Aug. 30, 1966 E. J. HESS 3,269,558

COMPARTMENTED SHELF DEVICE

Filed July 27, 1964

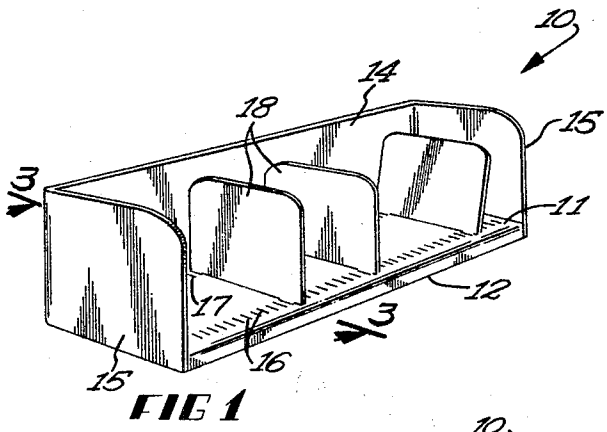


FIG 1

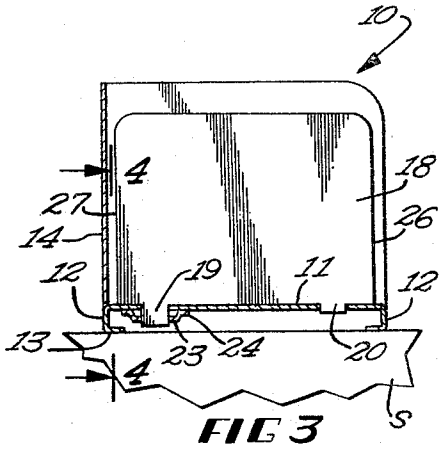


FIG 3

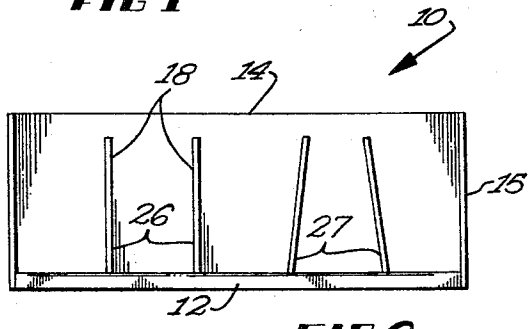


FIG 2

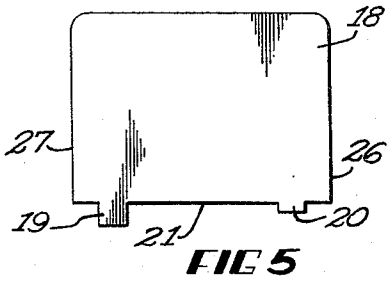


FIG 5

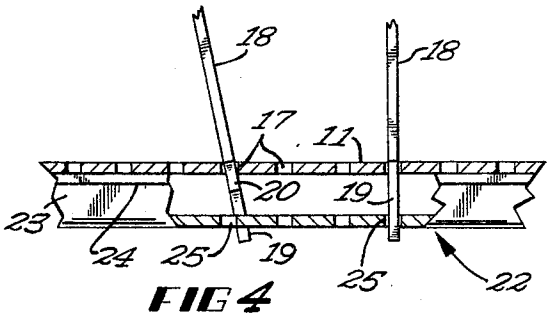


FIG 4

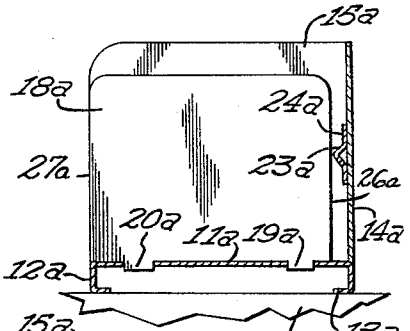


FIG 8

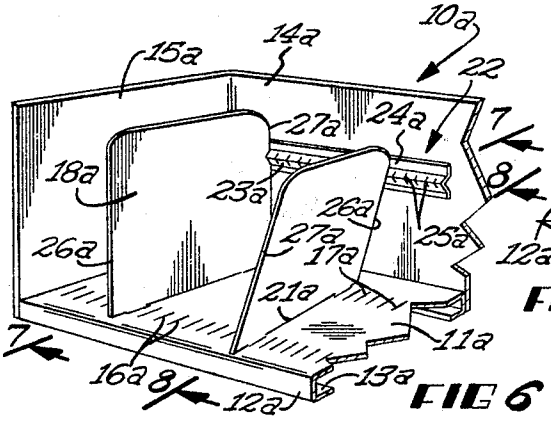


FIG 6

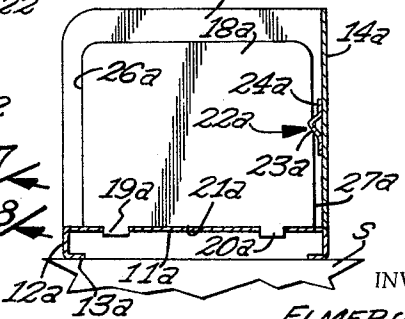


FIG 7

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COMPARTMENTED SHELF DEVICE

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This invention relates to a shelf device and more particularly to a compartmented shelf structure having adjustable compartments.

An object of this invention is to provide a compartmented shelf device for use in supporting papers, books, office supplies and the like, wherein the compartments are defined by upstanding adjacent plates removably mounted on a shelf base panel, and wherein each plate is capable of being repositioned on the shelf base through turning of a plate, end for end, whereby each plate will be held in rigid upstanding relation with respect to the shelf base panel when in one position, and each plate being capable of sidewise wobbling movement when in the other position so that the shelf compartments may be of fixed or adjustable width.

Another object of this invention is to provide a novel compartmented shelf device of the class described wherein the shelf base panel is provided with a plurality of slots therein for receiving attachment tabs of the upstanding compartment defining plates, and locking means for holding the compartment defining plates in rigid position relative to the shelf panel in one position but being disposed out of engaging relation with respect to the plates when the latter are in the other position.

A further object of this invention is the provision of a compartmented shelf device which is especially adaptable for use in conjunction with conventional office desks, and preferably to be supported thereupon, the shelf device being arranged and constructed to provide additional efficient storage and filing space for desk but while materially not reducing the normal working area of such a desk.

These and other objects and advantages of this invention will more fully appear from the following description made in connection with the accompanying drawings wherein like character references refer to the same or similar parts throughout the several views, and in which:

FIG. 1 is a front perspective view of my novel compartmented shelf device;

FIG. 2 is a front elevational view thereof;

FIG. 3 is a cross sectional view taken approximately along line 3—3 of FIG. 1;

FIG. 4 is a cross sectional view taken approximately along line 4—4 of FIG. 3;

FIG. 5 is a side elevational view of one of the compartment defining plates;

FIG. 6 is a fragmentary perspective view of a modified form of my compartmented shelf device;

FIG. 7 is a cross sectional view taken approximately along line 7—7 of FIG. 6 and looking in the direction of the arrows; and

FIG. 8 is a cross sectional view taken approximately along line 8—8 of FIG. 6 and looking in the direction of the arrows.

Referring now to the drawings and more specifically to FIGS. 1 through 5, one embodiment of my novel compartmented shelf device, designated generally by the reference numeral 10, is there shown. It is pointed out that the compartmented shelf device 10, as illustrated, may be supported upon a desk to provide additional storage and filing space without materially reducing the normal working area of the desk. When used in conjunction with other office equipment or furniture, the embodiment of a shelving device 10 illustrated may be supported along the front longitudinal marginal area of such a desk.

The shelf device 10 which is preferably constructed of a suitable metallic material includes a substantially flat base member or panel 11 which, as seen, is of substantially rectangular configuration. Referring now to FIG. 3 it will be seen that the front and rear longitudinal marginal portions of the base panel 11 is bent to define downwardly extending legs 12, the terminal portions of these legs also being bent at substantially right angles to define support engaging foot elements 13 whereby the base panel 11 is spaced above the support S such as a desk or the like.

The compartmented shelf device 10 also includes an upstanding back member or panel 14 engaging the rear longitudinal edge of the base panel and disposed in substantially right angular relation with respect to the latter. It will be noted that the back panel 14 is also of substantially flat rectangular configuration and the ends thereof are bent at substantially right angles to define substantially flat, upstanding, generally rectangular end members or panels 15. The lower marginal portion of the back panel 14 and the end panels 15 are secured to the marginal edges of the base panel 11 by any suitable securing means such as welding or the like.

The base panel 11, as best seen in FIG. 1, has a plurality of substantially identical transversely extending, longitudinally spaced-apart slots 16 therein which are arranged in a longitudinally extending row adjacent the front longitudinal edge of the base panel. The base panel 11 is also provided with a plurality of similar transversely extending longitudinally spaced-apart slots 17 which are arranged in another row adjacent the rear longitudinal edge thereof. It is pointed out that one of the slots 16 of the front row will be disposed in substantially transverse alignment with one of the slots 17 in the rear row thereof and it is also pointed out that the slots 16 and 17 are of substantially the same size.

It will be seen that the compartments of the shelf device 10 are defined by a compartment defining plates 18 which are also preferably constructed of a suitable metallic material and which, as seen, are of substantially flat, rectangular configuration. Referring to FIG. 3, it will be seen that the compartment defining plates 18 are of a size to traverse the base panel 11 and it will also be seen that the compartment defining plates are generally arranged in side-by-side, substantially upstanding relation on the base panel 11.

Referring now to FIG. 5, it will be seen that the means for mounting each compartment defining plate 18 in upstanding relation upon the base panel 11 comprises engagement tabs 19 and 20 which, as seen, are integrally formed with the plate 18 and depend from the lower edge 21 of the plate. Referring again to FIG. 5, it will be seen that the engagement tabs 19 and 20 have substantially the same longitudinal dimension but that the engagement tab 19 has a greater vertical dimension than the engagement tab 20. The engagement tabs 19 and 20 are insertable into a selected pair of transversely aligned slots 16 and 17 so that each compartment defining plate may be positioned in upstanding relation. It will be noted that the width of the compartments may be varied by varying the spacing between adjacent compartment defining plates 18 so that the compartments may be adjusted to accommodate articles of varying sizes. This adjustability of the compartments is possible since each plate 18 is removable from a predetermined position with respect to the base panel 11 and can be inserted into any selected pair of transversely aligned slots.

In some instances, it is desirable to have at least one of the compartment defining plates 18 rigidly interrelated with respect to the base panel 11 so that the compartment defined is of substantially fixed width. In other instances, it is desirable to have at least one of the plates 18 mounted

on the base panel **11** in a manner to permit sidewise wobble of the plates **18** whereby a compartment defined by adjacent plates is of variable width.

To this end, means are provided for releasably locking each compartment defining plate in upstanding substantially normal relation with respect to the base panel **11** whereby such a panel is rigidly interrelated with respect to the base panel. However, upon repositioning the plates **18** upon the base panel **11**, the plate may then be permitted to wobble from side to side.

Referring now to FIGS. 3 and 4 it will be seen that this locking means is comprised of an elongate, substantially channel-shaped locking member **22** which includes a web portion **23** having a pair of leg portions **24** integrally formed therewith and extending upwardly therefrom. The ends of the leg portions **24** are outturned and are secured to the lower surface of the base panel **11** as by welding or the like adjacent the front longitudinal edge of the base panel, as best seen in FIG. 3. The web portion **23** of the channel-shaped locking member **22** also has a plurality of substantially parallel transversely extending, longitudinally spaced-apart locking slots **25** therein which are arranged in a row.

Each slot **25** in the channel-shaped locking member **22** is disposed in vertical alignment or registering relation with one of the slots **17** in the base panel **11** and the space between the web portion **23** and the base panel **11** is such to permit a tab **19** to project through a pair of vertically aligned slots **17** and **25** but is substantially larger than the vertical dimension of the engagement tab **20**, as best seen in FIG. 4. Thus when the compartment defining plate **18** is disposed in the position illustrated in FIG. 3, the engagement tab **19** will project downwardly through a slot **17** in the base panel **11** and through a slot **25** in the locking member **22**. It will be noted, as best seen in FIGS. 3 and 4, that the slots **16** and **17** are of a size only slightly larger than the horizontal cross sectional size of the engagement tabs **19** and **20**. Similarly, the slots **25** are of substantially the same size as the slots **16** and **17** so that when the plate **18** is in the position as illustrated in FIG. 3, the engagement tab **19** will cooperate with the locking member so that there will be little, if any, sidewise wobbling movement of the plate.

However, if a plate is removed from its upstanding locked relation from the position, as illustrated in FIG. 3, and is turned end for end and the engagement tabs **19** and **20** are reinserted into a pair of transversely aligned slots **16** and **17**, the engagement tab **20** will not extend through the slot **25** in the locking member since the engagement tab is of insufficient height to permit this relationship. Therefore since the slots **16** and **17** are slightly larger than the horizontal cross sectional size of the engagement tabs **19** and **20**, limited sidewise wobbling movement of the plate is possible as illustrated by the plate at the left side, as viewed in FIG. 4.

This end to end turning of each wobble plate and reinsertion of the engagement tabs **19** and **20** into transversely aligned slots **16** and **17** is possible since the spacing between the engagement tabs on a plate correspond substantially to the spacing between a pair of transversely aligned slots **16** and **17**. The lower edge **21** of each compartment defining plate is disposed in engaging bearing relation with the upper surface of the base panel regardless of whether the plate is in rigid or wobbling relation with respect to the base panel. It will be seen that when one or both of a pair of compartment defining plates **18** are in wobbling relation with respect to the base panel **11**, the plates may be shifted into diverging relation with respect to each other to thereby very easily accommodate papers, documents or the like, wherein the papers or documents are positioned in the compartment upon one of their edges. In the embodiment shown the amount of swinging movement of a plate is approximately fifteen degrees to either side of the vertical plane normal to the base panel **11**. Thus when two adjacent plates are mounted to permit sidewise wobble, the total adjustment would approximate thirty degrees.

Although the locking member **22** illustrated in the embodiments of FIGS. 1 to 5 comprises a single multi-slotted locking member which is fixedly connected to the lower surface of the base panel **11**, it is pointed out that a plurality of smaller slotted locking members may be provided which may be moved into and out of engaging relation with an engagement tab **19** and which are not necessarily fixed to the lower surface of the base panel. Such removable locking members would correspond substantially to the shape of the locking member **22** but would be of a length having only one slot therein and would not be secured to the lower surface of the base panel **11**. It is also pointed out that the locking member **22** could be fixedly connected adjacent the front longitudinal edge of the base panel **11**.

Referring now to FIGS. 6, 7 and 8, it will be seen that a modified form **10***a* of the compartment shelf device is there shown. This compartmented shelf device **10***a* also includes a base panel **11***a* which is of substantially flat, rectangular configuration and which is bent along its front and rear longitudinal edges to define a pair of legs **12***a*, the terminal portions of which are also bent at right angles thereto to define a pair of support engaging foot elements **13***a*. An upstanding elongate back member or panel **14***a* is rigidly secured to the rear longitudinal edge portion of the base panel **11** and this back panel member has the respective ends thereof bent to define end members or panels **15***a*, as best seen in FIG. 6. The base panel **11***a* is also provided with a plurality of transversely extending, longitudinally spaced-apart, substantially parallel slots **16***a* arranged in a longitudinally extending row adjacent the front longitudinal edge thereof. Similarly, the base panel **11***a* is also provided with a plurality of transversely extending, longitudinally spaced-apart, substantially parallel slots **17***a* therein arranged in a longitudinal row adjacent the rear longitudinal edge thereof. The slots **16***a* and **17***a* are of substantially identical size and shape whereby the structure of the embodiment thus described is substantially identical to the corresponding structure of the embodiment of FIGS. 1 to 5.

Compartment defining plates **18***a* are provided and these plates are also of substantially flat, rectangular configuration each having engagement tabs **19***a* and **20***a* integrally formed therewith and depending from the lower edge **21***a* thereof. It will be noted, however, that the engagement tabs **19***a* and **20***a* are of substantially identical size and shape and the spacing between these engagement tabs correspond substantially to the spacing between the rows of slots in the base panel **11***a*. Therefore the compartment defining plates **18***a* may be turned end for end, as in the embodiment of FIGS. 1 to 5.

However, it will be noted that the spacing between the engagement tab **19***a* and the adjacent vertical edge **26***a* is substantially different than the spacing between the tab **20***a* and the associated adjacent vertical edge **27***a* of the plate **18***a*. Thus in each compartment defining plate **18***a*, the engagement tab **19***a* is offset a less distance from the adjacent vertical edge **26***a* than the offset distance between the engagement tab **20***a* and the vertical edge **27***a* as best seen in FIGS. 7 and 8. With this arrangement, when a compartment defining plate **18***a* is positioned on the base panel **11***a* so that the edge **26***a* is disposed adjacent the back panel **14***a*, the spacing between this vertical edge and the back panel will be different than when the edge **27***a* is disposed rearmost, as best seen in FIGS. 7 and 8.

The embodiment of FIGS. 6 to 8 is also provided with locking means which may be selectively engaged by a compartment defining plate **18***a* to permit a fixed or wobbling relation of each compartment defining plate **18***a* with respect to the base panel **11***a*. This locking means comprises an elongate, generally channel-shaped locking member **22***a* including a V-shaped portion **23***a* having leg

portions **24***a* integrally formed therewith and projecting outwardly therefrom. It will be noted that the leg portions **24***a* are rigidly affixed to the front surface of the back panel **14***a* as by welding or the like to dispose the locking member **22***a* in substantially parallel relation with respect to the base panel **11***a*.

It will also be noted that the locking member **22***a* is positioned medially of the height of the back panel **14***a*. The V-shaped portion **23***a* of the locking member **22***a* is provided with a plurality of vertically extending, substantially parallel slots **25***a* therein, each slot **25***a* lying in a vertical plane passing through a pair of transversely aligned slots **16***a* and **17***a* and substantially normal to the base panel **11***a*.

The V-shaped portion **23***a* projects forwardly from the back panel **14***a* a distance sufficient to permit insertion of the marginal portion of a compartment defining plate **18***a* into one of the slots **25***a* thereof when the vertical edge **27***a* of the plate **18***a* is disposed rearmost. However, when the vertical edge **26***a* of a compartment defining plate **18***a* is disposed rearmost it will be noted that this edge, as best seen in FIG. 8, will be spaced slightly forwardly of the V-shaped portion **23***a*. Therefore when a compartment defining panel **18***a* is in the position as illustrated in FIG. 8, the panel may wobble slightly in a sidewise direction since the engagement tabs **19***a* and **20***a* are of slightly smaller horizontal cross sectional size than the slots **16***a* and **17***a*. On the other hand, if a compartment defining plate **18***a* is in the position as illustrated in FIG. 7 then the rear vertical marginal portion of the plate **18***a* will engage in one of the slots **25***a* of the locking member **22***a* to lock the plate **18***a* in upstanding vertical relation with respect to the base panel **11***a*. The amount of wobble of each plate **18***a*, when in the position as illustrated in FIG. 8, is also approximately fifteen degrees to either side of the vertical.

It will therefore be seen from the foregoing that my novel compartmented shelf device permits the compartments thereof to be readily adjusted with respect to their widths whereby articles including office supplies of varying sizes may be accommodated. As seen from the preceding paragraphs, this adjustability is possible because of the disengagement of the compartment defining plates from the base panel.

It will also be noted from the foregoing that each compartment defining plate may also be interrelated with the base panel in fixed or wobbling relation therewith so that adjacent panels may be of fixed or variable width. A fixed or wobbling relation of each compartment defining plate with respect to the base panel may be readily accomplished by removing a plate from supported relation on the base panel and thereafter turning the plate end-for-end and reinserting the engagement tabs thereof into transversely aligned slots in the base panel.

Thus it will be seen from the foregoing description that I have provided a novel compartmented shelf device which is not only of simple and inexpensive construction, but one which functions in a more efficient manner than any heretofore known comparable device.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of my invention.

What is claimed is:

1. An adjustable compartmented shelf device for use in supporting papers, books, office supplies and the like, said device comprising

a substantially flat, horizontally oriented, enlongate base panel member, a substantially flat back panel member connected with said base panel member adjacent one longitudinal edge thereof and projecting upwardly at substantially right angles thereto,

said base panel member having a row of longitudinally spaced-apart transversely extending slots therein adjacent one longitudinal edge thereof, and having another row of longitudinally spaced-apart transversely extending slots therein adjacent the other longitudinal edge thereof, each slot in one row being disposed in substantially transverse alignment with the slots in the other row,

a plurality of generally rectangular, flat compartment defining plates each having a pair of spaced-apart longitudinally aligned attachment tabs affixed thereto and projecting from one edge thereof, said tabs of each plate extending into a pair of transversely aligned slots of said row to orient each plate in generally upright transversely extending relation with respect to said base panel member and to space each plate laterally from the next adjacent plate to define a filing space therebetween, said engagement tabs of each plate being shaped and sized with respect to the associated pair of slots to permit limited sidewise wobbling movement of each plate relative to said base panel member whereby adjacent of said plates define a compartment of adjustable width,

and locking means on one of said base and back panel members releasably engageable with each plate to lock the same in substantially rigid upright right angular transversely extending relation with respect to said base panel member only when a plate is removed from the base panel member and turned end-for-end from said first upright position and the tabs thereof are inserted into a pair of transversely aligned slots in said rows of said panel member, the filing space defined between an adjacent pair of said plates being substantially vertically unobstructed to permit access to the filing space from above and between adjacent vertical edges of a pair of said plates.

2. The adjustable compartmented shelf device as defined in claim **1**

wherein one of said tabs of each plate being off set from the adjacent vertical edge of the plate a greater distance than the off set distance of the other tab in the other vertical edge,

and said locking means being mounted on said back panel member and having slots engageable with each plate to lock the same in substantially rigid upright angular, transversely extending relation with respect to the base panel member only when a plate is removed from the base panel member and turned end-for-end from said first upright position and the tabs thereof are inserted into a pair of transversely aligned slots in said rows of said base panel member.

3. The compartmented shelf device as defined in claim **2** wherein said locking means comprises an elongate slotted member having vertically disposed slots therein each of which is disposed in a vertical plane extending through a pair of said transversely aligned slots in said base panel member and substantially normal to said base panel member.

4. An adjustable compartmented shelf device for use in supporting papers, books, office supplies and the like, said device comprising a substantially flat, horizontal oriented, elongate base panel member, said base panel member having a row of longitudinally spaced-apart transversely extending slots therein adjacent one longitudinal edge thereof, and having another row of longitudinally space-apart transversely extending slots therein adjacent the other longitudinal edge thereof, each slot in one row being disposed in substantially transverse alignment with the slots in the other row, a plurality of generally rectangular, flat compartment defining plates each having a pair of spaced-apart longitudinally aligned attachment tabs affixed thereto and projecting from one edge thereof, said tabs of each plate extending into a pair of transversely aligned slots of said row to orient each plate in generally upright transversely extending relation with respect to said base panel member, and to space each plate laterally from the next adjacent plate to define a filing space therebetween, said engagement tabs of each plate being shaped and sized with respect to the associ-

ated pair of slots to permit limited sidewise wobbling movement of each plate relative to said panel member whereby adjacent of said plates define a compartment of adjustable width, and slotted locking means positioned below one of said rows of slots and being releasably engageable with the larger tab of each plate to lock the same in substantially rigid upright right angular transversely extending relation with respect to said base panel member only when a plate is removed from the base panel member and turned end-for-end from said first upright position and the tabs thereof are inserted into a pair of transversely aligned slots in said rows of said panel member, the filing space defined between an adjacent pair of said plates being substantially vertically unobstructed to permit access to the filing space from above and between adjacent vertical edges of a pair of plates.

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