Sept. 1, 1942. W. P. LAMAR 2,294,563

BOOK RACK

Filed Aug. 16, 1939

FIG. 1.

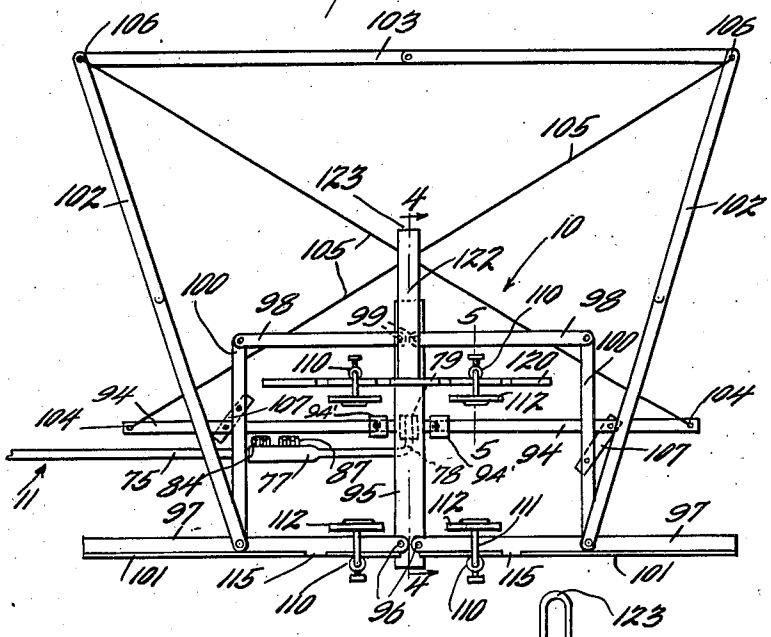


FIG. 2.

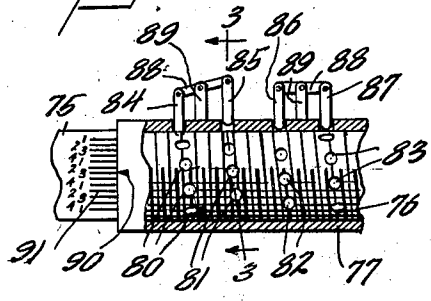


FIG. 3.

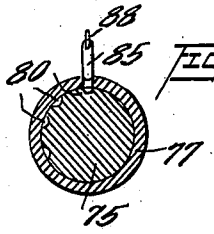


FIG. 4.

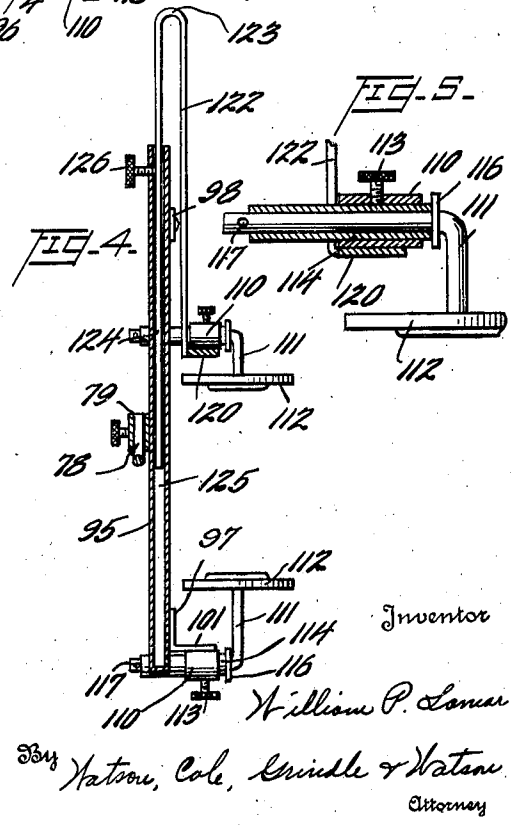


FIG. 5.

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BOOKRACK

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Application August 16, 1939, Serial No. 290,505

2 Claims. (Cl. 45—80)

This invention relates to stands or similar supports, and more particularly to adjustable stands or racks for supporting books, magazines, newspapers, drawings, music compositions, or the like in a variety of positions conveniently accessible to the reader, whether he is standing, seated, or lying in bed. This application is a continuation-in-part of my copending application Serial No. 43,772, filed October 5, 1935, which matured into Patent No. 2,186,300, issued January 9, 1940.

The general object of the invention is to provide a novel and improved stand of the type described.

A more specific object of the invention is the provision of a novel rack for holding printed matter or other articles of various sizes for ready perusal or other purposes and; also to provide improved means for rotatably adjusting the rack in vertical or horizontal positions or at selected intermediate inclined positions. Novel retaining means are also applied to the rack, and may be employed, for example, for holding the pages of a book or magazine in a flat position and preventing them from turning, or to secure loose sheets of newspapers, drawings, etc. against accidental displacement while in use. Means are also provided for expanding the rack by adjusting the article retaining means with relation to each other.

Other objects and features of novelty will be apparent from the following specification when read in connection with the accompanying drawing in which certain embodiments of my invention are illustrated by way of example.

In the drawing:

Figure 1 is a view in front elevation of a rack embodying the principles of the invention;

Figure 2 is an enlarged detail view, partly in elevation and partly in section, of a portion of the horizontal supporting arm for the rack, showing the means for adjustment of the angular position of the same;

Figure 3 is a vertical transverse sectional view of the same member taken on line 3—3 of Figure 2;

Figure 4 is a vertical transverse sectional view of the rack taken substantially on line 4—4 of Figure 1; and

Figure 5 is a sectional view through one of the article clamps forming a part of the rack, taken substantially on line 5—5 of Figure 1.

In Figure 1 of the drawing, the rack upon which the printed matter or other articles are held is indicated generally by the reference numeral 10 and is supported upon the end of a horizontal arm 11 extending from any suitable base or supporting member, as for example, as shown in the copending application to which reference has been made.

The rack 10 may be rotated upon the arm 11 from the vertical position indicated in Figure 1 of the drawing to a horizontal position and may be held in intervening angular adjustments. The outer end 75 of the cross arm 11 is cylindrical and provided with the screw threads 76. A tubular member 77 is threaded internally and receives the end 75 of the cross arm 11. Member 77 is closed at its outer end and formed with a projecting prong 78 which is received within the socket 79 provided on the rack 10. In order to secure the rack 10 in its adjusted angular positions the end 75 of the arm 11 is provided with several series of sockets or holes 80, 81, 82, and 83, which are arranged as clearly indicated in Figure 2 of the drawing. The sleeve member 77 is provided with a series of pins 84, 85, 86 and 87 which are adapted to register successively with certain of the holes 80, 81, 82, and 83. The respective pins are pivotally carried by the ends of the rocking levers 88 which are fulcrumed at their midpoints upon the posts 89 secured to the sleeve 77.

In the embodiment illustrated, the pin 84 when in register with the first hole of the series 80, as shown by Figure 2, will hold the rack in its horizontal position. A slight rotation of the sleeve 10 above the horizontal, say about six or seven degrees, will bring the pin 85 into register with the first hole of the series 81. A further rotation through the same selected interval will bring the pin 86 into register with the first hole of the series 82. Then the pin 87 is brought into registry with the first hole of the series 83 and after the next interval the first pin 84 reaches the second hole of the series 80 and the pins again are successively brought into registry with succeeding holes in the numbered series until the vertical position is reached. Of course, the intervals of adjustment may be varied by multiplying or diminishing the numbers of the holes in the several series. A mark 90 is provided on the sleeve or socket member 77 for indicating upon the scale 91 on the member 75 the pin to be operated at any position of rotation of the member 77. The pins may be numbered 1, 2, 3, and 4 and the indications on the scale correspondingly designated.

The rack 10 is provided with the flat, tubular, central longitudinal strip 95 which is connected to the member 77 by means of the elements 78

and 79. Pivoted to the lower end of the member 95 at the spaced points 96 are the ends of the laterally extending base members or sills 97 of the rack. Corresponding short members 98 are pivoted as at 99 near the upper end of the member 95 and the side members 100 pivotally connect the ends of the strips 98 with the sills 97. The sills 97 are angular in cross section to provide a flange 101 for retaining the books or other printed matter on the rack 10 when in vertical or inclined positions. Thus far the rack 10 is very similar to the conventional form of knock-down music rack. In order to adapt this type of stand to the retention of large sheets such as drawings, blueprints or newspapers, the sills 97 are extended laterally as shown and the elongated jointed side arms 102 are provided which are connected by the jointed top member 103. Laterally extending horizontal strips 94 are lock-pivoted as at 94' upon either side of the vertical member 95. The intermediate horizontal strips 94 are also extended and the ends 104 are connected by means of the wires 105 with the outer corners 106 of the extended rack. Additional cross wires may be provided for further support of large sheets and also for providing means for holding down such sheets. Brace strips 107 may be employed to rigidify the rack frame, these strips being detachably connected at their ends to the members 94 and 100.

In order to retain books or magazines which may be supported on the rack in the desired open positions, a certain holding arrangement is provided and will now be described. Tubular projections 110 are secured to the flanges 101 of the sills 97 through which are adapted to extend the arms of the angular rods 111. The other arms of these rods are adapted to overlie the printed matter carried by the rack and are provided at their ends with the rubber discs 112 which rest against the pages. One arm of the member 111 is frictionally received within a sleeve 114 having a flange or washer 116 secured to its end. A pin or cotter element 117 prevents the removal of the sleeve 114. The sleeve 114 is reciprocable in the member 110 and is held in adjusted position, according to the thickness of the book, paper, or other article to be clamped, by means of the set screw 113. In order that the hold-down discs may be swung out of position as for the removal of books from the rack 10, notches or openings 115 are provided in the flanges 101 as clearly shown in Figure 1 of the drawing.

For the purpose of securing the upper portion of the books, periodicals, or the like, which may be held upon the rack, there is provided the upper bar or strip 120 which corresponds to the lower flange 101 on the members 97. This strip or bar 120 is adjustably secured to the rack by means of the U-shaped strip 122, which is secured to the midportion of the bar 120, is bent upon itself as at 123, and has a relatively elongated arm 124 which is received within the hollow interior 125 of the central member 95 of the rack.

For the purpose of adjusting the position of the strip 120 in accordance with the height of the article to be clamped, the set screw 126 is provided. Upon the bars 120 are secured similar clamping devices to those carried by the lower members 97, with the exception that the holding elements 111, 112 are directed in a downward position to overlap the upper edge of the book or article. The upper members include the tubular holder 110 which is secured to the strip 120 and all of the other elements of the clamps are identical with those described in connection with the lower corresponding members and the same reference characters will be used.

It will be realized from the foregoing description that an exceedingly adaptable rack has been provided by the present invention which is susceptible of many uses and adjustable in many ways for the convenience of the user.

It is understood that various changes and modifications may be made in the embodiments illustrated and described herein without departing from the scope of the invention as defined by the following claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a stand of the class described, in combination, a rack for supporting printed matter of various kinds, such as books, music compositions, or the like, said rack being provided with a flanged strip along its lower edge, a centrally disposed tubular strip embodied in said rack and having an open end, a U-shaped member having one of its arms adjustably received within the end of said tubular member, a transverse strip secured to the other arm of said U-shaped member for adjustment with respect to said lower flanged strip, whereby said upper and lower strips may be adjusted relatively to each other to accommodate articles of various dimensions upon the rack, and pivoted clamping elements carried by said transverse strip and adapted to bear upon the matter supported by said rack.

2. In a stand of the class described, in combination, a rack for supporting printed matter of various kinds, such as books, music compositions, or the like, said rack being provided with a flanged strip along its lower edge, a centrally disposed tubular strip embodied in said rack and having an open end, a U-shaped member having one of its arms adjustably received within the end of said tubular member, a transverse strip secured to the other arm of said U-shaped member for adjustment with respect to said lower flanged strip, swivelled clamping elements carried by said upper and lower strips and means for swinging them to and from positions overlying the article to be retained, whereby said upper and lower strips, together with their clamping elements, may be adjusted relatively to each other to accommodate articles of various dimensions upon the rack.

WILLIAM P. LAMAR.