Oct. 8, 1968 V. J. CAFIERO ET AL 3,404,930

PIVOTAL DISPLAY SHELF

Filed June 28, 1967 3 Sheets-Sheet 1

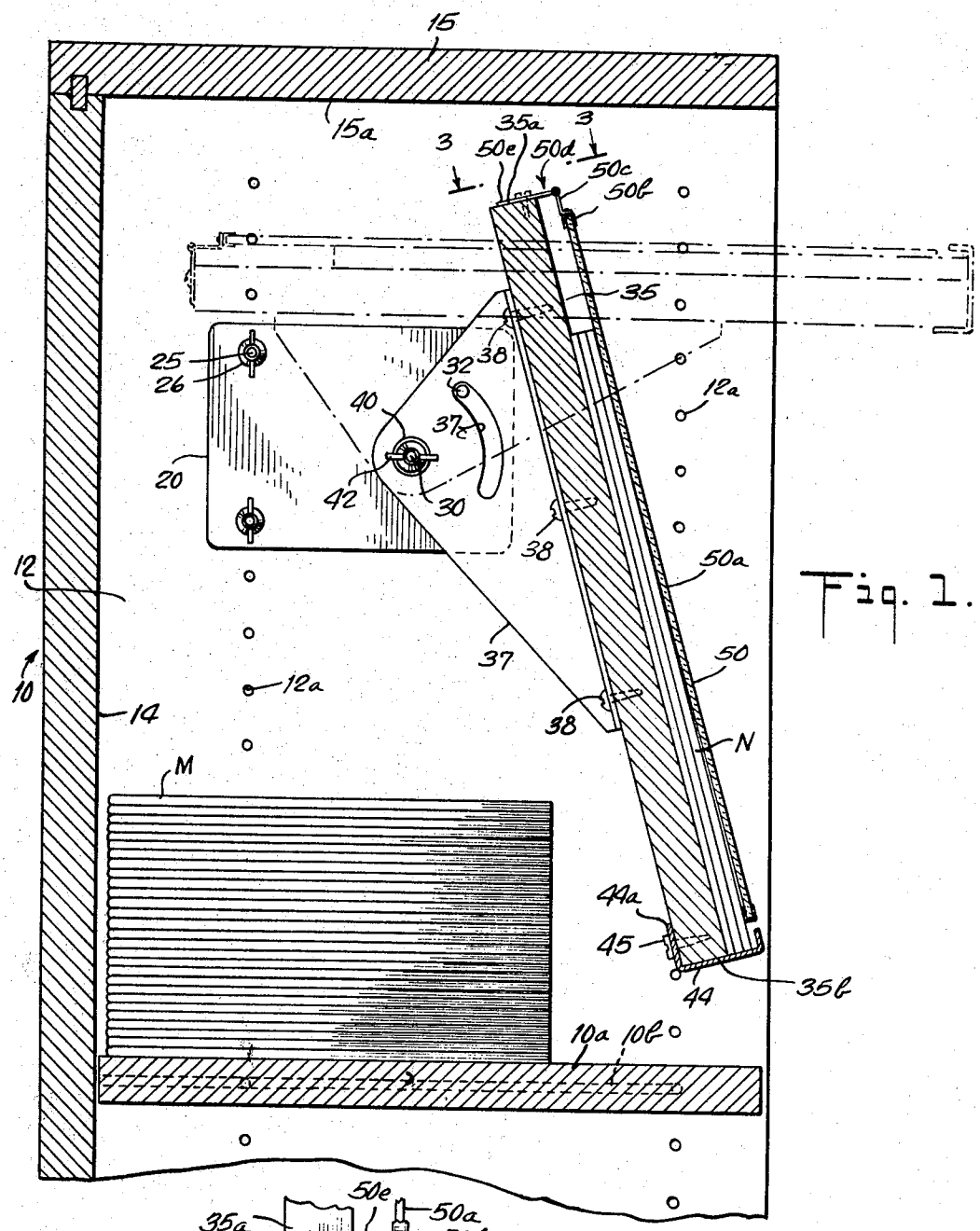


Fig. 1.

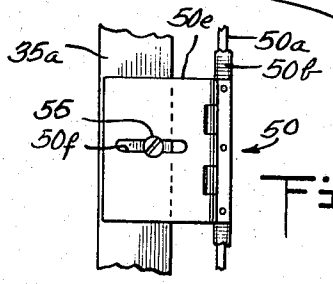


Fig. 3.

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PIVOTAL DISPLAY SHELF

Filed June 28, 1967 3 Sheets-Sheet 2

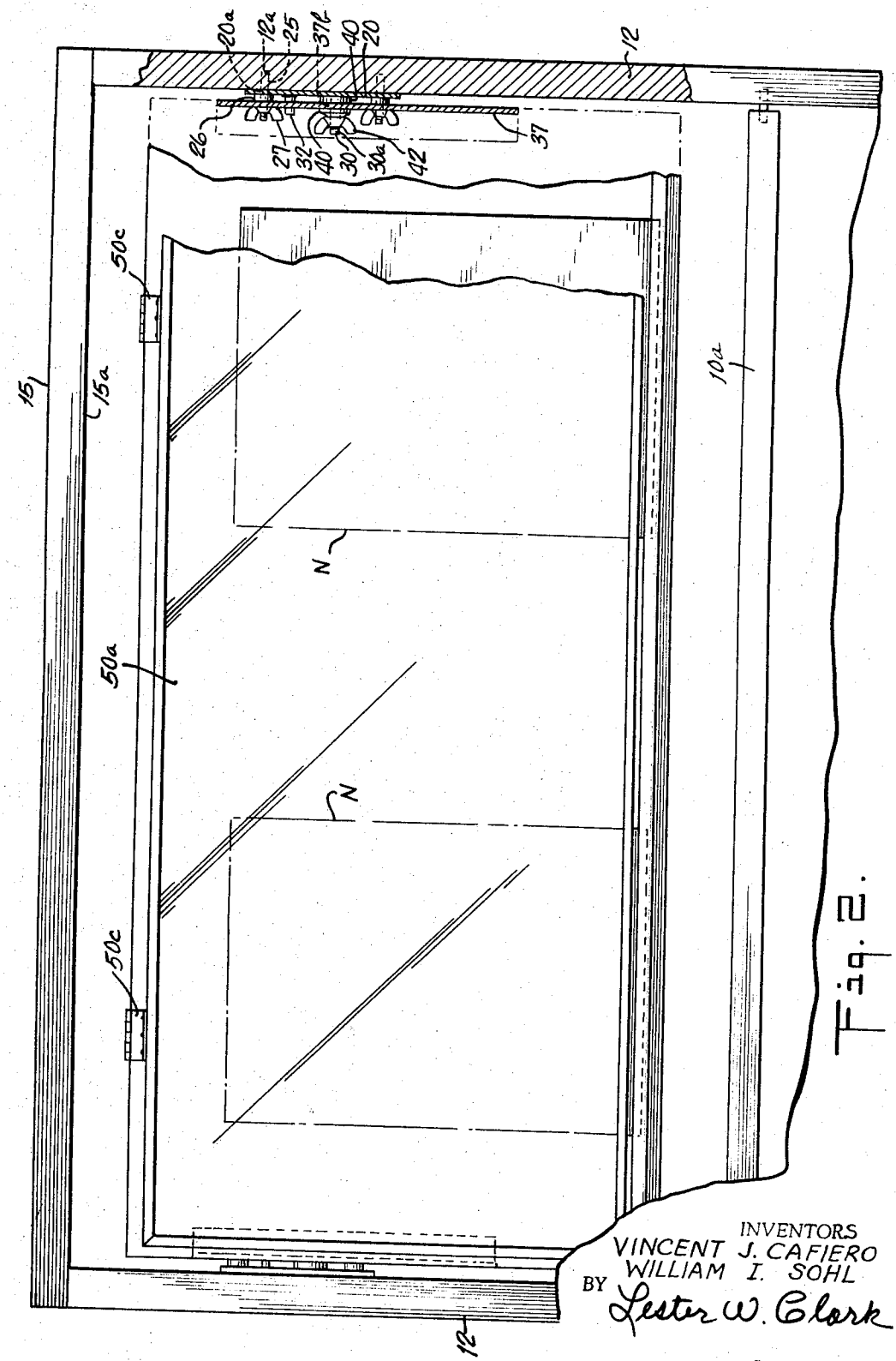


Fig. 2.

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PIVOTAL DISPLAY SHELF

Filed June 28, 1967 3 Sheets-Sheet 3

Fig. 4.

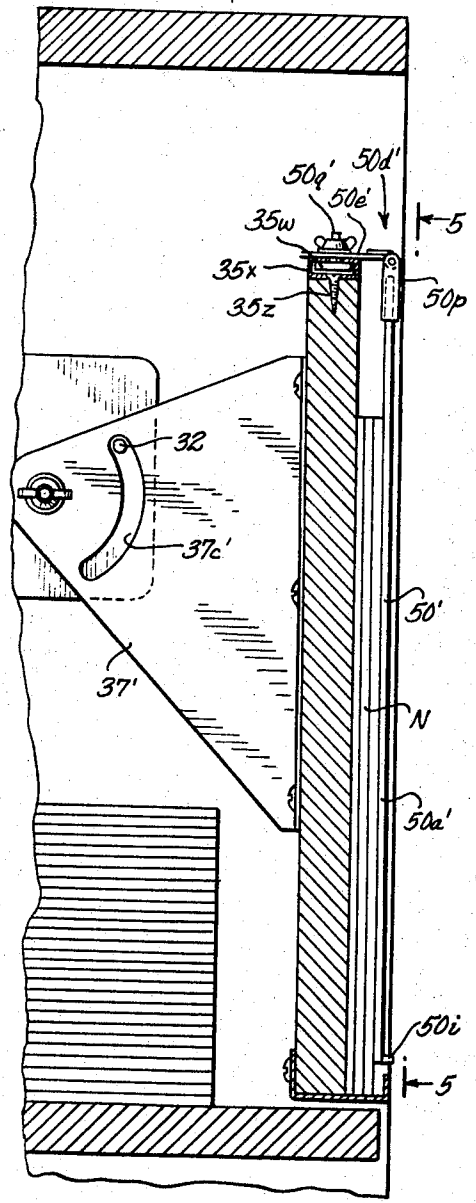


Fig. 5.

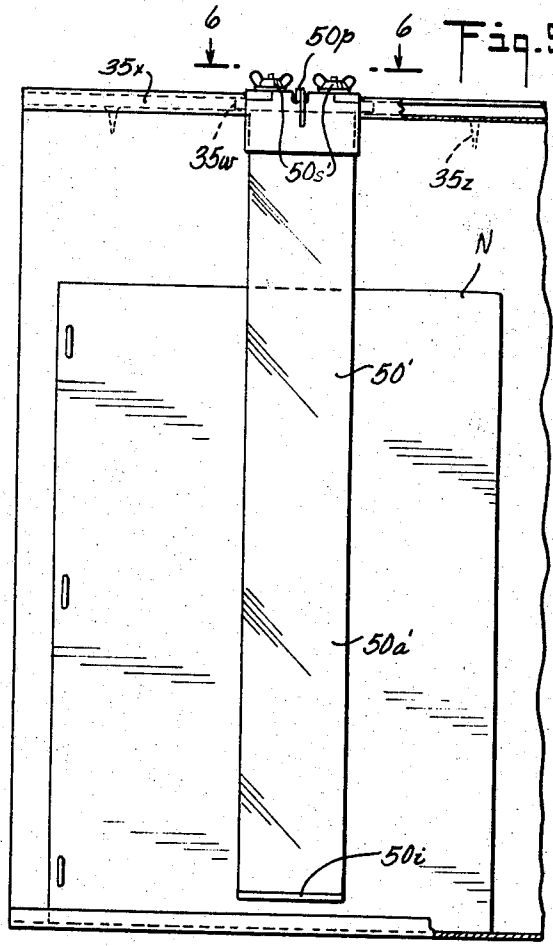


Fig. 7.

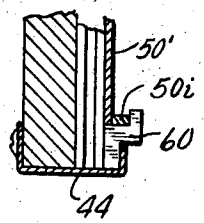
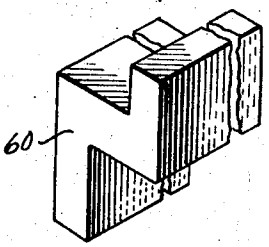


Fig. 8.



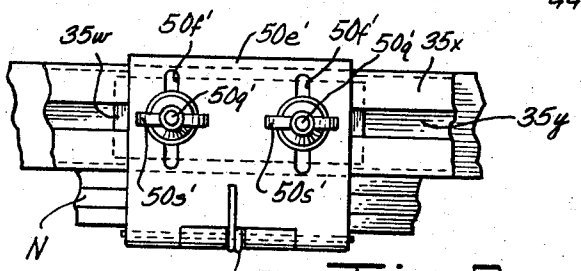


Fig. 6.

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United States Patent Office 3,404,930 Patented Oct. 8, 1968

3,404,930

PIVOTAL DISPLAY SHELF

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Continuation-in-part of application Ser. No. 563,163, July 6, 1966. This application June 28, 1967, Ser. No. 652,398

15 Claims. (Cl. 312—234.1)

ABSTRACT OF THE DISCLOSURE

A pivotable display shelf for mounting above a horizontal support surface having a space above said support surface to accommodate any articles supported thereon (e.g. a bookshelf) including, a display shelf surface, a pivot support for the display shelf surface located at an intermediate height within the space above the support surface and essentially parallel to and spaced from the display shelf surface, pivot connections between the display shelf surface and the pivot support structure, and limit structure limiting the pivotal movement of the display shelf surface to a first extreme wherein the display shelf surface is essentially horizontal at the upper portion of the space and a second extreme wherein the display shelf surface is essentially vertical in front of the space. In specific forms thereof, there is included a cover for all or a portion of the display shelf surface, having a hinge connecting the cover along the uppermost edge of the display shelf surface, and being slidably connected thereto for adjustable retention of articles on the display shelf surface; and specific pivot structure comprising a pair of pivot pins supported at opposite sides of the display shelf surface, and a pair of brackets carried one at each lateral edge of the display shelf surface, including curved slots which engage with the pins to provide the range of pivotal movement of the display shelf surface including the extreme limits thereto.

This application is a continuation-in-part of the copending application entitled "Display Shelf for Employment with a Bookshelf," filed July 6, 1966, having Serial No. 563,163, invented by Vincent J. Cafiero and William I. Sohl, and assigned to a common assignee with the present invention.

For purposes of this specification, the term bookshelf will signify any horizontal support surface (e.g. a horizontal surface adapted to and designed for supporting one or more books in an upright side-by-side position) together with the space immediately above that surface adapted to accommodate articles, e.g. books. Typically, but not necessarily, a bookshelf will include additional structural members to support the aforementioned horizontal surface and define the aforementioned book space, such as sides, a back and a top. The term bookcase will refer to a group of bookshelves wherein the individual bookshelves are either arranged side by side, or above one another, or a combination thereof. While the invention is illustrated in combination with a bookshelf, it is equally useful with any other horizontal support surface.

It is often desired, in a library or elsewhere, to employ one or more bookshelves in a bookcase for the retention of periodicals rather than books. Since magazines, newspapers, and other periodicals are very flexible, it is often convenient to stack them vertically in a pile, although they are also sometimes stacked side by side as is done with books. In either case, stacking does not display the cover or outermost sheet of the periodical well, and since they have narrow or no spines, identification of the periodicals stacked on a shelf is difficult or awkward. Often, a display shelf, fixedly arranged nearly vertically within the bookshelf, is employed to display one of the periodicals broadside so that its cover can be viewed. However, such a display shelf wastes the dimensions of a bookshelf in displaying a single piece of periodical matter, and is in other ways inconvenient to employ with a bookshelf.

It is an object of the invention to provide a display shelf for use with a bookshelf and adapted for selective employment at a generally depending display position, and a generally horizontal disuse position adjacent the upper part of the bookshelf and out of the way of the main bookshelf space underlying same.

Another object of the invention is to provide such a display shelf especially suited for the display of one or more pieces of printed matter having relatively few sheets in each piece such as newspapers and various periodicals.

Another object of the invention is to provide such a display shelf which is adapted in the depending display position to occupy the generally forward part of the shelf so as to define and hide from view the generally rearward portion of the shelf where additional quantities of the piece of printed matter on display or other objects may be stored out of view of an observer facing the bookshelf.

Another object of the invention is to provide such a display shelf which when positioned in the aforesaid disuse position is situated generally horizontally and generally at the upper portion of the bookshelf space so that access can be gained for loading or unloading or observation of any articles stacked or otherwise stored at the rear portion of the bookshelf.

Another object of the invention is to provide such a display shelf which can be positioned in any position intermediate the essentially horizontal and essentially vertical, including the fully vertical, so as to give the best visibility of the displayed periodical considering the height of the particular bookshelf above the floor and the average height of the adults or children using the bookcase.

Another object of the invention is to provide such a display shelf provided with one or more display covers which may each be transparent and serve the function of smoothly retaining one or more copies of the printed article on display against the display shelf so that the copies do not buckle and fall away from the display shelf under their own weight when the display shelf is in the nearly vertical, or even fully vertical, display position.

Another object of the invention is to provide such a display shelf wherein each display cover is provided with means enabling it to accept any of a variety of thicknesses of display pieces or matter between itself and the display shelf while in all cases smoothly contacting the outermost of such articles or matter.

These and other objects and advantages of the invention will be more fully appreciated as the detailed description of a presently preferred, but merely illustrative, embodiment of the invention is set forth hereinbelow, with reference to the drawings, wherein:

FIG. 1 is a sectional side elevational view of a bookshelf including a first embodiment of a display shelf according to the invention and viewed along the plane 1—1 of FIG. 2;

FIG. 2 is a front elevational view of a bookshelf and display shelf shown in FIG. 1 with a portion thereof broken away to show the means for mounting the display shelf with respect to the bookshelf;

FIG. 3 is a view of a portion of the apparatus of FIG. 1 taken along plane 3—3 therein;

FIG. 4 is a partial sectional side elevation view of a bookshelf including a second embodiment of a display shelf according to the invention, corresponding to the view shown in FIG. 1 and showing a fully vertical orientation of the display shelf;

FIG. 5 is a partial front elevational view of a bookshelf and display shelf shown in FIG. 4 corresponding to the apparatus shown in FIG. 2 taken along plane 5—5 in FIG. 4;

FIG. 6 is a view of a portion of the apparatus of FIG. 5 taken along plane 6—6 therein corresponding to the view shown in FIG. 3;

FIG. 7 is a partial detail view of the lower portion of the display shelf of FIG. 4, including a modified lower edge to the cover, and with a locking bar in place; and

FIG. 8 is a shortened broken perspective view of the locking bar of FIG. 7.

Referring now to the figures, there is shown a bookshelf indicated generally at **10** which may be of conventional construction and may be fabricated in wood, metal, combinations thereof, or any other suitable bookshelf material. The bookshelf **10** is a single bookshelf unit forming a part of a bookcase of several bookshelf units structurally combined, but the invention is equally applicable to single bookshelf units.

The bookshelf **10** includes a shelf **10***a* which extends horizontally and is adapted to support upright books side by side in the usual fashion. The shelf **10***a* includes a groove **10***b* extending along each of the left and right sides thereof as viewed from the front in FIG. 2. A pair of upright panels **12** are disposed at either side of shelf **10***a*, and a plurality of apertures **12***a* appear (FIG. 1) therein. Apertures **12***a* are aligned into two vertical rows, and each aperture in either row is at the same elevation above shelf **10***a* as a corresponding aperture in the other row. The two rows of apertures appear in each of upright panels **12** in the facing surfaces thereof, and the apertures are aligned as between the upright panels **12**. By this standard construction, the shelf **10***a* may be raised or lowered on the upright panels **12** by manipulation of hardware (not shown) which cooperates with an aperture in each of the four rows at the same elevation above shelf **10***a* and the grooves **10***b* at either side of shelf **10***a*.

The upright panels **12** extend from one bookshelf to another as a unitizing structure, i.e. they are common to several bookshelves counted both in the vertical and horizontal directions. A plurality of legs **13** (or a solid base, not shown) extend below the lowermost bookshelf (not shown) to support the entire structure on a floor or the like. A back panel **14** is common to all the bookshelves in a common vertical stack, and a top panel **15** is similarly common to all the uppermost bookshelves of the bookcase. It will be noted that the illustrated bookshelf **10** forms the uppermost bookshelf in a particular stack of the bookcase and consequently underlies the top panel **15** so that the bottom surface **15***a* of the top panel **15** forms the upper extreme of the bookshelf **10**. In bookshelves below the illustrated top bookshelf **10**, the upper extreme of the particular bookshelf is defined by the lower surface of the horizontal shelf (corresponding to shelf **10***a* of bookshelf **10**) of the bookshelf immediately above. The foregoing features of an illustrative bookshelf construction useful with the present invention are known to the prior art, and will not be described further.

The display shelf assembly according to the present invention includes a pair of mounting plates **20** each having a generally rectangular outline with two apertures **20***a* locked respectively in the vicinity of two corners of the plate **20** along one side thereof. The vertical distance between apertures **20***a* is equal to a multiple of the vertical distance between apertures **12***a* in upright panels **12**, so that the pair of plate apertures **20***a* may be aligned with various pairs of apertures **12***a* in the upright panels **12**. As may best be seen in FIG. 3, a pair of partly threaded studs **25** are disposed in a pair of apertures **12***a* in each upright panel **12** in alignment with apertures **20***a* of mounting plate **20**, so that the threaded end of the studs **25** projects through the mounting plate **20**. The mounting plate is secured in place by nylon washers **26** upon which bear wing nuts **27** which are engaged with

the threaded end of studs **25**. By means of studs **25** the mounting plate **20** can be raised or lowered relative to the upright panels **12** by removal and insertion in a higher or lower pair of apertures **12***a*, as desired.

A pivot pin **30** is welded, threadedly connected, or otherwise secured to mounting plate **20** to project normally therefrom, and includes a threaded end portion **30***a*. A stop pin **32** is similarly joined to mounting plate **20** to project normally therefrom, and is spaced from pivot pin **30**, and in the illustrated embodiments lies along a line extending from pivot pin **30** to the adjacent upper corner **20***b* of mounting plate **20**.

The display shelf assembly further includes a shelf member **35**, which in the illustrated embodiments is fabricated in wood. Shelf member **35** is planar and has a lateral dimension slightly smaller than the distance between the upright panels **12**, and a vertical dimension smaller than the vertical distance between the upper surface of shelf **10***a* and the lower surface **15***a* of top panel **15**. Attached to shelf member **35**, at either lateral extreme thereof, is a shelf bracket **37** having a triangular configuration with a perpendicular flange **37***a* which is secured to shelf member **35** by a plurality of wood screws **38**, so that the triangular portion of shelf bracket **37** extends normally outward of shelf member **35**. An aperture **37***b* appears in a portion of shelf bracket **37** spaced from shelf **35**, and a slot **37***c* appears in shelf bracket **37** intermediate aperture **37***b* and shelf **35**. In the illustrated embodiments the slot **37***c* is formed as a portion of a circle having a mean radius equal to the mean distance to the center of aperture **37***b*. This radial distance is equal to the distance between the center of stop pin **32** and the center of pivot pin **30**, so that stop pin **32** projects through slot **37***c* when pivot pin **30** projects through aperture **37***b*. In the illustrated embodiments the slot **37***c* is arranged to be bisected by the lever arm of shelf **35**, i.e. to be bisected by the line extending from aperture **37***b* perpendicular to the shelf member **35**.

The shelf member **35** with the shelf brackets **37** at either lateral extreme thereof is mounted to mounting plates **20** at either of upright panels **12** by the aperture **37***b* receiving the pivot pin **30**. The shelf member **35** is thereby pivoted for movement relative to pivot pin **30**, and as will appear presently, important advantages of the invention arise from the fact that pivot pin **30** is spaced from shelf member **35** by a lever arm in the form of the intervening portion of bracket **37**. A pair of nylon washers **40** are also retained on pivot pin **30**, one being intermediate mounting bracket **20** and shelf bracket **37** so as to space those members apart. The other washer **40** overlies shelf bracket **37** and is borne upon by a wing nut **42** which threadedly engages the end portion **30***a* of pivot pin **30**. By selective tightening of wing nut **42** the force required to pivot shelf member **35** relative to mounting plate **20** can be varied, and the shelf can be held at various tilted positions, as will presently be described.

The shelf **35** has a first end **35***a* and a second end **35***b*. As may best be seen in FIG. 1, end **35***a* is the uppermost end of shelf **35** in one extreme pivoted position (the nearly vertical position, shown in full outline) and is the rearmost end in the other extreme pivoted position (the nearly horizontal position, shown in broken outline). Similarly, end **35***b* is the lowermost end in the full outline position and the frontmost end in the broken outline position. It will be appreciated that the stop pin **32** determines the extreme positions of shelf **35** just indicated. Thus, when the stop pin engages one end of slot **37***c*, the shelf **35** will occupy one extreme position and when the shelf is pivoted with respect to pivot pin **30** until the stop pin **32** abuts the opposite end of slot **37***c*, the shelf **35** will occupy the other illustrated extreme position.

At end **35***b* of shelf member **35** is secured a lip member **44** in the form of a U-shaped channel running along the entire edge at end **35***b*, having a longer leg **44***a* which is secured to the rear of shelf member **35** by a plurality of

wood screws **45**, and a shorter leg **44***b* which is spaced forwardly of shelf member **35** when it is in the generally vertical position shown in full outline in FIG. 1. An article of thin printed subject matter N, e.g. such as a newspaper or magazine, may be displayed by means of shelf member **35** by laying it against the surface of shelf member **35** as is shown in FIG. 1, with the lowermost edge thereof retained upon lip member **44** and secured by the leg **44***b* thereof. When a plurality of periodicals or the like are stacked against shelf **35**, especially when highly flexible printed matter such as newspapers are so stacked, and even when a single article of printed matter, especially a highly flexible article such as a newspaper, is stacked against shelf **35**, there is a tendency for the printed matter, when the shelf is in the nearly vertical position as shown in full outline in FIG. 1, to buckle forwardly and fall off the shelf despite the leg **44***b* of lip member **44**. The present invention provides means for preventing this occurrence in the form of a hinged cover.

There are two embodiments of a hinged cover, one shown in FIGS. 1–3 and the other shown in FIGS. 4–6. In addition, a variation of the second embodiment is shown in FIGS. 7 and 8. The only difference between the display shelf of the first embodiment and that of the second embodiment resides in the construction of the cover, and in the form of the display shelf itself only insofar as the attachment of the cover thereto is concerned. The first embodiment of the hinged cover, illustrated at **50** in FIGS. 1–3, includes a rectangular cover member **50***a* preferably fabricated in a transparent material such as a transparent plastic or glass, whose dimensions are essentially coextensive with the dimensions of shelf member **35** so that the cover member **50***a* may bear against the outermost of the articles N along the entire surface thereof. At its edge adjacent end **35***a* of shelf member **35**, cover member **50***a* is hinged by a structure which allows contact between the cover member **50***a* and the outermost of periodicals N despite increase or decrease in the total thickness of the articles stacked against shelf **35**. Hinged cover **50** further includes a U-shaped channel home **50***b* secured around the edges of cover member **50***a*, and welded or otherwise secured to one leaf **50***c* of each of a pair of spaced hinges indicated generally at **50***d* (FIG. 3). Frame **50***b* can be omitted if desired, and attachment of leaf **50***c* can be made to cover **50***a* directly, or through local structure, as in the second embodiment discussed below.

The other leaf of each of hinges **50***d* is slidably secured to the end edge of shelf **35** adjacent end portion **35***a* for movement normal to the plane of shelf **35**. Specifically, each leaf **50***e* includes a slot **50***f* which is normal to the plane of shelf **35**. Slidably captured within slots **50***f* are cap-headed pins **55** which are secured to the end edge of shelf **35** to retain the hinge **50***d* thereto, but which also allow the hinge **50***d* to slide relative to pins **55** along slots **50***f* normal to the plane of shelf **35**. Slots **50***f* are long enough to allow cover member **50***a* to be pushed toward shelf **35** to rest flush against even a single very thin periodical N carried by shelf **35**, and to be moved away from shelf **35** until a desired thickness of articles N can be accommodated with flush resting of cover member **50***a* against the outermost of such articles. It will be appreciated that the outer surface of the outermost article will be visible through the cover **50**, but that the cover **50** will maintain generally flexible periodicals in smooth upright relationship. In various positions of hinge leaf **50***e*, i.e. with varying thicknesses of articles N, the cover member **50***a* can still be pivoted upwardly out of the way at hinge **50***d* to allow removal of the periodicals N from the shelf **35**. The flush contact is important from the standpoint both of appearance of the cover and the appearance of the periodicals themselves. A hinge **50** without the aforesaid sliding feature would not allow flush contact of the cover member **50***a* with varying thicknesses of periodicals N.

The second embodiment of a hinged cover and its connection to the display shelf is illustrated in FIGS. 4–6 at **50′**. The hinged cover **50′** differs from the first embodiment hinged cover **50** in only two respects. First, as may be best seen in FIG. 5, the cover member **50***a′* is quite narrow, e.g. much narrower than the typical magazine, while the cover member **50***a* of the first embodiment is as broad as the entire display shelf thereby fully covering one or more magazines. Second, the means of attachment of the hinged cover **50′** to the display shelf is modified from that shown in the first embodiment to enable the hinged cover **50′** to be moved laterally along the display shelf. Thus, a channel **35***x* having an upward central slot opening **35***y* (FIGS. 4 and 5) is provided along the upper portion of shelf **35**, and secured thereto by screws **35***z*. The hinge **50***d′* (FIG. 4) includes a hinge leaf **50***e′* which has a pair of slots **50***f′*, all corresponding to similar parts in the first embodiment. However, the hinge leaf **50***e* is not secured directly to the shelf **35** as in the first embodiment, but rather, a slider member **35***w* is provided within channel **35***x* having an upstanding pair of studs **50***q′*, the slider member **35***w* being proportioned to slide within channel **35***x* with studs **50***q′* projecting upwardly out of slot **35***y*. Studs **50***q′* pass through slots **50***f′* in hinge leaf **50***e′* and are threadedly engaged with wing nuts **50***s′*.

The narrow width of cover member **50***a′* (FIG. 5) presents a neat appearance because it can be centered over a magazine N thus allowing the magazine to be retrieved easily from under the cover member **50***a′*. One or more cover members **50***a′* may be mounted to the display shelf, and each of them will ride within channel **35***x* so that they can be moved laterally manually to overlie magazines N spaced anywhere along the display shelf. Yet at the same time, the feature of accepting a variable plurality of magazines N under the cover plate with flush retention thereof is provided by slots **50***f′* in the second embodiment just as in the first embodiment. Individual covers **50′** can accommodate different pluralities N thereunder. The wing nuts **50***s′* may be employed to secure the position of the hinge member **50***d′* if desired.

Also shown in FIG. 4 is a modified form of shelf bracket, shown therein at **37′**, which varies from that shown at **37** in FIG. 1 only in the proportions thereof, and in the proportions of curved limit slot **37***c′*, both of which are intended to allow attainment of full vertical disposition of shelf **35**, as illustrated in FIG. 4. It will be noted that the proportions are such that when the full vertical is attained (when stop pin **32** abuts the end of slot **37***c′* as shown), the forward plane of shelf **35** is essentially coplanar with the forward plane of the bookshelf **10**.

This full vertical position of shelf **35**, as shown in FIG. 4, is very attractive when viewed from the front of the bookshelf **10**. However, in the full vertical position, periodicals N on shelf **35** sometimes tend to buckle slightly and tilt away from the shelf **35** so that they can fall off. Because the shelf **35** is then disposed fully vertically, the cover **50′** does not exert much retention force on the periodicals N, and accordingly when the bracket **37′** is utilized to allow full vertical disposition of shelf **35**, a spring **50***p* (e.g. of the single loop type as illustrated) can be added to hinge member **50***d′* to bias cover **50′** against periodicals N.

As may be seen in FIG. 4, an optional pull tab **50***i* may be added to cover member **50***a′* to provide a handle for pivoting the cover member **50***a* away from the periodicals N, as to extract a periodical from under the cover member **50***a′*. In the unframed cover **50***a′* illustrated in FIG. 4, the tab **50***i* can be glued to the lower extreme of cover **50***a* as illustrated, or can be otherwise affixed.

In FIG. 7 there is shown a locking bar **60**, designed to lock the lower edge of cover **50′** to bracket **44** and thereby to the shelf **35** itself. The bar **60**, as shown in shortened broken perspective in FIG. 8, has a generally Z-shaped cross section to intercept both the tab **50***i* and

the short leg of bracket **44** to prevent pivoting of cover **50'** away from shelf **35** at the lower edge thereof. This locking function occurs only when the shelf **35** is in the full vertical position shown in FIG. 4, because then the bar **60** cannot be withdrawn from its nest (FIG. 7) between the lower edge of cover **50'** and the short leg of bracket **44**. While the bar **60** can be removed by pivoting shelf **35** away from the full vertical so that bar **60** clears the sides of the bookshelf, and then sliding it out laterally, that will not be apparent to the uninstructed viewer, to whom the bar **60** will appear to be a unit with the shelf **35** and cover **50'**. Preferably the bar **60** will extend the width of shelf **35**, and various locking cross sections may be employed. A shallower cross section will, for example, be employed when the pull tab **50***i* is omitted. The bar **60** may also be employed with the apparatus of the first embodiment although there it will never be captured at its ends by the sides of the bookcase.

In operation, a stack of periodicals may be placed toward the rear of the bookshelf resting upon shelf **10***a*. For purposes of clarity, the articles stacked on the shelf **10***a* are designated M, while the articles displayed on the pivotable shelf **35** are designated N, although the two may be the same, and often are the same. The stacked articles M can for example be identical articles which are to be sold to customers or loaned to readers one at a time, or to be otherwise dispensed. One or more of the periodicals M can be put on the pivotable shelf **35** for the purpose of displaying what is available within the bookshelf **10**. The pivotable shelf **35** may then be swung down to the essentially vertical position wherein the stop pin **32** contacts one end of the slot **37***c* (or **37***c'*), to display the representative articles N.

When a plurality of periodical articles N are displayed in stacked fashion on pivotable shelf **35**, the hinged cover **50** or **50'** will allow smooth retention yet accessibility to any one of those periodicals as desired. For example, the stack of periodicals M on the shelf **10***a* may constitute older back issues of a magazine, while the several periodicals N on the pivotable shelf **35** may constitute the most recent issues of the same magazine. It is then desirable to gain easy access to the most recent issues by manipulation of the hinged cover **50** or **50'** and to gain infrequent access of the older issues by manipulation of the pivotable shelf **35**. Also as has already been indicated, when the magazines or other periodicals are identical, the articles N may be sold one at a time from the display shelf **35**, and may be periodically replenished from the store of periodicals M on the shelf **10***a*.

It is an important feature of the invention that when the pivotable shelf is in the display position, i.e. in the nearly vertical full outline position illustrated in FIG. 1, the magazines or other periodical articles M stored at the rear of shelf **10***a* are hidden, or essentially hidden, from the view of a person viewing the display shelf **35**. When however, access to the magazines or other periodicals M is desired, the shelf **35** may be pivoted up to the approximately horizontal broken outline position shown in FIG. 1, and in that position the shelf **35** will be translated upwardly as well as tilted to the horizontal position, thus exposing the entire stack of periodicals M for inspection or removal or the like. This upward translation occurs because of the aforesaid lever arm portion of bracket **37** between the pivot pin **30** and the shelf member **35**. If shelf **35** were instead to be pivoted within its own body, rather than at a distance with the intervening lever arm, it would tilt but it would not translate upwardly, and easy access to the stacked articles M at the lower rear of bookshelf **10** could not be gained.

There are many important advantages to the features of the present invention, which were not heretofore available in the bookshelf construction art. Only a few will be summarized here. First, the display shelf is easily pivoted to the essentially vertical display position, or to the essentially horizontal disuse position near the top of the bookshelf **10** where it is out of the way. The bookcase **10** can thus be easily adapted to temporary use for other than a periodical display case, if desired. Second, when continuous use as a periodical display case is desired, the same action acts respectively as a door or gate to hide from view the extra periodical articles stacked at the rear of bookshelf **10**, or to fully expose the whole stack to view. Third, the ability of the shelf **35** to be positioned at intermediate positions allows accommodation to children vs. adults, or to different heights for a particular bookshelf, so that in each case the shelf **35** can be positioned more nearly normal to the line of sight when in the display position. Fourth, the slidable hinged cover **50** or **50'** makes an essentially vertical periodical display shelf practical by avoiding buckling, despite changes in thickness of the displayed material.

The invention has been described with reference to particular, but merely illustrative, embodiments. Changes therein may be made within the scope of the invention, and all such variations are contemplated as part of the invention.

What is claimed is:

1. A display shelf for mounting between two vertical members, over a horizontal support surface having a space above said support surface to accommodate any articles supported thereon, comprising:

(a) first means defining a display surface;

(b) second means defining a pivot for said first means, located at an intermediate height within said space above said support surface, and essentially parallel to and spaced from said first means;

(c) third means pivotally connecting said first means to said second means; and

(d) fourth means limiting the pivotal movement of said first means to a first extreme wherein said display surface is essentially horizontal at the upper portion of said space and a second extreme wherein said display surface is essentially vertical, and to intermediate positions;

whereby said display surface hides said space from view when in the essentially vertical display position, and exposes said space to essentially full view when in the essentially horizontal position.

2. A display shelf according to claim **1** further comprising, a cover member for said display surface, and a hinge adapted to connect said cover member to said first means along mutual edges located at the portions thereof which are uppermost when said display surface is essentially vertical, said hinge including a slidable connection to said first means so that the spacing of the hinged end of said cover member from said display surface is variable.

3. A display shelf according to claim **2** further wherein, said hinge has a hinge pivot line, one leaf fixed to said cover member, and a second leaf provided with a slot extending essentially perpendicular to said hinge pivot line, and wherein means is secured to the adjacent end edge of said first means and slidably engaged within said hinge leaf slot to form said slidable connection.

4. A display shelf according to claim **1** wherein, said second means comprises a pair of pivot pins supported at opposite sides of said bookshelf, said third means comprises a pair of brackets, one at each lateral edge of said first means, and each located intermediate the edges of said first means which are uppermost and lowermost when said first means is in said essentially vertical position.

5. A display shelf according to claim **4** wherein, said third means comprises a pair of brackets, one at each lateral edge of said first means, and each located intermediate the edges of said first means which are uppermost and lowermost when said first means is in said essentially vertical position.

6. A display shelf according to claim **5** wherein, each of said pair of pivot pins is mounted to a mounting means, and a screw clamp is employed to selectively increase and

decrease the frictional engagement of said brackets to said respective mounting means around said pivot pins.

7. A display shelf according to claim **6** wherein, said screw clamp comprises a threaded end on each of said pivot pins, and a wing nut threadedly engaged with said threaded end.

8. A display shelf according to claim **6** wherein, at least one of said brackets includes a curved slot, and wherein said mounting means includes a fixed pin secured thereto and slidably engaged within said slot, to limit the extremes of pivoting in either direction by said first means.

9. A display shelf according to claim **1** wherein, said vertical members comprise a pair of spaced upright lateral panels, overlaid by a top panel essentially parallel to said lower support surface, and wherein said first means has a vertical dimension equal to a major portion of the height from the upper surface of said support surface to the lower surface of said top panel, and a lateral dimension equal to slightly less than the lateral dimension between the facing surfaces of said upright lateral panels, both measured when said first means is in said essentially vertical position, and wherein said third means comprises pivot pins secured relative to said respective upright lateral panels.

10. A display shelf according to claim **1** further comprising, a cover member for said display surface having a transverse dimension equal to a fraction of the transverse dimension of said display surface, and a hinge adapted to connect said cover member to said first means along mutual edges located at the portions thereof which are

uppermost when said display surface is essentially vertical.

11. A display shelf according to claim **10** wherein said hinge is slidable laterally along the uppermost edge of said first means and is also slidable normal to said display surface so that the spacing of the hinged end of said cover member from said display surface is variable.

12. A display shelf according to claim **11**, wherein said hinge member is slidably engaged with the upper edge of said first means for lateral sliding motion therealong.

13. A display shelf according to claim **1** wherein said fourth means is arranged to allow vertical disposition of said display surface at said second extreme.

14. A display shelf according to claim **9** wherein said third and fourth means are proportioned to allow vertical disposition of said display surface at said second extreme, at which occasion the forward face of said display shelf is approximately coplanar with the forward edges of said upright lateral panels.

15. A display shelf according to claim **2** wherein a locking bar is laterally slidably engaged with the lower edge of said first means, and the lower edge of said cover means.

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