclosed in the following description and drawings, in which,

Figure 1 is a plan view of the rack, the goods holding bars thereof being shown in section on a plane taken horizontally therethrough.

Fig. 2 is a section on line *a*—*a*, Fig. 1.

Fig. 3 is a section on line *c*—*c*, Fig. 2, the section being on a horizontal plane through the axis of a goods holding bar.

Fig. 4 is a section on line *e*—*e*, Fig. 3.

Similar reference numerals refer to similar parts throughout the several views of the drawings.

In specific construction the rack includes a base 1 which is secured in any desired manner to a floor or other suitable supporting means and has a post 2 fixed therein and extending upwardly for any desired distance, this base and post forming the support for the rotatable rack structure mounted thereon. The rotatable rack member is comprised of a tubular sleeve 3 extending over the post and seated on ball bearings at its lower end in the base 1, said sleeve at its upper end having secured thereto a casting 4 from which project radially the arms 5, and at the outer ends of said arms the goods holding rods or bars 6 are secured, such rods being located parallel to each other and situated on opposite sides of the post. The sleeve and casting 4 being loosely mounted on the post 2, the goods holding elements are rotatable about the post and in the absence of means to control such rotation will be freely rotatable.

Locking means of the following construction is provided to normally retain the rotatable rack member in fixed position with reference to the base 1 and post 2. The goods supporting bars 6 are formed as hollow tubes and midway between the ends of one of such bars, a member 7 is slidably mounted, such member in structure having ends 8 of a thickness nearly filling the rod 6 and a central section 9 of very meager cross-section compared with the ends 8, the ends being tapered as at 10 to reduce to said central section. A slot 11 extends from near one end of the member 7 to near the other end thereof. An opening is formed in the side of the rod 6 through which passes the flattened end 12 of the locking rod 13, this flattened end passing through the slot 11 and then being formed with a head 14 too large to pass through the slot. Said head bears against the central section 9 of member 7 and if desired may be formed to pass along

each side thereof though this is not in any way essential. The locking rod 13 extends inwardly to the casting 4 of the rotating rack member passing through an opening therein and seating in a recess formed in the upper end of the post 2. There are two of these recesses 15 in the post being located diametrically opposite therein. A coiled spring 15′ is secured at one end to the casting 4, is wound around the rod 13 until it comes adjacent the flattened end 12 thereof, being secured to the rod at its other end and placed under tension thereby serving to continually press the end of the rod 13 against the post and seating it in a recess 15 upon coming thereto in the rotation of the rack member. It will be clear therefore, that there is provided a locking means acting automatically to lock the rack from rotation, and one positively holding the rack from rotation when the locking rod is seated in one of the recesses 15 in the post.

When the end of the rod 13 is seated in a recess 15, the head 14 is located against the central section 9 of the member 7. Secured to one end 8 of member 7 is a flexible device as a small rope or cable 16 which extends to the end of the rod 6 passing over a pulley 17 mounted in the end thereof, thence to the end of the opposite bar 6 and through the length thereof, being guided over similar pulleys or rollers mounted in the ends thereof, thence back to the opposite end of the first bar over a similar pulley 17, to the opposite end of the member 7 and having connection therewith. Those sections of the cable lying between the ends of the rods 6 are provided with members 18, there being two of such members on each section of the cable, the location thereof being a short distance from the ends of the rods 6. Such members serve as hand-holds to be grasped by the hand of the operator when pulling on the cable to unlock the rack for rotation as described below.

Let it be supposed that the rotating rack members are locked against rotation as shown in Figs. 1 and 2. The goods supported on the front bar are in best display position and are held therein. If the goods on the rear bar are to be seen and inspected, the rack must be rotated and this is accomplished by grasping a member 18 at either end of the front rack bar 6 and exerting a pull thereon. The cable is drawn around the pulleys or rollers 17 and member 7 moved lengthwise of the rod 6 in which it is mounted, thereby forcing head 14 upon one of the inclines formed at one of the tapering portions 10 of said member 7 and moving locking rod 13 bodily against the tension of spring 15′ until it is moved sufficiently to disengage the end thereof from the notch 15 in which it is seated. As soon as such disengagement is effected, the rack starts to rotate under the pull being given on the cable 16. As soon as rotation is started and the end of rod 13 taken away from a notch or recess 15, the cable may be released and the rack further rotated by force exerted on the rods 6, such rotation continuing until the rack has been rotated sufficiently to bring the end of locking rod 13 into position to enter the other recess 15, spring 15′ thereupon causing the rod to enter the recess and stopping and locking the rack in fixed position. Further rotation may be accomplished by repeating this process, it being immaterial whether the rod 13 is projecting from a front bar 6 backward toward the central post 2, or from a rear bar 6 forward to such post, the unlocking of the device being performed in all instances by a pull on the cable from in front of the rack and in a forward direction, the pull being given from either end of the rack as desired.

From the foregoing it will be apparent that I have made a very simple and easily working locking device for rotary racks which acts automatically to stop and lock the rack from rotation when it reaches certain predetermined positions and one which is easily manually operated to unlock and rotate the rack. The specific structure disclosed may be varied in minor detail without departing from the invention which is defined in the appended claims, and all modifications falling within the scope of the claims are considered as comprehended within this invention.

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

1. In combination, a stationary post, a rack rotatably mounted thereon, said rack including spaced apart parallel rods, locking means operatively associated with the rack and post automatically locking said rack in stationary relation to the post, and means for manually operating the locking means from adjacent and between the parallel rods to unlock the rack for rotation.

2. In combination, a stationary support, a rack rotatably mounted thereon including parallel and spaced apart goods supporting rods, locking mechanism associated with the support and rack for automatically locking the rack in fixed position relative to the support, and means for manually operating the locking mechanism from a point between the ends of the goods supporting rods.

3. In combination, a stationary support, a rack rotatably mounted thereon said rack including goods supporting rods mounted in spaced apart and parallel relation, a locking rod carried by the rack, recesses in the support adapted to receive the end of said locking rod, means tending to seat the end of the locking rod in said recesses and means manually operable from adjacent either end of either goods supporting rod for unseating

the locking rod from the recesses and freeing the rack for rotation.

4. In combination, a stationary support, a rack rotatably mounted thereon said rack including hollow goods supporting rods positioned in spaced apart relation, recesses provided in the support, locking means carried by the rack adapted to engage the recesses and hold the rack against rotation, a flexible member threaded through the goods supporting rods, and means connected thereto and operable by the flexible member to cause the disengagement of the locking means from the recesses, thereby freeing the rack for rotation.

5. In combination, a stationary support, a rack rotatably mounted thereon said rack including hollow goods supporting rods positioned in spaced apart relation, recesses formed in the support, a locking rod carried by the rack having one end thereof adapted to seat in the recesses thereby locking the rack against rotation, and having the other end received within one of the goods supporting rods, a flexible member threaded through the said goods supporting rods and means connected thereto and movable back and forth in one of the goods supporting rods with the movement of the flexible member, said means having operative engagement with the locking rod to move it longitudinally when moved in either direction thereby freeing the recesses of the locking rod and freeing the rack for rotation.

6. In combination, a stationary support, a rack rotatably mounted thereon said rack including hollow goods supporting rods positioned in parallel and spaced apart relation, recesses formed in the support, a locking rod carried by the rack and having one end thereof adapted to seat in the recesses thereby locking the rack against rotation, said rod at its other end extending within one of said goods supporting rods and having a head formed thereon, a member mounted within said goods supporting rod having cam surfaces at either side of the head whereby movement of said member in either direction will serve to draw the rod outwardly and disengage it from a recess in which it may be seated, and a flexible member connected to one end of said member, threaded through the goods supporting rods and back to the other end of said member and secured thereto, whereby movement may be imparted to said member from adjacent either end of either goods supporting rod.

7. In combination, a stationary support, a rack mounted thereon, said rack including rods spaced apart, at least one of which is hollow, means whereby said rack may be rotated about its support, recesses formed in the support, a rod seated at one end within the hollow rod and at the other end adapted to seat in one of said recesses in the support, and means within the hollow rod for operating the rod to unseat it from the recess and free the rack for rotation.

In testimony whereof, I have hereunto affixed my signature in the presence of two witnesses.

ANTHONY VANDERVELD.

Witnesses:
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L. E. CURRAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."