

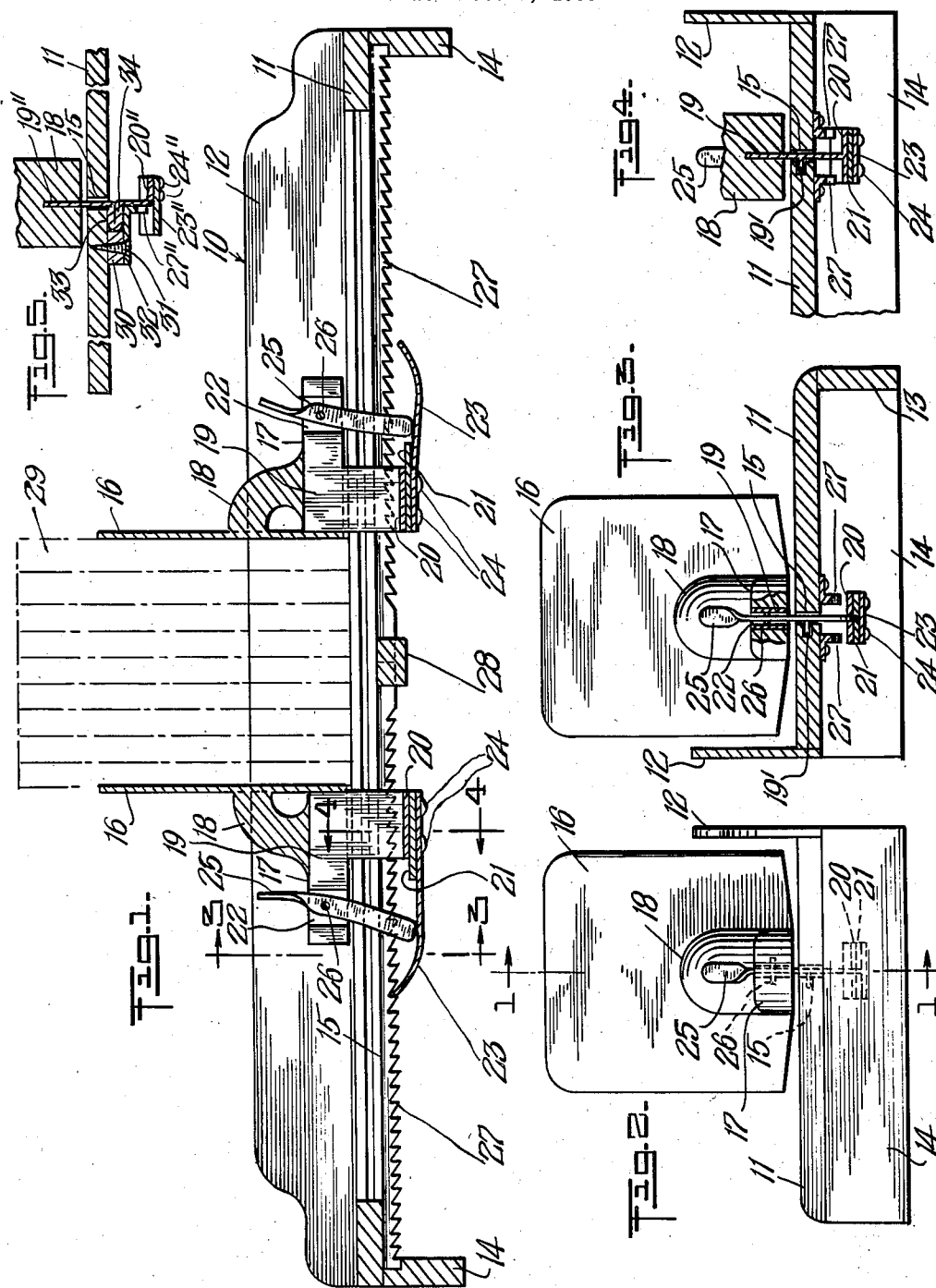
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BOOKRACK

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BOOKRACK

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5 Claims. (Cl. 211—43)

This invention relates to improvements in book racks.

Objects

Among the principal objects which the present invention has in view are: to provide an improved book rack having means whereby book ends constituting a part thereof will be locked against outward movement; to provide means whereby a plurality of books, magazines, leaflets and the like will be supported in upright position and held closely in place between the book ends constituting part of the book rack; to be enabled to move the respective book ends towards each other and to securely support a plurality of books, magazines, leaflets and the like therebetween; to minimize displacement of books, magazines, leaflets and the like between book ends while moving the book rack from place to place; to provide means on the underside of a pair of book ends to permit movement of the same in a direction toward and away from each other; to provide means on the underside of the book rack; to enable the means on the underside of the book ends to engage the means on the underside of the book rack at all times; to secure simplicity of operation and construction; and to obtain other advantages and results as may be brought out in the following description.

Drawing

Figure 1 is a longitudinal sectional view of my improved book rack shown as taken on line 1—1 of Figure 2;

Figure 2 is an end elevation looking from the right end of Figure 1;

Figures 3 and 4 are cross-sectional views shown as taken on lines 3—3 and 4—4 respectively of Figure 1; and

Figure 5 is a sectional view substantially similar to Figure 4 and showing a slightly different construction.

Description

As seen in the drawing, the reference numeral 10 indicates the improved book rack in general as having a base 11, a back upright 12 extending upwardly from the base, front wall 13 and side walls 14, 14. The front wall and side walls as seen in the several views preferably extend downwardly from the base member a sufficient distance so as not to interfere with the working mechanism on the underside of the said base. The base in the present showing is provided with a longitudinally disposed comparatively narrow

slot 15 extending throughout the thickness of the said base with a groove 15' in the one wall of said slot, said slot 15 and groove 15' extending from adjacent one end of the longitudinal length of the rack to the opposite adjacent end, with the outer ends being completely closed as clearly seen in Figure 1. In construction the material used in the manufacture of the book rack may be of any suitable material, such as wood, metal or the like. The design as shown is merely for illustrative purposes, as in the manufacture, any suitable design may be employed to suit individual taste. It is preferred that the rack be light in weight and may be placed on a table, desk or any flat surface so as to be easily moved without disturbing any books and the like which may be held thereby.

In carrying out the invention there is mounted to slide on the top of the base 11, but slightly above the surface thereof, a pair of book braces or book ends 16, 16 preferably of upright wooden plates or the like and brackets 17, 17 secured thereto or integral therewith. Said brackets in construction preferably provide finger gripping portions 18, 18 whereby in manipulating, or when desiring to move the said book ends 16, 16 towards or away from each other, the same may be easily accomplished and without the necessity of taking hold of the tops of the upright plates. About midway down from the tops and centrally of the brackets 17, 17 are provided inverted L-shaped metal members 19, 19, one in each of the said brackets, with the one end of each said metal member extending downwardly through the slot 15 of the base 11 to approximately midway between the bottom of the base 11 and the bottom of the front and side walls 13 and 14 respectively. Approximately in the middle of the downwardly projecting ends of the members 19, 19 is provided a laterally disposed projection 19' which in practice rides within groove 15'. This will enable the book ends 16, 16 and brackets 17, 17 to remain slightly above the upper surface of the base 11 and in a position so as not to mar or scratch the surface of said board as the respective book ends are moved towards or away from one another. Each said metal member at the bottom thereof is bent to provide a horizontal flat surface 20 to which may be secured in any suitable manner, such as by riveting or welding, reinforcing strips 21, 21 preferably as extending slightly beyond the end of said flattened surface 20. Said reinforcing strips 21, 21 at their projecting ends face away from each other towards the outer ends of the

rack 10. The other portions of the metal L-shaped members extend outwardly towards the outer ends of the brackets 17, 17 and are bent adjacent the said outer ends to provide narrow elongated openings or slots 22, 22 in the said brackets. At the bottom each reinforcing strip is provided with a substantially flat metal spring 23 attached at one end thereto by any suitable manner, preferably by screws 24. The screws 24 are screwed, into the reinforcing strips where said strips are held securely to the underside of the horizontal bent portions 20 of the L-shaped members 19. The outer or free ends of the flat metal springs 23 are curved slightly in an upwardly direction and are resilient with respect to the secured portions. Mounted in said openings or slots 22, 22 of the brackets 17, 17 are triggers or pivoted levers 25, 25 which are preferably pivoted as at 26, 26. Said triggers preferably are of metal and are of less width than the longitudinal width of the said openings, which in practice will permit swinging of the same in either a forward or rearward direction for substantially the width of the openings. Said triggers likewise are vertically disposed with the upper parts thereof beyond their pivotal points being at right angles to the parts extending downwardly through the groove 15. The upper parts terminating between the top of the brackets 17, 17 and the finger gripping members 18, 18, thus permitting engagement of the fingers of a person to grasp the gripping members and a finger to press against the triggers when in operation as will hereinafter be described. The lower portions of the triggers extend slightly beyond the reinforcing strips 21, 21 and are rounded at their lower ends to come in direct engagement with the free end of the flat metal springs 23, but not in contact with the reinforcing strip 21.

On the underside the base 11 at each side of the groove 15 in the present showing, is provided with a pair of longitudinally disposed ratchets 27, with the outer ends imbedded in the walls 14, 14. The middle of said ratchets are held in place as by a cross-piece 28 transversely of the base and held securely to the said base. It is to be noted at this time that while I have shown two such ratchets 27, it is well within the scope of my invention that only one such ratchet may be employed if so desired. Also, for convenience and operation it will be noted that the teeth of the ratchets face oppositely to each other from the middle cross-piece 28. Said ratchets 27, 27 are spaced apart longitudinally a sufficient distance so as to be in alinement with respect to the flattened base portion 20 of the member 19, the reinforcing strips 21, and the flat metal spring 23 so as to accommodate receiving the curved outer ends of the said spring into the teeth when desiring to move the book ends or braces 16, 16 away from supporting the books, magazines, leaflets and the like 29 or for adding thereto.

In operation and referring to Figure 1 of the drawing, there is shown a plurality of books 29 or the like being supported and held securely in upright position by the book braces or book ends 16. As looking at the left hand side of the book rack it will be seen that the book end is locked in place against movement in either direction by virtue of the flat spring 23 being snapped into the ratchet teeth. On the right side the spring 23 is disengaged from the ratchet teeth by virtue of the pivoted member 25 having been pressed towards the outer part of the opening 22. When

the spring is in this position the book end may be released from its supporting position by gripping the finger gripping portion 18 and then moved away a sufficient distance or far enough to add more books, or the like, to those already in place. Immediately upon releasing pressure against the pivoted member 25, the spring due to its resiliency will yield upwardly to again snap into and engage one of the ratchet teeth. In order to securely hold the books or the like in upright position, and against displacement in the event of moving the rack, the book end is pushed inwardly with the spring 23 disengaging and snapping into each succeeding tooth of the ratchet until it cannot be moved any further, as illustrated in the left hand side of Figure 1.

The invention is not specifically directed to the construction shown in Figures 1 to 4 inclusive as the same can be equally applied to shelves, cabinets, radios and so forth. To this end there is shown in Figure 5 a slightly modified construction wherein a base or other flat board 11 may be provided with a longitudinal slot 15' and which may extend the entire length of the board or a convenient distance depending on the length of the board, shelf, radio, cabinet and so forth. Mounted on the bottom of the said board 11 and adjacent one side of the longitudinal slot 15' is a block 30 preferably extending the length of the board. To this block may be secured as by screws 31 a metal strip 32 which projects inwardly beyond the inner edge of the block and towards the slot, and then is bent downwardly to provide ratchet teeth 27' and in alinement with said slot. As in the preferred showing a track is required for keeping the book ends and their brackets 18 spaced upwardly from the surface of the board 11. To this end the space between the bottom of the board and the metal strip 31 is utilized as a track 33 wherein the downwardly extending L-shaped metal members 19' are bent to form an inwardly directed ledge 34 to ride within said track in the forward and rearward movement of the book ends. Also, the said ledge 34 will function to keep the book ends in raised position away from the upper surface of the board 11 thereby preventing marring and otherwise mutilating the surface of the board. The metal strip from its bent portion or ledge then extends downwardly to slightly below the teeth of the ratchet and then is bent outwardly to form a platform 29'. To the underside of said platform may be attached as by screws 24' the one end of flat metal springs 23' with the other end of the spring curved upwardly to engage with the teeth of the ratchet. Operation of the device as shown in Figure 5 is similar to that shown and described in Figures 1 to 4 inclusive.

Obviously detail changes and modifications may be made in the construction and use of my improved book rack without departing from the spirit and scope of the invention, and I do not wish to be understood as limiting myself to the exact construction or operation shown or described except as set forth in the following claims when construed in the light of the prior art.

I claim:

1. A book rack of the character described comprising a base, side walls, front wall and a back extending upwardly from the base, an elongated groove extending adjacent from one side wall to the other side wall, a pair of slidable upright supports having means extending downwardly through said groove, a ratchet fixedly secured

to the underside of said base and in parallel relationship to the said groove, and said means of the supports having other means whereby said second means will engage the ratchet adapted to securely hold a plurality of books in upright position between the said upright supports.

2. A book rack of the character described comprising a base elevated from the surface having a narrow longitudinal groove extending from adjacent ends of the base with the ends closed, a ratchet fixedly secured to the underside of said base and parallel to said groove, a pair of upright supports slidably mounted on the top of the base adapted to hold a plurality of books and the like therebetween, said supports having means extending downwardly therefrom through the said groove and yieldably engaging said ratchet, and other means for releasing said first means from the ratchet to permit movement of the upright supports in a direction towards or away from each other.

3. A book rack of the character described comprising a base elevated from the surface having a narrow longitudinal groove extending from adjacent ends of the base with the ends closed, a cross-piece transversely of said base and centrally thereof, a plurality of longitudinally disposed ratchets secured to the underside of the base and said cross-piece and parallel to said groove, a pair of upright supports slidably mounted on the top of the base adapted to hold a plurality of books and the like therebetween, said supports having inverted L-shaped members extending downwardly therefrom through said groove, resilient spring members mounted on said L-shaped members and yieldably engaging said ratchets, and means for releasing said resilient spring members from the ratchets to permit movement of the upright supports in a direction towards or away from each other.

4. A book rack of the character described comprising a base elevated from the surface having a narrow longitudinal groove extending from ad-

jacent ends of the base with the ends closed, a cross-piece transversely of said base and centrally thereof, a plurality of longitudinally disposed ratchets secured to the underside of the base and said cross-piece and parallel to said groove, a pair of upright supports slidably mounted on the top of the base adapted to hold a plurality of books and the like therebetween, said supports having inverted L-shaped members extending downwardly therefrom through said groove, resilient spring members mounted on said L-shaped members and yieldably engaging said ratchets, and pivoted levers mounted on and extending downwardly from said supports engaging the resilient spring members and for releasing said spring members from the ratchets to permit movement of the upright supports in a direction towards or away from each other.

5. A book rack of the character described comprising a base elevated from the surface having a narrow longitudinal groove extending from adjacent ends of the base with the ends closed, a cross-piece transversely of said base and centrally thereof, a plurality of longitudinally disposed ratchets secured to the underside of the base and said cross-piece and parallel to said groove, a pair of upright supports slidably mounted on the top of the base adapted to hold a plurality of books and the like therebetween, said supports having inverted L-shaped members extending downwardly therefrom through said grooves, and having resilient spring members facing towards the outer ends of the rack with their free ends curved upwardly for yieldably engaging said ratchets, and pivoted levers mounted on the supports and extending downwardly through the groove engaging said spring members and adapted to release said spring members from the ratchets to permit movement of the upright supports in a direction towards or away from each other.

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