

July 26, 1960

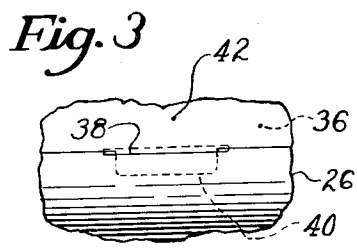
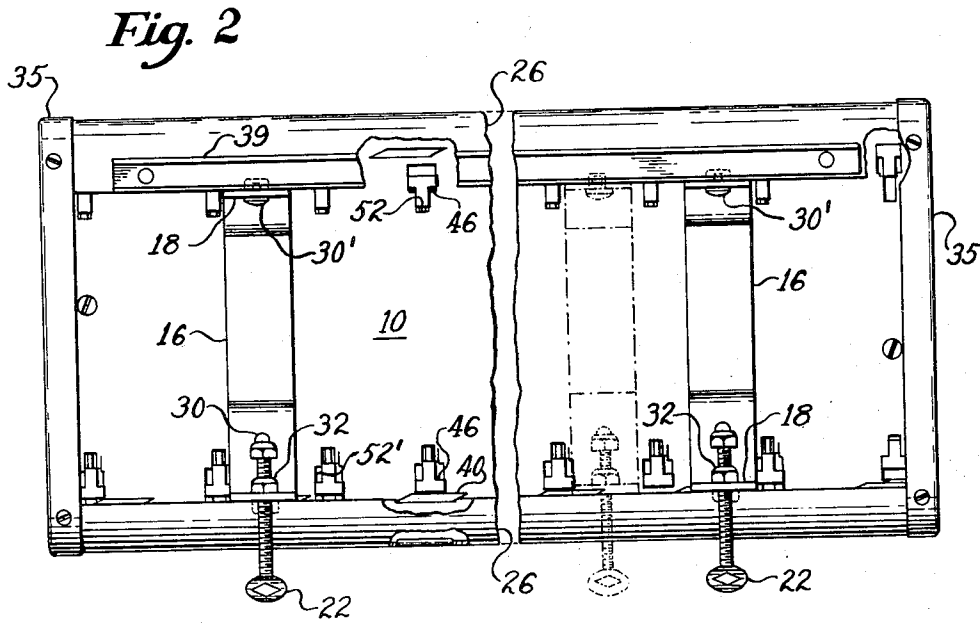
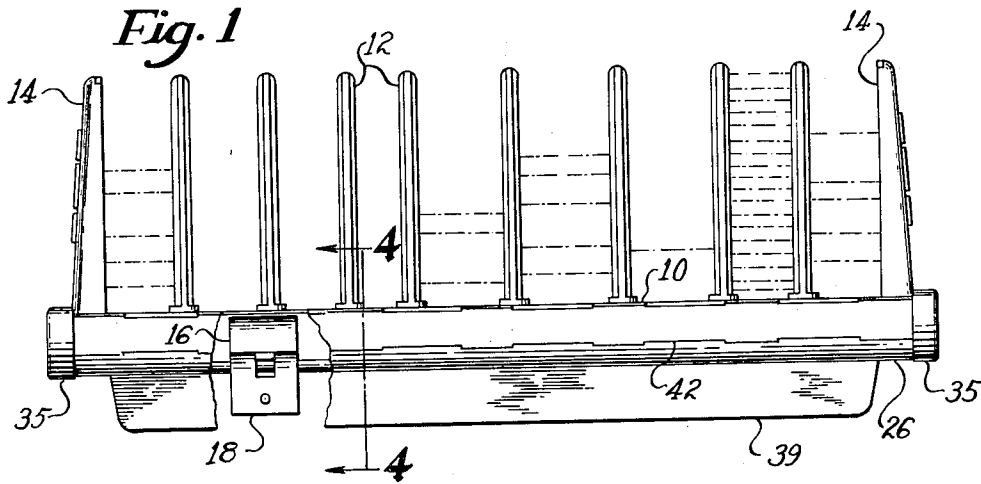
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2,946,457

DISPLAY RACKS

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2 Sheets-Sheet 1



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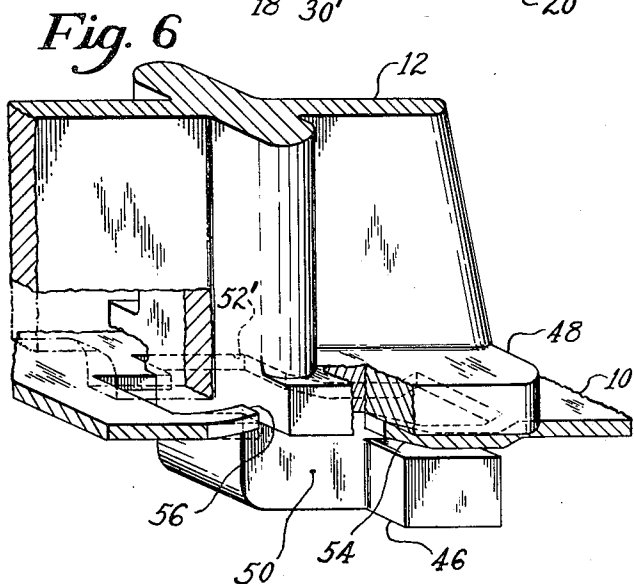
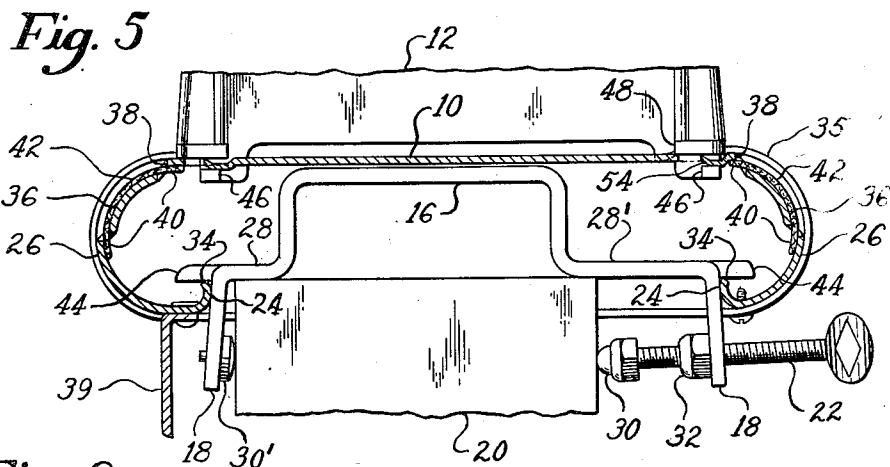
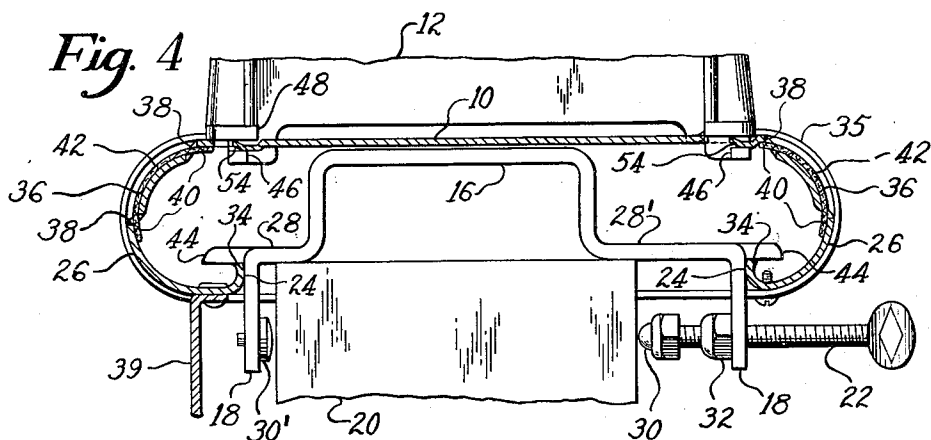
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2,946,457

DISPLAY RACKS

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The present invention relates to merchandise display racks.

Merchandise displayed at a place where customers must for one reason or another pause, most readily and effectively reminds the customers of their need for such merchandise. This is particularly true of small items, such as razor blades, the need for which could otherwise be easily forgotten. Thus it has become a desirable practice to mount display racks for such items at the cashier's station, in self-service or super markets (as well as other locations). When thus located it is commonly found that the top of the cashier's cash register will conveniently serve as a supporting member which further brings the merchandise to the attention of the customers by placing it at eye level, although many other forms of supporting members could be employed.

The principal object of the present invention is to provide a new and improved display rack construction of superior attributes compared to prior constructions.

Another object of the invention is to provide a display rack of inexpensive construction which has improved means for mounting it on a supporting member.

A further object of the invention is to provide a display rack having simplified means for adjustment of the merchandise-bearing portion with respect to the mounting means whereby the rack may be disposed, in any desired relationship, on many different types and sizes of supporting members.

A still further object of the invention is to provide a display rack having attachable partitions for segregating merchandise carried thereby, and simplified means for securely locking the partitions in correct position to prevent their inadvertent separation from the rack.

With the above objects in mind, the invention, in one of its aspects, includes a display rack having mounting means capable of being locked on a supporting member and also brought into locking engagement with the display rack. This arrangement permits an inexpensive and yet rugged construction for secure attachment of the rack to the supporting member. In carrying out this aspect of the invention it has been found preferable to effect locking of the mounting means with respect to the supporting means and the display rack simultaneously. In order to further economize and simplify the construction of the display rack, a single means may be employed for effecting both of these locking actions. Additionally, the mounting means may be linearly adjustable relative to the display rack in order readily to afford any desired disposition of the display rack on the supporting member.

In furtherance of this aspect of the invention the mounting means may take the form of a bracket having legs for straddling the supporting member. Horizontal portions may be formed in these legs for facilitating heightwise positioning of the display rack with respect to the supporting member.

The invention in another aspect may comprise par-

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titions or partition-like members attachable to the rack body for segregating merchandise carried thereon, and having simplified means for preventing inadvertent or accidental detachment of the partitions once they have been operatively attached to the rack body.

In a further aspect of the invention, the body of the display rack is inexpensively formed as a single unit of substantially uniform thickness. Thus, the merchandise-bearing portion, the means which are brought into locking engagement with the mounting means and the means affording linear adjustment of the mounting means relative to the merchandise-bearing portion may all be formed as a single, integral unit. If desired that unit may have incorporated therein means for securely attaching partition-like members thereto.

The invention will now be further explained by describing a preferred embodiment thereof by way of illustration, and pointed out in the claims.

In the drawings:

Fig. 1 is a front elevation of a preferred embodiment of our improved display rack;

Fig. 2 is a bottom view, on an enlarged scale, of the rack seen in Fig. 1 with certain portions broken away;

Fig. 3 is a fragmentary and enlarged view of means indicated in Fig. 1 for attaching a printed sheet to the display rack;

Fig. 4 is a section taken on the line 4-4 in Fig. 1, on an enlarged scale, showing the display rack preparatory to being mounted on a supporting member;

Fig. 5 is a section similar to that in Fig. 4 showing the display rack after it has been locked on the supporting member; and

Fig. 6 is a perspective view illustrating novel means for securing a partition-like member to the display rack.

The display rack of the present invention includes a merchandise-bearing base portion 10 on which packages or other articles may be stacked for display or other purposes, as indicated in Fig. 1. Partitions 12 may be provided for segregating various types of articles being displayed as well as for aiding in the support of high stacks of such articles. At either end of the base 10 partition-like end walls 14 may be provided to prevent merchandise from falling off of the display rack. Mounting means are provided for securing the display rack to a supporting member. While the mounting means may take many forms, we find it useful to employ two, linearly adjustable, mounting brackets 16 (Figs. 1 and 2) having yieldable or resilient legs 18 arranged to straddle a supporting member 20 in the manner shown in Fig. 4. Preferably a single locking means, such as the thumb screw 22 associated with each bracket 16, may then be employed to secure the respective bracket 16 to the supporting member 20. Thus as a thumb screw 22 is turned to lock a bracket 16 on the supporting member 20, the yieldable legs 18 are deflected towards and into locking engagement with trust-receiving portions 24 of flanges 26 which extend from the base 10 of the display rack and in close proximity to the respective legs 18. This arrangement uniquely provides for the attachment of the display rack as a solid appurtenance to the supporting member 20 by deflection of the yieldable legs 18, which are a part of the mounting means, into locking engagement with the flanges 26. It will be noted that there are two locking actions involved, one being between the mounting means and the supporting member and the other being between the flanges 26 and the mounting means. By arranging the flanges 26 in contacting relationship with respective legs 18 it is possible to gain the further advantage of effecting these two locking actions simultaneously.

It will be appreciated that deflection of a yieldable leg of a mounting bracket into engagement with a thrust-

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receiving flange-like portion extending from a display rack could be obtained by using many different forms of construction. For example and not by way of limitation, a single mounting bracket might be employed with no provision for linear adjustment wherein but one of the legs was yieldable. Furthermore the locking means could be any one of several types, as, for instance, cam means which would automatically deflect the yieldable leg into locking engagement with a flange-like portion of the display case when the mounting means is secured or locked on a supporting member.

The illustrative embodiment has other useful aspects which afford certain advantages particularly effective in providing a simple and inexpensive construction. Each bracket 16 may be formed of a yieldable and resilient material having a uniform cross-section. The legs 18 are formed with horizontal portions 28, 28' which position the bracket 16 with respect to the supporting member 20 preparatory to its being locked thereon (Fig. 4). It can also be seen that pads 30 and 30' are provided at the inner ends of the screw 22 and at the opposed surfaces of the opposite legs 18, respectively. These pads may be formed of plastic such as a polyamide or other relatively soft material so that when a bracket 16 is locked on the supporting member 20 the surface thereof will not be marred. Also from viewing Figs. 4 and 5 it will be appreciated that after a mounting bracket 16 has locked on the supporting member 20 with its legs 18 in locking engagement with the flanges 26, the thumb screw 22 may be locked by a checknut 32.

In order to obtain further economies of construction, the base 10 and the flanges 26 may be formed as a single unit, as by bending a piece of sheet metal to obtain a body portion of the configuration which is best seen in Figs. 4 and 5. This single unit body construction could of course be obtained by using other materials and forming methods as by molding resinous plastic materials. The flanges 26 extend from the longitudinal edges of the base 10 curving outwardly and then inwardly to provide the thrust-receiving portions 24. These flanges may then be curved upwardly and terminate in rail-like portions 34, the function of which will be explained shortly. At each end of the base, caps 35 may be provided which also enclose the ends of the flanges 26.

With this integral construction, as well as in modifications thereof, it may be found desirable to provide means for mounting a price list or other advertising material on the display rack. For this purpose one or both of the flanges may be provided with a longitudinally extending depression 36. Slots 38 may then be provided along the top and bottom edges of the depressions 36 (Figs. 1, 3 and 4) for receiving tabs 40 formed on a strip 42 on which prices or other information are imprinted. It will be noted that the upper tabs 40 are formed on an inclined angle (Fig. 2) to insure better attachment of the strip 42 while the side edges of the lower tabs are formed vertically to facilitate their insertion into the lower slots 38 (Fig. 3). If desired a plate 39 may be secured to the lower portion of one of the flanges 26 to provide further advertising or imprinting space.

By providing two mounting brackets 16, it has been found that a simple and rugged construction results when the display rack is to be mounted on a supporting member of any substantial length, such as the top of a cash register. This ruggedness or rigidity of mounting generally increases with the distance between these mounting means. Thus it is desirable that the mounting means, the brackets 16, be linearly adjustable of the display rack so that they may be spaced apart as far as possible for the particular size of supporting member to which the rack is to be attached. In most cases it will be found that this adjustment should be longitudinally of the body or merchandise-bearing portion of the display rack. There are, of course, other considerations which add to the desirability of having the mounting means longitudi-

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nally adjustable of the display rack irrespective of adjusting the distance between two mounting brackets. Thus it may be desirable to provide for such longitudinal adjustment where only one mounting bracket is used, in order to properly dispose the display rack on a supporting member having dimensions which do not permit adjustment between it and the mounting means.

In the present invention it has been found convenient to employ the rail-like portions 34 of the flanges 26 in providing linear, longitudinal adjustment of the mounting brackets 16 with respect to the display rack. It will of course be appreciated that rail-like portions could also be provided by other or separate means. In any event, the rail-like portions 34 serve as bearing means for projections 44 extending from the brackets 16. The box-like construction of the base 10 and flanges 26 securely retains the brackets 16 on the display rack while the width of the legs 18 prevents the brackets 16 from being freely twisted away from said flanges. Thus free adjustment of said bracket mounting means with respect to the display rack can be obtained by sliding the brackets 16 along the rails 34. As noted above, the legs 18 are, preferably in contacting relation with the flanges 26; however said contacting relation, preferably, should not impose any pressure therebetween which would interfere with this free and easy longitudinal adjustment.

Among other aspects of the invention, it will be seen that the single body unit construction provides a simple and inexpensive means for forming the thrust-receiving surfaces needed to coact with the described mounting brackets having yieldable legs. Other advantages are also found in manner of forming this single body unit whereby longitudinal adjustment of the mounting brackets may be provided for without resort to the complexities which such adjustment usually entails.

Referring now to other aspects of the invention, the partitions 12 and the end walls 14 are preferably formed as separate elements to be attached to the base 10. The partition-like end walls 17 may be molded of opaque thermosetting resin, while the partitions 12 may be molded of a transparent thermoplastic resin.

In order to facilitate the secure attachment of the partitions 12 and end walls 14, each may be fabricated with tongues 46 projecting from their lower extremities. Overlying the tongues 46 may be pedestals 48 which are connected thereto by webs 50. With at least one tongue 46 and overlying pedestal portion 48 at each end of a partition 12 or end wall 14 secure attachment of a partition 12, for example, may be obtained by introducing the tongues 46 into slots or openings 52, 52' (Figs. 2 and 6) formed in the base 10. With the tongues 46 below an undersurface of the base 10 the partition 12 may be shifted laterally towards narrower portions of the slots 52, 52'. When so shifted the partition 12 is locked against vertical movement by the portions of the base 10 which are between the tongues 46 and the pedestal portions 48. Greater rigidity of the partition 12 may be obtained by cam means, such as the surfaces 54 which are integrally formed in the base 10. Thus as the partition 12 is shifted laterally the tongues 46 are displaced downwardly to bring the pedestal portions 48 into firm and intimate contact with the upper surface of the base 10. In this manner sidewise tipping of a partition or partition-like member is effectively controlled.

Once a partition 12 is locked on the base 10 by the described shifting movement, inadvertent reverse movement may be prevented by a locking or latch arrangement, or the like. It may take the form of a resilient finger 56 formed integrally with the base 10, located at one side of each slot 52. This finger 56 will be deflected downwardly by the lower surface of a pedestal portion 48 as the partition 12 is shifted laterally. In this connection the cam surfaces 54 facilitate depression of the finger 56. When the pedestal portion 48 is shifted beyond the end of the finger 56 the latter springs up into the path

of reverse movement of the pedestal portion 48 to lock the partition in place. Preferably, further shifting movement of the partition 12 is limited by engagement of a web 50 with the end of a slot 52, 52'. Thus a partition or partition-like member may be firmly and securely attached to the base 10 in a manner requiring a positive act, i.e. depression of the finger 56, before it can be removed.

As pointed out above, the body portion of the rack, including the base 10 and the flanges 26 may be formed of a single piece of material, preferably sheet metal. By forming the slots 52, 52' cam surfaces 54 and spring fingers 56 as well as the recesses 36 and slots 38 directly in or of the same piece of material, without using further elements, even greater economies can be obtained in constructing display racks.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent of the United States is:

1. A merchandise display rack for attachment to a supporting member, said rack having a single integral body unit formed of substantially uniform thickness and including a base portion having a merchandise-supporting surface, said body unit also having two opposed flanges curving outwardly from said base portion, inwardly beneath said supporting surface to provide opposed thrust-receiving portions and then upwardly and terminating in longitudinally-extending rail-like portions; at least one mounting bracket having yieldable legs for straddling the supporting member, said legs extending downwardly of the display rack and adjacent to the thrust-receiving portions with respect to the flanges; said bracket also having projections bearing against the rail-like portions of the respective flanges; and a single means for deflecting said yieldable legs toward and into locking engagement with the adjacent thrust-receiving portions of said flanges and also locking said legs on the supporting member thus firmly locking the display rack with respect to the mounting bracket and the supporting member.

2. A display rack having a pair of spaced flange-like thrust-receiving portions, a mounting bracket having opposed legs for straddling a supporting member on which the display rack is to be mounted, at least one of said legs being yieldable, said legs being between and in close proximity to respective ones of said flange-like portions and a single means for locking said legs on the supporting member and deflecting said yieldable leg against and into locking engagement with the adjacent one of said flange-like thrust-receiving portions firmly to lock the display rack with respect to the mounting bracket and the supporting member.

3. A display rack having a pair of spaced flange-like thrust-receiving portions, a mounting bracket having opposed legs for straddling a supporting member on which the display rack is to be mounted, one of said legs being yieldable and in close proximity to one of said flange-like portions, the other leg being engageable by the other flange-like portion, and means for deflecting said yieldable leg towards and into locking engagement with the adjacent flange-like portion as such legs are brought into locking engagement with the supporting member.

4. A display rack having spaced flange-like thrust-receiving portions, a mounting bracket having opposed legs for straddling a supporting member on which the display rack is to be mounted, one of said legs being yieldable, said legs being in close proximity to respective ones of said flange-like portions, and means for simultaneously locking said legs on the supporting member and deflecting said yieldable leg against and into locking engagement with the adjacent one of said flange-like thrust-receiving portions firmly to lock the display rack with respect to the mounting bracket and the supporting member.

5. A display rack having spaced flange-like thrust-receiving portions, a mounting bracket having opposed legs for straddling a supporting member on which the dis-

play rack is to be mounted, one of said legs being yieldable, said legs being in close proximity to respective ones of said flange-like portions, and means for bringing said legs into locking engagement with said supporting member and also deflecting said yieldable leg against and into locking engagement with the adjacent one of said flange-like thrust-receiving portions and in opposition to the other portion firmly to lock the display rack with respect to the mounting bracket and the supporting member.

6. A merchandise display rack comprising a base portion including a merchandise supporting surface having downwardly and inwardly extending flange-like thrust-receiving portions integral therewith and means for securing thereto a plurality of partition-like members, a mounting bracket disposed between said portions including a pair of legs extending downwardly adjacent respective ones of said portions for straddling a supporting member on which the display rack is to be mounted, at least one of said legs being yieldable with respect to the other leg toward the adjacent thrust-receiving portion, and means for deflecting said yieldable leg toward and into locking engagement with said portion adjacent thereto while forcing said other thrust-receiving portion into engagement with said bracket and simultaneously securing said legs to the supporting member.

7. A merchandise display rack according to claim 6 in which the partition-like members have tongues extending therefrom and pedestal portions overlying said tongues, each of said means for securing the partition-like members comprising tongue-receiving slots having narrow portions towards which one of the partition-like members may be shifted to bring a part of said base portion between each tongue and overlying pedestal portion, said securing means also including cam means formed integrally in said body unit adjacent the narrow portion of each slot, said cam means being arranged to deflect said tongues downwardly as the partition-like member is shifted thus bringing the overlying pedestal portions into firm engagement with said base portion and a yieldable finger integral with and extending from said base into the path of shifting movement of said partition-like member and deflectable thereby, the length of said finger being such that the partition-like member will pass beyond its end as such shifting movement is substantially completed whereupon said finger will again come into the path of movement of said member to prevent inadvertent detachment thereof by reverse shifting movement.

8. A merchandise display rack according to claim 6 in which the partition-like members have tongues extending therefrom and pedestal portions overlying said tongues, each of said means for securing the partition-like members comprising tongue-receiving slots having narrow portions towards which one of the partition-like members may be shifted to bring a part of said base portion between each tongue and overlying pedestal portions and a yieldable finger integral with and extending from said base into the path of the shifting movement of said partition-like member and deflectable thereby the length of said finger being such that the partition-like member will pass beyond its end as said shifting movement is substantially completed whereupon said finger will again come into the path of movement of said member to prevent inadvertent detachment thereof by reverse shifting movement.

9. A display rack having a pair of spaced flange-like thrust-receiving portions, a mounting bracket having opposed legs for straddling a supporting member on which the display rack is to be mounted, each of said legs having an horizontal portion for positioning said bracket heightwise with respect to said supporting member, one of said legs being yieldable and in close proximity to one of said flange-like portions and means for locking said legs on said supporting member and deflecting said yieldable leg against and into locking engagement with the adjacent one of said flange-like thrust-receiving portions with the other portion in engagement with said bracket

firmly to lock the display rack with respect to the mounting bracket and supporting member.

10. A display rack having a pair of spaced flange-like thrust-receiving portions, a mounting bracket adjustable linearly of the display rack, said bracket having opposed legs for straddling a supporting member on which the display rack is to be mounted, one of said legs being yieldable and in close proximity to one of said flange-like portions, and means associated with one of said legs for locking said bracket on said supporting member and deflecting said yieldable leg against and into locking engagement with the adjacent one of said flange-like, thrust-receiving portions against the opposition of the other portion firmly to lock the display rack with respect to the mounting bracket and the supporting member.

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