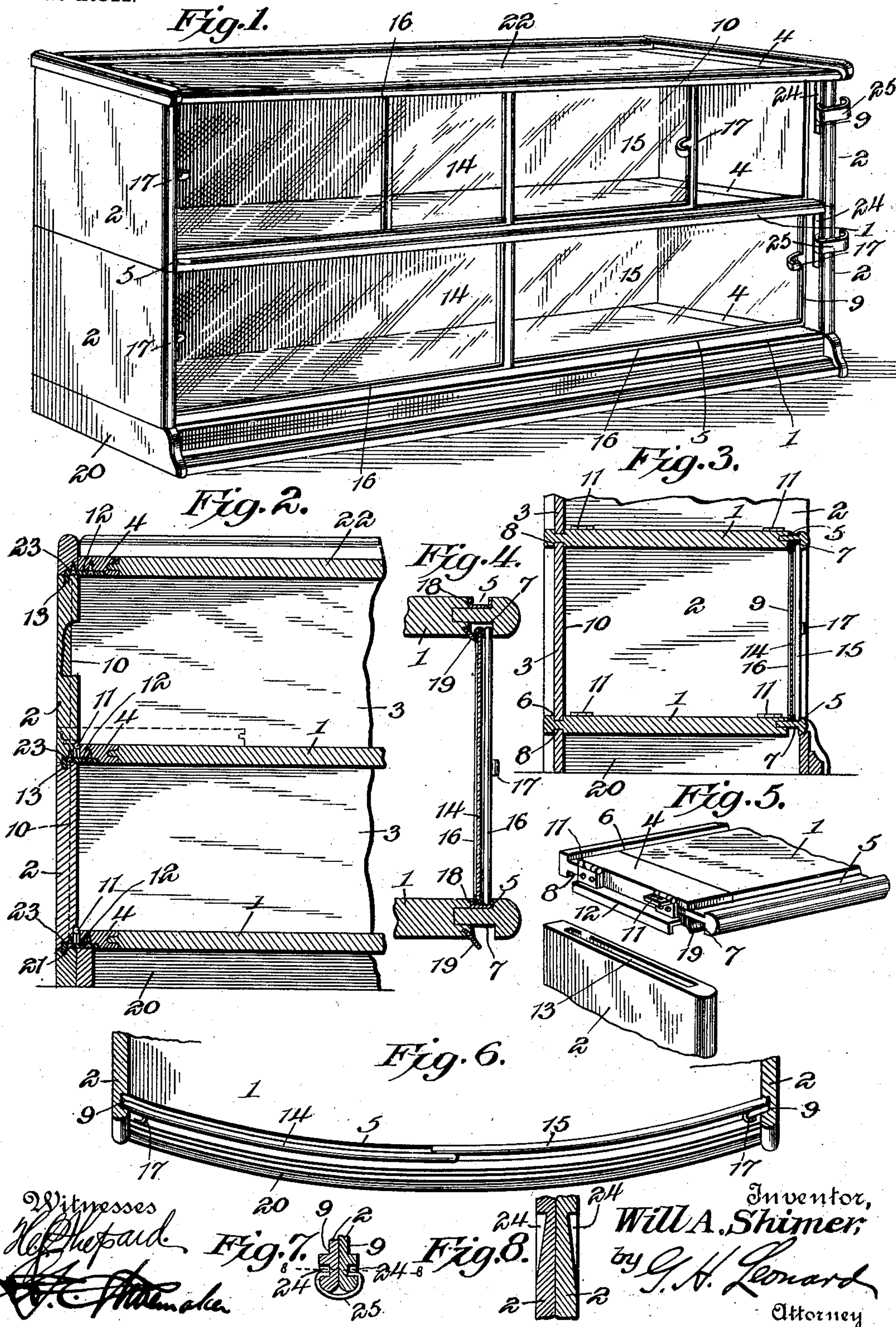


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W. A. SHIMER.
SECTIONAL BOOKCASE.
APPLICATION FILED JAN. 23, 1903.

NO MODEL.



Witnesses
H. Shepard
W. A. Shimer

Fig. 7. Fig. 8.

Inventor,
Will A. Shimer,
by G. H. Leonard
Attorney

UNITED STATES PATENT OFFICE.

WILL A. SHIMER, OF MORAVIA, NEW YORK.

SECTIONAL BOOKCASE.

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To all whom it may concern:

Be it known that I, WILL A. SHIMER, a citizen of the United States, residing at Moravia, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Sectional Bookcases; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to bookcases, and has for its object to provide certain new and useful improvements in sectional or "elastic" cases, whereby the several sections may be conveniently assembled and taken apart without the aid of skilled labor. It is furthermore designed to provide a new and novel detachable connection between the shelves and the end pieces of the sections, which is constructed and arranged to stiffen the joint and also facilitate the setting up and taking down of the case.

It is a still further object of the invention to provide the case-sections with sliding doors, which are mounted to slide past each other without interference, and also to facilitate the application and removal of the doors without taking the sections apart.

A still further object of the invention resides in a new and novel means to detachably connect the abutted ends of adjacent sections.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully explained, shown in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a sectional bookcase embodying the features of the present invention. Fig. 2 is a detail longitudinal sectional view taken through one end of the sectional case. Fig. 3 is a detail transverse sectional view taken through the adjacent shelves. Fig. 4 is an enlarged detail sectional view taken through the front of a section to show the manner of mounting the sliding doors. Fig. 5 is a detail perspective view of adjacent end portions

of an end member and a shelf member. Fig. 6 is a detail horizontal sectional view taken through the front of a modified form of a bookcase having a bowed front. Fig. 7 is a detail horizontal sectional view showing means for detachably connecting the abutted ends of adjacent sections, and Fig. 8 is a detail sectional view on the line 8 8 of Fig. 7.

Like characters of reference designate corresponding parts in all the figures of the drawings.

As hereinbefore intimated in the preliminary statement of the invention, the present bookcase is made up of a plurality of sections, and although only two sections have been shown in the drawings it will of course be understood that any number of sections may be assembled to form a single case. Furthermore, as the sections are duplicate in construction and arrangement a detail description of a single section is deemed sufficient.

In carrying out the present invention each section is provided with a bottom 1, opposite duplicate ends 2, and a back 3, it of course being understood that the bottom of one section forms the top of the next section below. Each bottom also constitutes the shelf for the support of books or other matter and is preferably provided at each end with a transverse cleat 4, which is rigidly connected to the shelf by means of a tongue-and-groove connection, as best indicated in Fig. 2 of the drawings, the grain of the cleat being disposed transversely to that of the shelf for the purpose of preventing warping of the latter and also to provide a stronger surface for connection therewith of certain elements, as will be hereinafter more fully explained. Each shelf is further provided in its upper side with front and rear longitudinal grooves 5 and 6, and corresponding grooves 7 and 8 are formed in the underside of the shelf. As indicated in Fig. 3, it will be seen that the back 3 has its lower edge fitted in the groove 6 of the adjacent lower shelf and its upper edge fitted in the groove 8 of the adjacent upper shelf, whereby the back is snugly held in place. The end pieces 2 are provided upon their inner sides with front and rear upright grooves 9 and 10, the latter grooves receiving the ends of the back 3. As best shown in Fig. 3, the front edge of each shelf may, if desired, be of a

strip of separate material of equal length and thickness as the remainder of the shelf and fitted to the latter by a tongue-and-groove joint.

5 Each end piece 2 has its lower portion fitted flat against one end of the adjacent shelf and is connected thereto by means of a pair or more of hinges 11, one leaf or member of each hinge being secured flat against the terminal
10 edge portion of the adjacent shelf and the other member secured flat against the inner face of the end piece, whereby, as clearly shown in Fig. 2 of the drawings, it will be seen that the hinge is closed when the section is
15 set up, and hence there is comparatively little strain upon the hinge when the section is in use. This hinged connection between the end piece and the shelf permits of the former being folded down flat against the shelf, as
20 indicated by dotted lines in Fig. 2, whereby the section may be folded into compact form for storage and transportation.

For connecting each shelf to the top of the next below end piece each end of the shelf
25 is provided with an angle-iron or bracket 12, which has its longer substantially horizontal member let into the end of the cleat 4 and projected slightly therebeyond, with its other and shorter member extending downwardly to
30 form a tongue, which is adapted to take into the groove 13, formed in the upper edge of the adjacent end piece 2. It will here be noted that the bracket or angle-iron lies entirely between the grooves 7 and 8, and the
35 ends of the groove or seat 13 are terminated short of the front and rear edges of the end piece. By this disposition of the parts it is apparent that the groove or seat is closed at the opposite ends and when the bracket is
40 fitted to said groove it entirely closes the top thereof, whereby dirt and foreign matter cannot become lodged in the groove. It will now be understood that in addition to preventing warping of the shelf the cleat 4 affords a
45 stronger and more durable part to which the bracket and the hinges may be connected than if the latter were connected directly to the end of the shelf proper.

A very important feature of the present invention will be understood by reference to
50 Fig. 2, wherein it will be seen that the hinges 11 are snugly inclosed between the end pieces and the shelves 1, and hence do not form obstructions to the insertion and removal of
55 books. This advantage is also true with respect to the brackets, and in addition thereto neither the hinges nor brackets are visible, which is an important point with respect to the appearance of the bookcase.

60 The front of each section is normally closed by means of a pair of slidable doors 14 and 15, each of which consists of a single pane of glass having a metallic frame 16. These doors have their upper and lower edges working in
65 the corresponding grooves 5 and 7 of adjacent shelves and are slightly more than one-half the length of the section, so that their inner

ends may slightly overlap to entirely close the section. It will of course be understood that the outer ends of the doors fit in the front
70 grooves 9 of the end pieces. Suitable handles or finger-pieces 17 are provided upon the outer ends of the frames for convenience in slidably moving the doors, the thickness of the latter being somewhat exaggerated in the drawings
75 for purposes of illustration; but in practice they will be reduced in thickness and less than the width of each of the grooves 5 and 7 in order that said doors may slide past each other. Each groove 5 may be provided with a
80 lining 18, of felt or other suitable material, so as to obviate noise and at the same time exert a binding effect upon the doors, so as to prevent looseness thereof without materially interfering with the free movement of the
85 doors. A strip of rubber or other suitable material 19 is secured to the inner edge or wall of each groove 7, with the lower edge of said strip projected below the groove and extended forwardly, so as to form a spring-
90 tongue in frictional engagement with the upper portion of the doors, and thereby hold the latter in intimate engagement with the front edge of the groove to prevent looseness of the upper edges of the doors. 95

To facilitate the application and removal of the doors without taking the sections apart, the upper groove 7 of each section is made somewhat deeper than the lower groove 5 to permit of the doors being elevated in the
100 grooves until the lower edges thereof are free or above the lower grooves, when they may be drawn outwardly, and thereby conveniently removed from the sections or inserted therein, as occasion may require. 105

As in all bookcases of this type, there is provided a base 20, the top of each end of which is provided with a longitudinal groove or seat 21 for engagement by the bracket 12 of the
110 lowermost shelf 1, and a top 22 is also provided, each end of said top having a bracket 12 (see Fig. 2) to engage the groove 13 of the adjacent uppermost end piece.

For an understanding of a very important feature of the present invention attention is
115 directed to Fig. 2 of the drawings, from which it will be seen that each shelf is hinged to the lower portion of the next above end piece and has a detachably rigid connection with the top of the next below end piece, where-
120 fore it will be noted that each shelf is connected to the two adjacent end pieces. In this connection it will be observed that the bottom edge of each end piece is cut away at its inner side or rabbeted, as indicated at 23,
125 for the reception of the horizontal member of the bracket 12, in order that the outer lower edge of the end piece may rest upon the top of the next below end piece, and thereby form a flush joint at this point. 130

A still further advantage of the present form of detachable connection between each shelf and the adjacent end piece resides in the fact that the tongue of the bracket 12 extends con-

tinuously throughout the greater part of the intermediate portion of the top of the end piece, which constitutes a very strong and durable connection and effectually obviates any twisting of the parts under the influence of weight upon the shelf.

In some instances it may be desired to give the sections a bowed or convexed front, and therefore such form has been shown in Fig. 6 of the drawings, it of course being understood that the grooves are correspondingly bowed and the doors work in corresponding curved grooves. This slight modification in the shape of the case may be made without altering or changing any of the other features of the invention.

For the purpose of detachably connecting the abutted ends of adjacent sections I employ substantially U-shaped spring clips or clamps 25, which are adapted to embrace the front edges of the abutted end pieces, with their ends fitted snugly in the vertical seats or grooves 24, formed in the inner faces of the end pieces. These grooves or seats are deepest at their upper ends, with their backs inclined outwardly and merged into the faces of the respective end pieces, whereby by drawing or forcing the clips downwardly the free ends are spread as they slide over the inclined backs of the grooves, and the end pieces are thereby drawn into snug engagement. It will of course be understood that the grooves or seats are in front of the grooves 9, and therefore in front of the glass doors.

As has been hereinbefore intimated, the frames for sliding glass doors are somewhat exaggerated in Fig. 1 of the drawings for purpose of illustration. The frames are of thin metallic binding placed around the edges of each piece of glass, and when the doors are closed the edges of the frame fit within the corresponding grooves of each section, where they are hardly visible, save at that point where the inner edges thereof overlap. By this form of frame the doors are rendered very light and the title of the books or other subject-matter thereon may be seen without opening the doors, and, moreover, there is not an uneven appearance at their point of overlapping, the thickness of the frames being about or less than the thickness of the glass.

From the foregoing description it is apparent that the device of the present invention possesses points of advantage in simplicity, inexpensiveness, and durability and can also be set up and taken apart without the aid of skilled labor, and it will of course be under-

stood that a change in form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit of sacrificing any of the advantages of the invention.

I claim—

1. In a sectional case, the combination with abutted end pieces, of a shelf having a bracket projected beyond one end thereof and detachably connected to the top of the lower end piece, and also provided with a hinged connection with the bottom portion of the upper end piece.

2. In a sectional case, the combination with abutted end pieces, the lower of which has a longitudinal groove in the top edge thereof, of a shelf, a bracket carried by and projected beyond the end of the shelf to rest upon the top of the lower end piece and provided with a pendent tongue to removably fit in the groove of said end piece, and a hinged connection between the same end of the shelf and the lower portion of the upper end piece.

3. In a sectional case, the combination with abutted end pieces, the lower of which is provided with a longitudinal groove in its top edge, of a shelf having one end fitted against the inner side of the upper end piece, an angular bracket secured to the said end of the shelf and resting upon the top of the lower end piece, with the pendent member of the bracket snugly and detachably fitted in the groove of said end piece, and a hinge having one member secured to the adjacent terminal edge of the shelf and its other member secured to the inner face of the upper end piece.

4. A case having a groove in the top and bottom thereof, and slidable doors having their top and bottom edges working in said upper and lower grooves and slidable past each other, the upper groove being deeper than the lower groove whereby the doors may be removably fitted to the case.

5. A case having a curved groove in the top and bottom thereof and concavo-convex sliding doors having their top and bottom edges working in the said upper and lower grooves and slidable past each other, the upper groove being deeper than the lower groove whereby the doors may be removably fitted to the case.

In testimony whereof I affix my signature in presence of two witnesses.

WILL A. SHIMER.

Witnesses:

CHARLES ATWOOD,
WM. FITTS.