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H. E. BERK
SHELF SYSTEM

3,234,897

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FIG. 2.

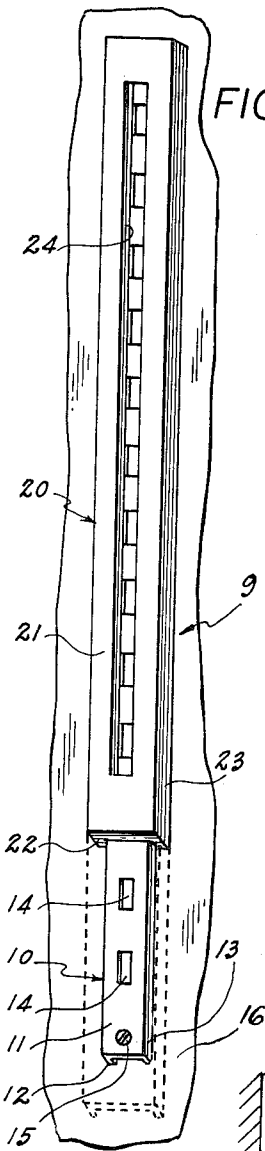


FIG. 1.

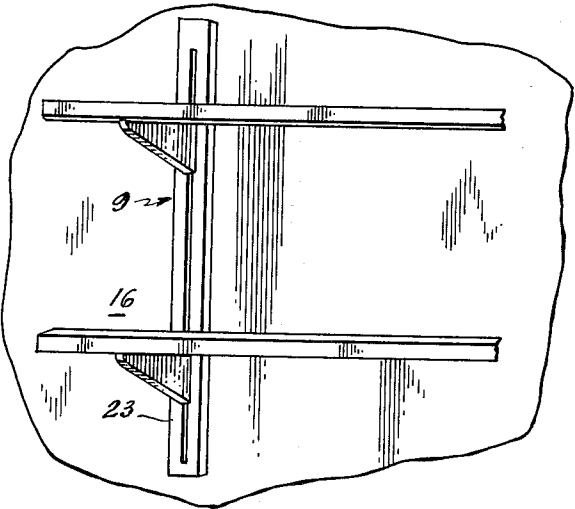


FIG. 3.

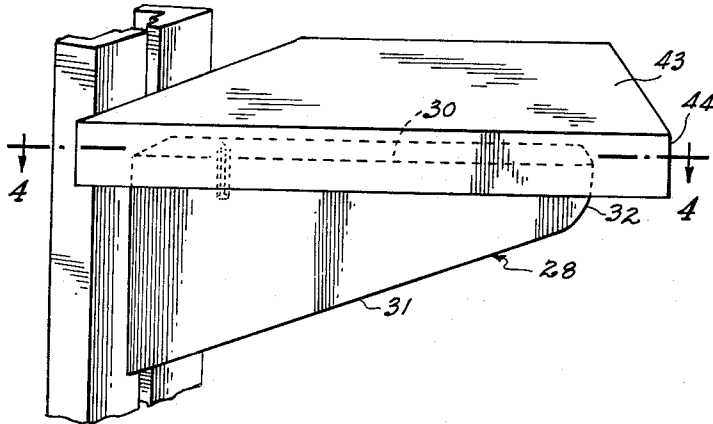


FIG. 4.

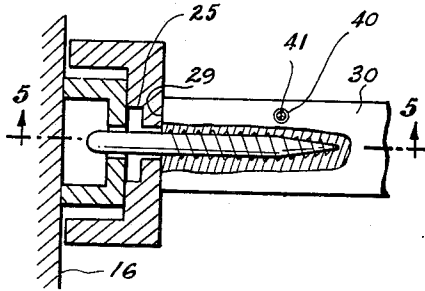
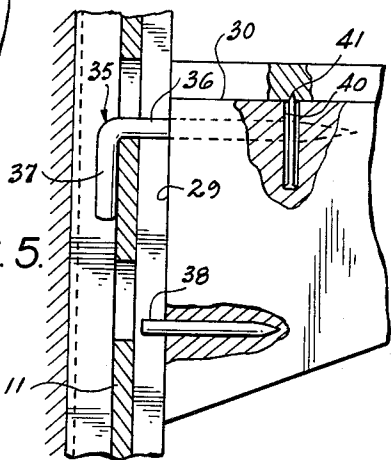


FIG. 5.



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SHELF SYSTEM

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This invention relates generally to shelf systems, and is especially concerned with shelf systems of the type employing fixed standards, brackets adjustable on the standards, and shelves supported by the brackets.

As is well known to those versed in the art, the necessary strength of such shelf systems requires that the standards, and usually the brackets, be fabricated of metal. Unfortunately, metal does not lend itself to proper aesthetic treatment for visual harmony in all environments.

Accordingly, it is an important object of the present invention to provide a unique construction of shelf system which permits graceful utilization of wood, or other desired materials, on all exposed surfaces to achieve greatly enhanced aesthetic effects, and integrally retains metal for desirable strength.

It is a further object of the present invention to provide a shelf system having the advantageous characteristics mentioned in the preceding paragraph, which is extremely simple in construction, requiring a minimum of parts, and easily set up and adjusted by persons of only average skill.

Other objects of the present invention will become apparent upon reading the following specification, and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

In the drawings:

FIGURE 1 is a front perspective view showing a shelf system constructed in accordance with the teachings of the present invention.

FIGURE 2 is a front perspective view showing a compound standard in accordance with the instant invention.

FIGURE 3 is an enlarged partial perspective view showing the instant shelf construction in greater detail.

FIGURE 4 is a horizontal sectional view taken generally along the line 4—4 of FIGURE 3.

FIGURE 5 is a sectional elevational view taken generally along the line 5—5 of FIGURE 4.

Referring now more particularly to the drawings, and specifically to FIGURES 1 and 2 thereof, there is shown a compound standard 9 comprised of a rearward element 10 and a forward element 20. The rearward element is shown in FIGURE 2, and may be substantially similar to a conventional standard, and is generally designated 10. Such rearward element is conventionally of metal or other material of suitable strength and of channel shape having a front wall 11, and side walls 12 and 13. Formed in the front wall 11 longitudinally of the rearward element 10 is a series of spaced, through holes 14. Said rearward element may be fixed by any suitable means, and is conventionally secured to a wall by fasteners, as at 15, extending rearwardly through the front wall 11 into a supporting wall 16.

The forward element of the compound standard 9 is generally designated 20, and may also be of channel-like configuration, including a front wall 21 and side walls 22 and 23. The forward element 20 may be fabricated of any suitable material, such as wood or the like, the strength requirements being almost only that of horizontal resistance to compression so that the material of the

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forward element 20 may be primarily selected for its appearance, and need not be massively employed. The dimensions of the forward element 20 are such that the front wall 21 extends at least entirely across and in facing engagement with the forward face of the rearward element 11, while the side walls 22 and 23 extend rearwardly from the lateral margins of the forward element and terminate short of the supporting wall 16. The lateral dimensions of the forward element need not correspond to those of the rearward element and may greatly exceed it. It may be diversely shaped and patterned. Provided in the front wall 21 of the forward element 20 is an elongate opening or slot 24 in alignment with the series of holes 14 in the rearward element 10. The forward element opening or slot 24 may be of a width no wider than necessary to admit the bracket hook to pass for the insertion in the perforations 14 in the rearward element, and may extend substantially the entire length of the forward element terminating short of the ends of the forward element, to maintain unity and rigidity of the forward element. Of course, if desired, the forward element 20 may be provided with a series of openings or slots 24, rather than the single slot shown. In addition, the rearward or inner surface of the forward element 20 may have a recess in the vertical midline to accommodate an outstanding fastener 15, as at 25, in FIGURE 4. This recess 25 may extend the entire length of the forward element front wall 21. If desired, a plurality of forward element units 20 may be longitudinally associated with a single uninterrupted rearward element 10 or a plurality of rearward elements may be utilized in vertical linear association with a single forward element of sufficient length.

With forward element 20 in covering position in front of the rearward element 10, a bracket 28 may be applied to the standard. The bracket 28 may be of an elongate, generally triangular configuration and formed of wood, or other suitable material. In practice, the brackets 28 may each be of generally right-triangular configuration, disposed in an upright plane and include a generally vertical rear surface 29 and generally horizontal upper surface 30 extending forwardly from the upper end of the rear surface. The lower surface or edge 31 of the bracket 28 may decline rearwardly at approximately 20 degrees with respect to the upper surface 30. It will shortly be noted that the forward end 32 of the bracket 28 need not be provided with an upward projection or hook, as heretofore required in such shelf systems.

The bracket 28 is arranged in front of the forward element 20 with the rear bracket face 29 engaging the forward face of forward element front wall 21. The thickness or lateral extent of the bracket 28 and its rear face 29 is sufficient to span or bridge the forward element opening 24, see FIGURE 4, and extend beyond the recess 25, for a purpose appearing presently.

A hook or catch 35 includes a shank 36 embodied in the bracket 28 and projecting rearwardly from the rear bracket face 29 adjacent to and spaced below the upper bracket surface 30. The shank 36 extends through the forward element opening 24 and a selected rearward element hole 14, having on its rear end a depending catch or finger 37 in retaining abutment with small clearance with the inner side of the lateral extending surface of the rearward element 11. Thus, the hook or catch 35 retains the bracket 28 in position on the compound standard 9, and the rear bracket face 29 abuts the forward element wall 21 to hold the latter firmly against the rearward element 11. In this condition the bracket 28 projects forwardly from the front surface of forward element 21. In order to insure against possible rotation of the bracket 28 about the shank 36, there may be provided a stabilizing or alignment pin 38 embedded in the bracket

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and projecting rearwardly from the rear face thereof directly below the hood shank 36. The projecting end of pin 38 engages at least in the forward element opening 24 to lock the bracket 28 against rotation. However, if desired, the alignment pin 38 may be replaced or substituted by a second hook for added strength.

The bracket 28 may further be formed with an upwardly opening bore or hole 40, such as a generally vertical blind hole opening upwardly through the upper bracket face 30. The hole 40 may be offset laterally from the hook shank 36, see FIGURE 5, the hook shank preferably being located medially between vertical sides of the bracket. Located in the hole or bore 40 is a brad or impaling element 41 which is loosely engaged in the bore and has its point projecting somewhat above the upper bracket surface 30. Thus, the brad 41 may be readily removed from the bore 40.

In this condition, a shelf 43 may rest on the upper bracket surface 30 and be impaled by the point of impaling element 41 to retain the shelf against horizontal shifting. By this simple construction, the forward bracket end 32 may terminate short of the forward shelf edge 44 without fear of accidental shelf movement. Of course, the shelf may be readily removed by merely raising the same from its supporting bracket 28 to withdraw the impaling element 41 upwardly out of its receiving hole 40. If desired, the prior conventional forward retaining projection may be employed, either with or without the impaling element.

When the shelf 43 is loaded, obviously the weight of the shelf and its contents is transmitted to the supporting brackets 28, which in turn is transmitted through the hooks 35 to the rearward element 10. However, the hooks 35 permit a tendency of the brackets 28 to rotate about a horizontal axis so that the lower region of each rear bracket face 29 bears firmly against the adjacent portion of the forward element 20 to frictionally sandwich the latter in position between the rear bracket face and the rear element 10.

The ease of installation and versatility of adjustment are readily apparent from the above description, while ample strength is provided for most purposes. In addition, all exposed surfaces may be of fine woods, or other material as determined by decorating motif without structural limitations. Further, all screws and other fastening devices are concealed from view.

Moreover, the hereinbefore described arrangement of single hook 27 per bracket 28 increases adjustability over the heretofore conventional requirement of two hooks per bracket.

From the foregoing, it is seen that the present invention provides a shelf system which fully accomplishes its intended objects and is well adapted to meet practical conditions of manufacture, distribution, installation and use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. In a shelf system, the combination of a compound standard comprised of a vertical rearward element ex-

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ternally secured and having a plurality of forwardly opening vertically-spaced holes and a forward element anterior to and abutting against the face of the rearward element and having an elongate opening for alignment with said holes, a bracket forward of said forward element and having a vertical rear face wider than said elongate opening abutting the face of said forward element, a downwardly facing hook-device extending rearwardly from the upper portion of said rear bracket face through said forward element opening and engaging the wall of a selected hole for retaining engagement in said rearward element, and a shelf supported on said bracket whereby said forward element is frictionally retained in position being pressed between said rearward element and rear face of said bracket, the resistance of the forward element to the bracket maintaining the attitude of the bracket, and an alignment pin projecting rearward from said rear bracket face for engagement in said opening to prevent rotation of said bracket.

2. The combination according to claim 1, in combination with an impaling element projecting upwardly from said bracket for retaining engagement in said shelf.

3. The combination according to claim 2, said bracket terminating at its forward end short of the forward edge of said shelf.

4. The combination according to claim 1, said forward element comprising a front wall, the rear face of which abuts the front of said rearward element, and side walls on the lateral sides of said front wall extending rearwards and of lateral position to the posteriorly directed sides of the rearward element.

5. The combination according to claim 4, said side walls extending rearwardly of said front wall and terminating short of the rearward termination of said rearward element.

6. The combination according to claim 2, said impaling element being carried gravitationally by said bracket for free upward removal therefrom upon raising of said shelf from said bracket.

7. The combination according to claim 1, the rear face of said bracket bridging said opening to maintain said forward element flat against said rearward element and frictionally maintaining the forward element in fixed relationship with the rearward element.

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