June 4, 1957 E. BERGMAN 2,794,697

BOOK STORAGE AND DISPLAY DEVICES

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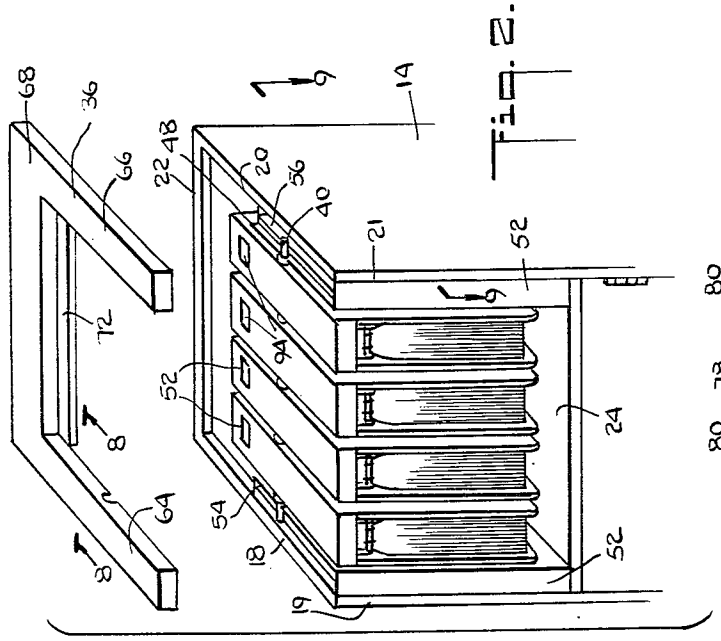


Fig. 2.

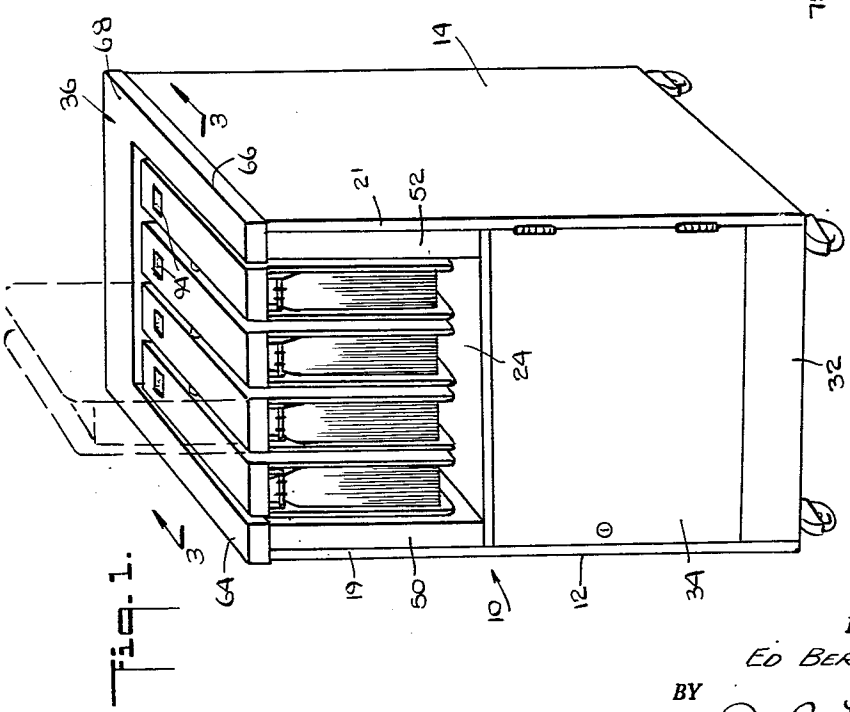


Fig. 1.

INVENTOR.
Ed Bergman
BY
J. B. Kelshin
ATTORNEY

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BOOK STORAGE AND DISPLAY DEVICES

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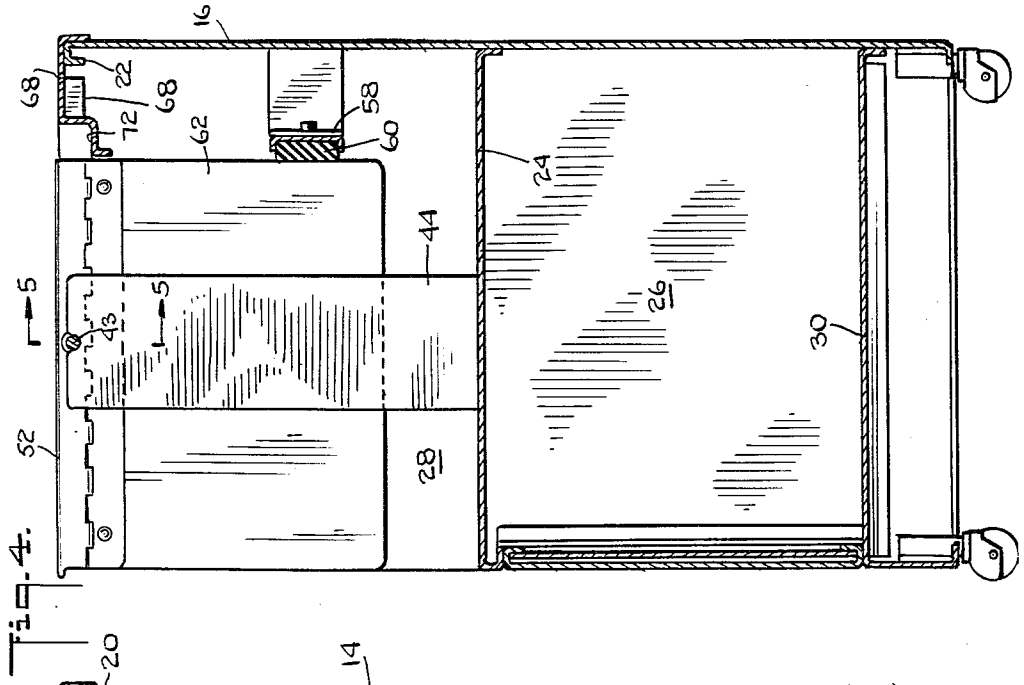


Fig. 4.

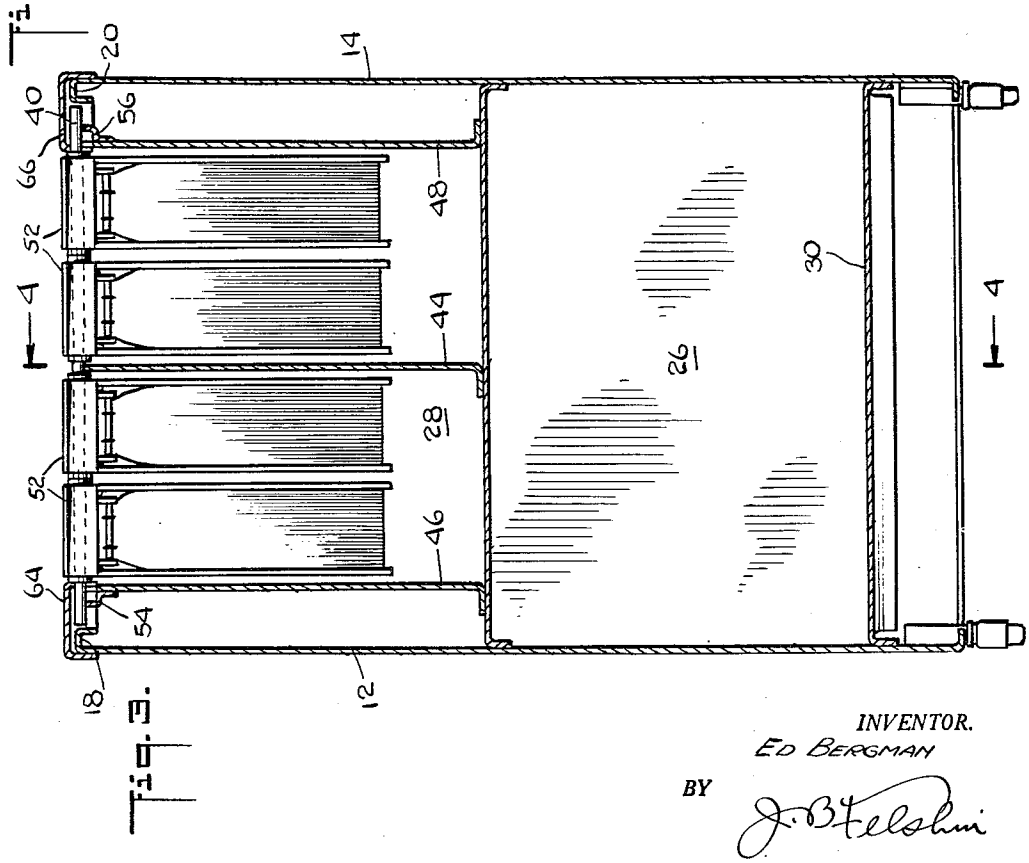


Fig. 5.

INVENTOR.
ED BERGMAN
BY
J. B. Felshin
ATTORNEY

June 4, 1957 E. BERGMAN 2,794,697

BOOK STORAGE AND DISPLAY DEVICES

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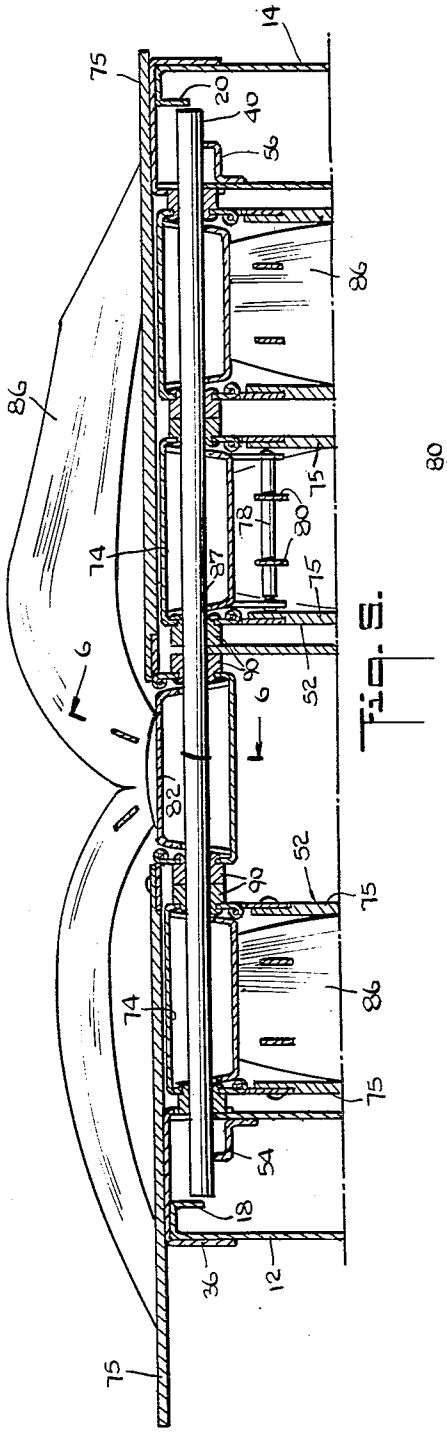


Fig. 5.

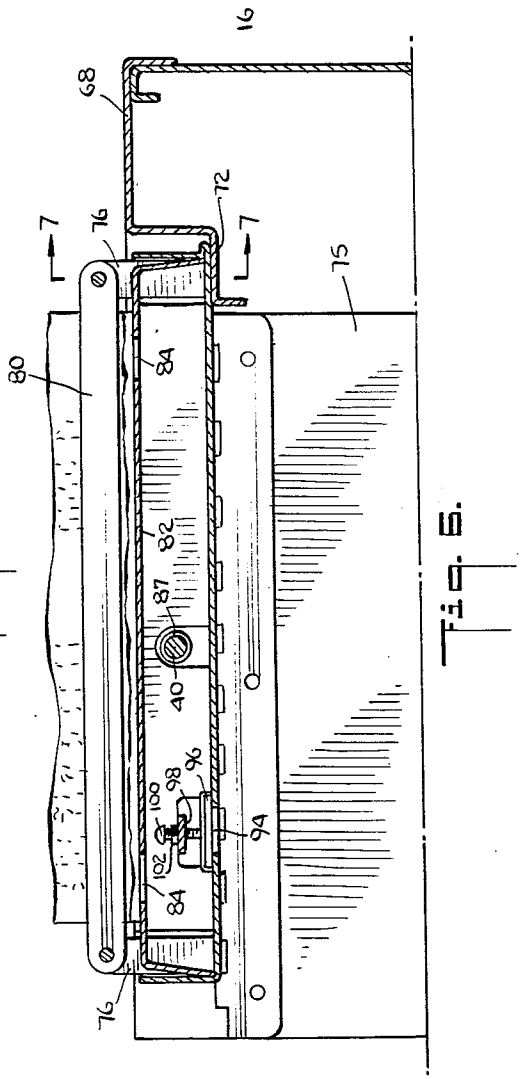


Fig. 6.

INVENTOR.
ED BERGMAN
BY J. B. Feeshan
ATTORNEY

June 4, 1957 E. BERGMAN 2,794,697

BOOK STORAGE AND DISPLAY DEVICES

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Fig. 9.

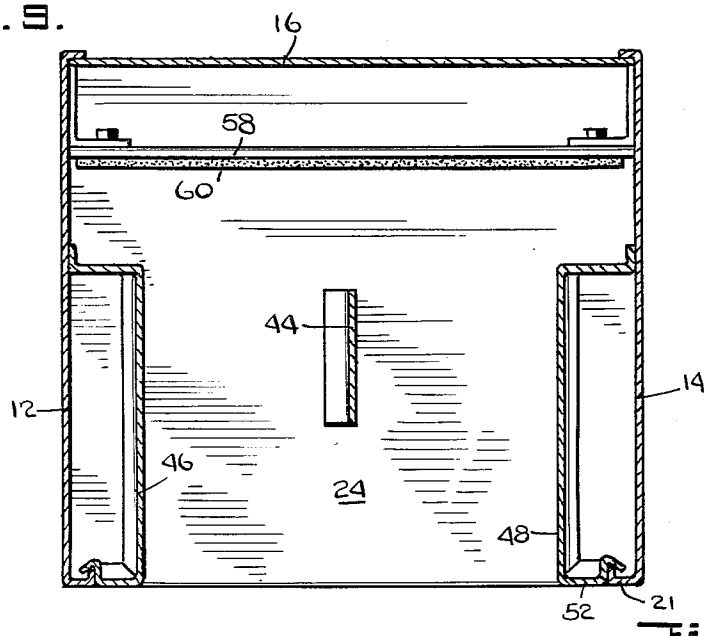
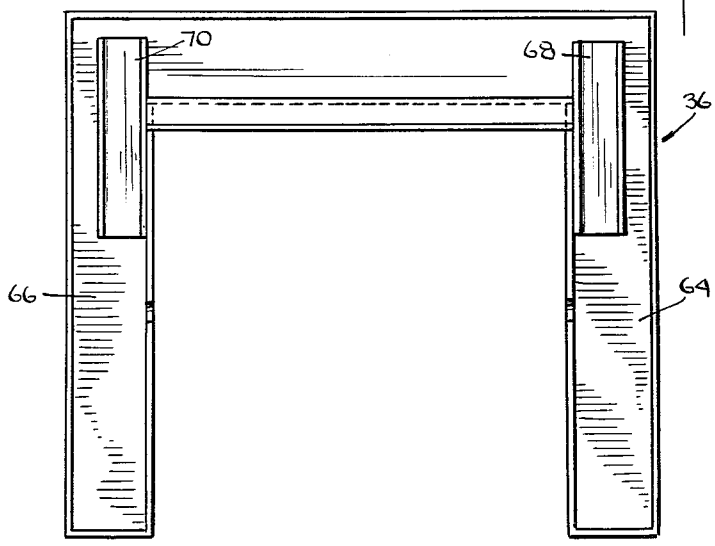


Fig. 10.



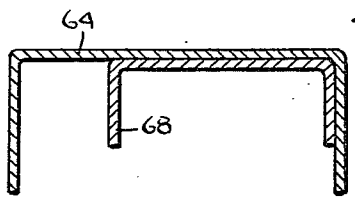


Fig. 8.

INVENTOR.
ED BERGMAN
BY
J. B. Felsham
ATTORNEY

United States Patent Office

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BOOK STORAGE AND DISPLAY DEVICES

Ed Bergman, New York, N. Y., assignor to Art Steel Co. Inc., New York, N. Y., a corporation of New York

Application January 7, 1955, Serial No. 480,534

4 Claims. (Cl. 312—233)

This invention relates to storage and display cabinets and, particularly, to such apparatus for storing and displaying a plurality of large-size telephone books, catalogues and the like.

An important object of this invention is to provide a storage and display cabinet for book holders, said stand being of new and improved form.

Another object of the invention is to provide an improved storage and display cabinet for book holders, said stand being of rugged construction.

Still another object of the invention is to provide an improved book storage and display cabinet of strong yet comparatively simple construction which allows the ready assembly and disassembly of books to be displayed.

A further object of the invention is to provide an improved book storage and display apparatus having an efficient book holding assembly which is readily accessible and which allows ready access to books carried thereby.

In general, the principles and objects of this invention are accomplished in one embodiment thereof a cabinet having upper and lower chambers with the lower chamber being closed by a door and the upper chamber being open and including a book holding assembly. The upper chamber has side and rear walls and a plurality of vertically disposed plates providing support for the book holding assembly. The side walls have inwardly turned extensions which limit the end play of the book holding assembly and the rear wall is provided with a bumper for controlling the movement of individual books as they are operated within the holding assembly. The upper chamber is also provided with a removable cover which caps the side and rear walls. The cover is generally U-shaped and has a step-like portion along the base of the U which is utilized as a support and stop for the books when they are moved from within the upper chamber into position in which they may be read.

The invention is described in greater detail by reference to the accompanying drawings wherein:

Fig. 1 is a perspective view of a support and display cabinet embodying the principles of the invention;

Fig. 2 is a perspective view of a portion of the stand of Fig. 1 showing a portion thereof disassembled;

Fig. 3 is a sectional view along the line 3—3 in Fig. 1;

Fig. 4 is a sectional view along the line 4—4 in Fig. 3;

Fig. 5 is a sectional view along the line 5—5 in Fig. 4;

Fig. 6 is a sectional view along the line 6—6 in Fig. 5;

Fig. 7 is a sectional view along the line 7—7 in Fig. 6;

Fig. 8 is a sectional view along the line 8—8 in Fig. 2;

Fig. 9 is a sectional view along the line 9—9 in Fig. 2; and

Fig. 10 is a bottom view of the cover of the cabinet of Fig. 1.

Similar elements are identified by similar reference characters throughout the drawings.

Referring to Figs. 1 and 2, an embodiment of the invention comprises a cabinet 10 of steel or the like having side walls 12 and 14 and a rear wall 16. The side walls

12 and 14 have L-shaped extensions 18 and 20, respectively, projecting inwardly from the top edges thereof. The rear wall has a similar L-shaped extension 22 projecting inwardly from the top edge thereof. The side walls 12 and 14 also have L-shaped projections 19 and 21 extending from the front edges thereof to form panels at the sides of the front of the cabinet 10 (Fig. 9). A plate 24 horizontally disposed and secured to the inner surfaces of the side and rear walls divides the cabinet 10 into lower and upper chambers 26 and 28, respectively.

The lower chamber 26 has a floor formed by a plate 30 horizontally disposed and secured to the side and rear walls 12, 14 and 16 of the cabinet 10. The lower chamber is closed by a panel 32 and a hinged door 34. The upper chamber 28 is defined by the rear wall 16 and the side walls 12 and 14 which are topped by an L-shaped cover 36. Thus, the upper chamber is open at the top and front.

The upper chamber 28 is utilized for housing a book holding assembly 38 which includes a shaft 40 on which a plurality of books or book-holders 42 are rotatably mounted. The shaft 40 of the book-holding assembly 38 is supported in a semi-circular notch 43 in the top edge of a vertical plate 44 secured to the horizontal plate 24 approximately midway between the side walls 12 and 14 and parallel thereto. The vertical plate 44 is also set back from the front of the cabinet 10 and extends over only a portion of the depth of the upper chamber as shown in Fig. 4.

Auxiliary vertical support plates 46 and 48 for supporting the shaft 40 are secured to the horizontal plate 24 and are positioned adjacent to the side walls 12 and 14, respectively and parallel thereto. The top edges of the auxiliary plates 46 and 48 are also notched to provide bearing surfaces for the shaft 40. The auxiliary plates 46 and 48 also have generally L-shaped projections 50 and 52, respectively, at the front edges thereof to form panels at the front of the cabinet adjacent to the panels formed by the projections 19 and 21 and in contact therewith as shown in Fig. 9. The auxiliary plates 46 and 48 extend rearwardly from the front of the cabinet 10 a sufficient distance to provide the necessary strength for supporting the book-holding assembly 38.

Brackets 54 and 56 are secured to the plates 46 and 48, respectively, at the upper ends thereof and extending along the length thereof. The brackets 54 and 56 have portions spaced from the plates 46 and 48 on which the shaft 40 is supported. As shown in Fig. 3, the end play of the shaft 40 is substantially limited by the L-shaped projections 18 and 20 of the side walls 12 and 14.

A bracket 58 carrying a bumper of resilient material 60, such as rubber, is secured to the side walls 12 and 14 and extends parallel to the rear wall 16. The bracket and bumper are spaced from the rear wall a sufficient distance so that they abut the book holders 62 in the assembly 38.

The cover 36 for the upper chamber 28 is generally U-shaped and has legs 64 and 66 and a base portion 68. The cover 36 is adapted to form a tight interference fit with the side and rear walls of the cabinet 10 and the legs 64 and 66 are notched to fit over the shaft 40 of the book-holding assembly 38. The legs 64 and 66 are also provided with reinforcing brackets 69 and 70, respectively, said reinforcing brackets being positioned adjacent to the base portion 68 as shown in Fig. 10. The base portion 68 includes a step portion 72 extending along the length thereof and serving as a support for a book when in use as shown in Fig. 6.

As described above, the book-holding assembly 38 carried in the upper chamber 28 of the cabinet 10 includes a plurality of the book holders 52 mounted on the shaft

40 which is journalled on the plates 44, 46, and 48. Referring to Figs. 5, 6, and 7, each book holder comprises a channel member 74 having a pair of rotatable cover plates 75 connected thereto. Each channel also has a pair of brackets 76 spaced apart at each end thereof. Between each member of each pair of brackets is a rod 78. Thus, a rod 78 is provided at each end of the channel 74 and a pair of resilient metal straps 80 are mounted on the rods and extend between each rod at each end of the channel member. A channel-shaped closure member 82 is provided for insertion into the channel 74. The closure member 82 is provided with openings 84 for use in removing the closure by hand from the channel 74. A book or catalogue 86 is mounted in the holder 52 and positioned between the pairs of brackets 76 with the straps 80 inserted between selected leaves thereof whereby the book is firmly held within the holder.

The channel 74 is provided with aligned openings 86 in which spacers 90 are inserted. The spacers function as bearings to support the shaft 40 on which the book holders 52 are rotatably mounted and as spacers to separate adjacent book holders as shown in Fig. 5.

The channel member 74 of each book holder 52 is provided with a generally rectangular opening in which is retained a book-identifying means 96 held in place by a strap 98 mounted in the channel 74 and carrying adjustable bolts 100 (one of which is shown) which are locked in position in contact with the identifying means by a locking nut 102. Of course, as many books as desired may be thus mounted on the shaft 40 with the number depending on the capacity of the upper chamber of the cabinet.

In order to study any one of the books held by the cabinet 10, the selected book-holder is rotated 180° from the position shown in Fig. 2 until the holder comes to rest on the step portion 72 of the cover 68 of the cabinet.

One advantage of the book-holding stand of the invention is that, by removing the cover 68 quickly and easily, either an entirely new set of books mounted on a new shaft may be inserted in place of the set carried on the shaft 40 which is lifted out of its place or, if desired, individual books may be removed from the shaft 40 and others put on in their place. The shaft is then returned to its place in the upper chamber 28 and the cover quickly replaced.

It will be noted that the shoulder 72 is spaced below the top wall 68 by such a distance that when one of the book holders is swung up, the side walls 75 may be opened up flat against the top walls of the book holders which are still hanging down, as illustrated in Fig. 5 of the drawing.

The top walls 74 of the book holders are substantially in a plan of the top wall 68 of the cover.

What is claimed is:

1. Book storage and display apparatus comprising a cabinet including two side walls and a rear wall, a horizontal plate secured to said side and rear walls and dividing said cabinet into upper and lower chambers, a vertical plate secured to said horizontal plate and disposed substantially parallel to said side walls approximately midway between said side walls, auxiliary vertical plates at each side of said upper chamber and adjacent to said side walls, a bracket secured to the upper edge of each of said auxiliary plates, a book holding assembly including a shaft and a plurality of book holders rotatably mounted thereon, said shaft being supported on said vertical plates and said brackets within said upper chamber, and a generally U-shaped cover in sliding friction fit engagement with said side and rear walls.

2. Book storage and display apparatus comprising a cabinet including two side walls and a rear wall, a horizontal plate secured to said side and rear walls and dividing said cabinet into upper and lower chambers, said side walls having L-shaped extensions projecting inwardly and toward each other, a vertical plate secured to said horizontal plate and disposed substantially parallel to said side walls and midway therebetween, auxiliary vertical plates at each side of said upper chamber and adjacent to said side walls, a bracket secured to the auxiliary plates adjacent to the upper ends thereof, a book holding assembly including a shaft and a plurality of book holders rotatably mounted thereon, said shaft being supported on said vertical plates and said brackets and disposed within said upper chamber, the ends of said shaft being adjacent to said L-shaped extensions of said side walls, and a U-shaped cover in sliding friction fit engagement with said side and rear walls at the upper ends thereof.

3. Book storage and display apparatus comprising a cabinet including two side walls and a rear wall, a horizontal plate secured to said side and rear walls and dividing said cabinet into upper and lower chambers, a hinged door closing said lower chamber, a vertical plate secured to said horizontal plate and disposed substantially parallel to said side walls and midway therebetween, an auxiliary vertical plate at each side of said upper chamber and closely adjacent to said side walls, a bracket secured to each of said auxiliary vertical plates adjacent to the upper ends thereof, a book holding assembly comprising a shaft and a plurality of book holders rotatably mounted thereon, said shaft being supported on said vertical plates and said brackets and being disposed within said upper chamber, a bracket extending between said side walls and substantially parallel to said rear wall, said bracket being disposed adjacent to said book holders and operating as a stop member therefor, and a generally U-shaped cover for said cabinet in press fit with the upper ends of said side and rear walls, said cover having a step portion for supporting said book holders when rotated on said shaft out of said upper chamber.

4. Book storage and display apparatus comprising a cabinet including two side walls and a rear wall, said side walls having L-shaped projections at the upper ends and at the front thereof, a horizontal plate secured to said side and rear walls and dividing said cabinet into upper and lower chambers, a hinged door closing said lower chamber, a vertical plate secured to said horizontal plate and disposed substantially parallel to said side walls and midway therebetween, an auxiliary vertical plate secured to said horizontal plate at each side of said upper chamber and closely adjacent to said side walls, said auxiliary vertical plates having L-shaped projections at the front ends thereof interlocked with said L-shaped projections of said side walls at the front thereof, a book holding assembly comprising a shaft and a plurality of book holders rotatably mounted thereon, said shaft being supported on said vertical plates, and a U-shaped cover for said cabinet having two legs and a base, each of said legs being in press fit engagement with a side wall and said auxiliary vertical plate adjacent thereto, said base having a step portion disposed adjacent to said book holding assembly and adapted to support said book holders when rotated out of said upper chamber.

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