Nov. 8, 1938. L. J. DEVNEY 2,135,565

RACK

Filed Aug. 25, 1937

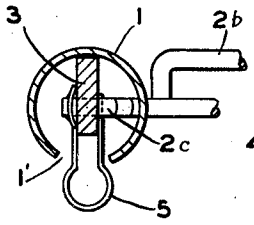


FIG.-7

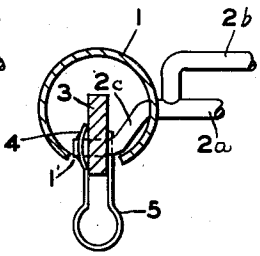


FIG.-8

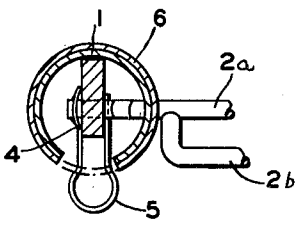


FIG.-9

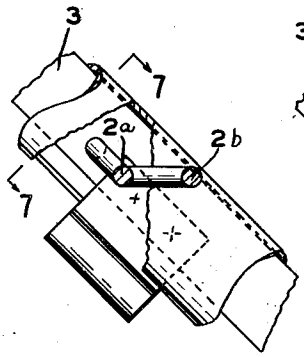


FIG.-4

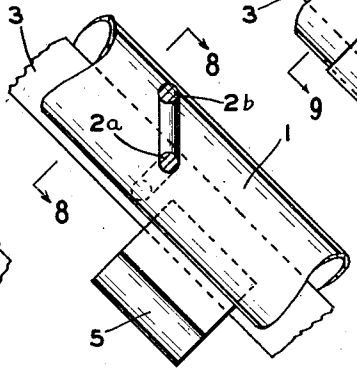


FIG.-5

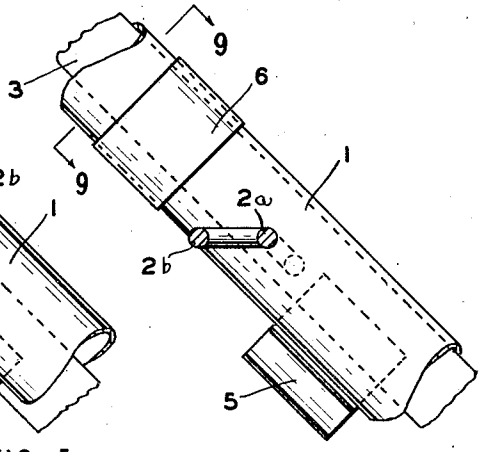


FIG.-6

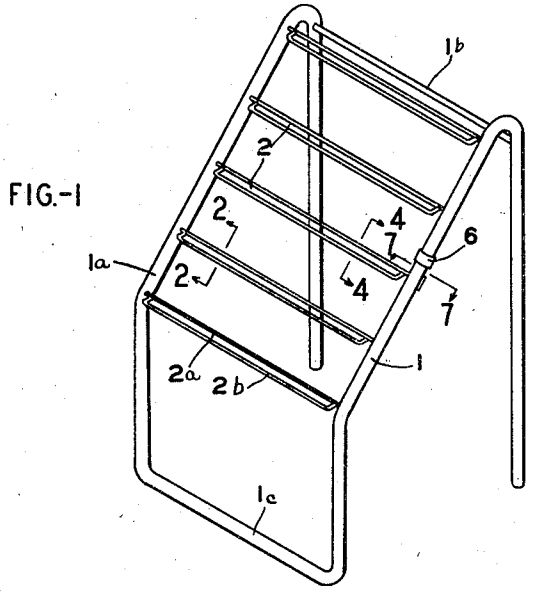


FIG.-1

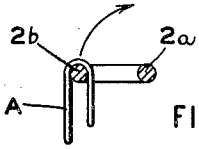


FIG.-2

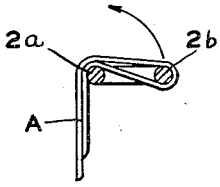


FIG.-3

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Patented Nov. 8, 1938

2,135,565

UNITED STATES PATENT OFFICE

2,135,565

RACK

Lee J. Devney, Painesville, Ohio

Application August 25, 1937, Serial No. 160,836

10 Claims. (Cl. 211—168)

This invention relates to racks for displaying and supporting neckwear, mufflers, socks, towels, curtains and similar limp fabric articles, and the object of the invention is to provide means in such a rack for locking the supported article in position, for preventing jerking of the displayed articles from the rack as by shop lifters, while permitting free removal of the articles at the will of the person using the rack.

The objects of the invention are generally to provide a rack for the described purpose of pleasing appearance, simple and inexpensive construction, wherein the mechanism is substantially concealed.

More particularly the invention contemplates a type of horizontal bar on which the articles are to be supported, the bar comprising a pair of rods with adjustment therebetween to frictionally grip the supported articles to secure them against removal so that the bar has adjustment between two positions, one in which the supported articles are free and the other in which they are secured; and the invention includes as an object the provision of snap action of the bar between its two adjusted positions.

Still more particularly, the invention contemplates a plurality of such bars mounted on a frame and provides as another object means for adjusting all of the bars simultaneously, and generally concealed and simple means for both adjusting them, and locking them in securing position.

Further objects and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawing, in which Fig. 1 is a perspective view of a rack embodying the invention, the parts being shown in open position, as to receive articles to be displayed or to permit their removal; Fig. 2 is a typical section of one of the bars shown in Fig. 1, as in the plane of line 2—2, Fig. 1, showing an article supported thereby; Fig. 3 is a view corresponding to Fig. 2 but showing the parts adjusted to secure the supported article; Fig. 4 is a detail sectional elevation as in the plane of line 4—4, Fig. 1; Figs. 5 and 6 are views corresponding to Fig. 4 but illustrating the parts as in intermediate and securing positions respectively; Fig. 7 is a sectional view in the plane of line 7—7, Figs. 1 and 4; and Figs. 8 and 9 are corresponding sectional views taken in the planes of lines 8—8 and 9—9 of Figs. 5 and 6 respectively.

With reference now to the drawing, the rack comprises a base or frame here indicated as formed from a single piece of cylindrical tubular metal. One specific form of frame is shown in Fig. 1 as having parallel sloping side members 1 and 1*a* and supporting legs therefor as indicated, a member 1*b* being arranged to interconnect the rear legs and the front legs being integrally interconnected by a bottom member 1*c*. A plurality of bars 2, six being shown, extend between the side frame members 1 and 1*a* for support of the articles to be displayed.

Each bar 2 comprises a main rod 2*a* and an auxiliary rod 2*b* in parallel relation therewith and secured thereto as indicated in the drawing as by welding, the illustrated rods being of metal.

For support of the bars, the frame members 1 and 1*a* are perforated to receive the ends of the main rods 2*a* so that the bars are rotatably supported on the frame.

The side frame member 1 is slotted along its bottom as indicated Figs. 7, 8 and 9, and the main rod members 2*a* extend within the hollow of this frame member and there are bent to form cranks 2*c*. These cranks are all interconnected by a link 3 perforated to receive them, the link being secured on the cranks as by speed nuts 4 or the like.

The proportion and arrangement of the parts is such that the link 3 has an uppermost position wherein it is stopped by the top of the frame member 1, as in Figs. 1, 4 and 7, through an arc downwardly past the intermediate position Figs. 5 and 8, and upwardly to the position of Figs. 6 and 9, the auxiliary rod 2*b* meanwhile moving from the position of Figs. 1, 2, 4 and 7 on one side or in front of the main rod 2*a*, over the main rod as in Figs. 5 and 8, and to a position behind or on the other side of the main rod, as illustrated Figs. 3, 6 and 9. The cumulative weight of the auxiliary rods 2*b* being much greater than that of the link 3, it will be apparent that the described rod adjustment will be characterized by a snap action, all of the rods tending to remain in either the open position of Figs. 1, 2, 4 and 7 or in the closed or securing position, Figs. 3, 6 and 9, and being unstable in the intermediate position, Figs. 5 and 8.

Referring to Figs. 2 and 3 it will be noted that the pull of the supported article A in the open position of Fig. 2 tends to retain the rack in open position. In the closed position of Fig. 3, the rod 2*b* is in substantially dead-center position relative to the pivot rod 2*a* and the pull of the supported article. In other words, the supported article does not exert sufficient turning moment on the rod 2*b* to rotate it in opening direction.

For coincidental adjustment of all the bars

between their two positions a handle 5 is secured to the link 3 projecting through the slot 1' in the frame member 1, this handle being here shown as of sheet metal bent to general U-form to embrace the link 3 and secured to the latter as by welding or riveting.

The parts are so proportioned and arranged that the link 3 projects into the slot 1' in its intermediate position for locking the link against movement from one of its adjusted positions to the other. Sleeve 6 may be provided upon the frame member 1, split to correspond with the slot 1' and therefore adjustable about the frame member to effectively control the slot 1'. Thus, when the sleeve is positioned as shown in Figs. 6 and 9, the link may move through the slot and the bars adjusted between open and closed position, whereas when the locking sleeve 6 is rotated to extend across the slot 1' the bars cannot be adjusted from their one position to the other.

In service the articles to be displayed or supported are hung over the auxiliary rods 2b as at A, Fig. 2. By the handle 5 the bars are adjusted to the closed position, Fig. 3, frictionally gripping the articles so that they are practically secured against removal. The locking sleeve 6 may then be adjusted to prevent return of the bars to the release position of Fig. 2 except by one familiar with the operation of the mechanism, the sleeve being inconspicuous and the handle 5 substantially concealed by the side frame member 1. The articles are practically insured against unauthorized or accidental removal from the rack.

What I claim is:

1. In a rack of the class described, a bar comprising a main rod and an auxiliary rod mounted thereon in parallel relation therewith, said main rod being horizontally disposed and mounted for rotational adjustment to adjust said auxiliary rod over said main rod between positions on opposite sides of said main rod, and stop means for preventing movement of said auxiliary rod below said main rod.

2. In a rack of the character described, a bar comprising a pair of rods horizontally disposed in parallel relation and mounted for adjustment about a longitudinal axis, adjusting means connected to said bar eccentrically of said axis and stop means engageable by said adjusting means, said parts being so proportioned and arranged that one of said rods is adjustable to either side of the other and is yieldably retained in either adjusted position.

3. In a rack of the character described, a bar comprising a pair of rods horizontally disposed in parallel relation and mounted for adjustment about a longitudinal axis, adjusting means connected to said bar eccentrically of said axis and stop means engageable by said adjusting means, said parts being so proportioned and arranged that one of said rods is adjustable to either side of the other and is yieldably retained in either adjusted position, and handle means connected to said adjusting means for adjusting said bar.

4. In a rack of the character described, a hollow frame member, a bar comprising a pair of rods horizontally disposed in parallel relation and mounted in said frame member for adjustment about a longitudinal axis, said bar having a crank part within said frame member, and means carried by said crank for adjusting said bar about said axis to dispose one of said rods on either side of the other, said means engaging said frame to determine the adjusted positions of said bar.

5. In a rack of the character described, a hollow frame member, a bar comprising a pair of rods horizontally disposed in parallel relation and mounted in said frame member for adjustment about a longitudinal axis, said bar having a crank part within said frame member, and means carried by said crank for adjusting said bar about said axis to dispose one of said rods on either side of the other, said means engaging said frame to determine the adjusted positions of said bar, said frame member having an opening providing clearance for adjusting movement of said adjusting means.

6. In a rack of the character described, a hollow frame member, a bar comprising a pair of rods horizontally disposed in parallel relation and mounted in said frame member for adjustment about a longitudinal axis, said bar having a crank part within said frame member, means carried by said crank for adjusting said bar about said axis to dispose one of said rods on either side of the other, said means engaging said frame to determine the adjusted positions of said bar, and handle means on said adjusting means.

7. In a rack of the character described, a hollow frame member, a bar comprising a pair of rods horizontally disposed in parallel relation and mounted in said frame member for adjustment about a longitudinal axis, said bar having a crank part within said frame member, means carried by said crank for adjusting said bar about said axis to dispose one of said rods on either side of the other, said means engaging said frame to determine the adjusted positions of said bar, and lock means slidably mounted on said frame member to control movement of said adjusting means into said opening.

8. In a rack of the character described, frame means and a plurality of bars, each bar comprising a pair of parallel rods horizontally disposed and mounted on said frame means for adjustment one about the other with snap action between two positions, and means interconnecting said bars for their coincidental adjustment.

9. In a rack of the character described, frame means and a plurality of bars, each bar comprising a pair of parallel rods horizontally disposed and mounted on said frame means for adjustment one about the other with snap action between two positions, means interconnecting said bars for their coincidental adjustment, and means effective between said frame means and said interconnecting means for coincidentally locking said bars in an adjusted position.

10. In a device of the character described, a frame, parallel main and auxiliary rods secured together, said main rod being pivotally mounted in said frame for rotational movement to carry said auxiliary rod over said main rod from an open position where an article pulling on said auxiliary rod maintains it in open position to a closed position where said auxiliary rod is carried to the opposite side of said main rod in position where the pull of said article is ineffective to produce a turning moment sufficient to move said auxiliary rod about said main rod in opening direction.

LEE J. DEVNEY.