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PORTABLE FOLDING BOOKCASE

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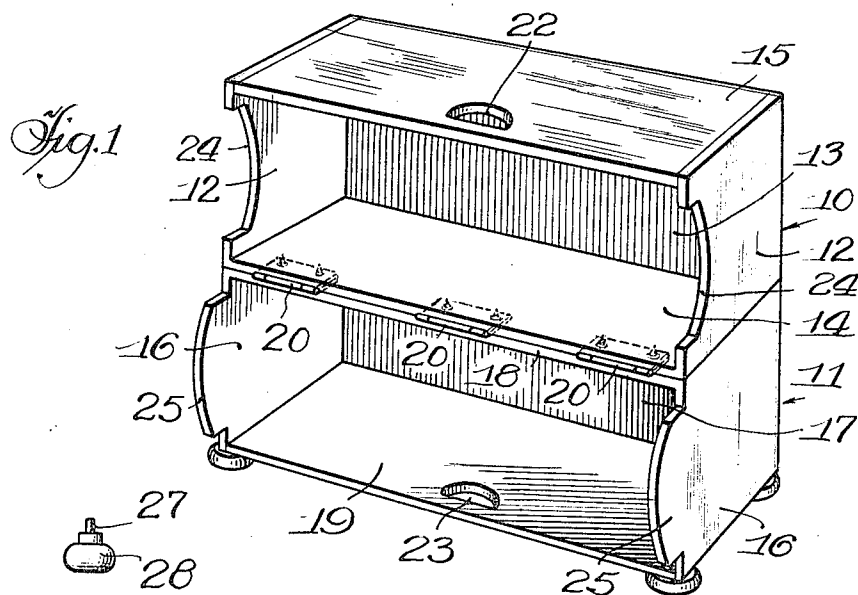


Fig. 3

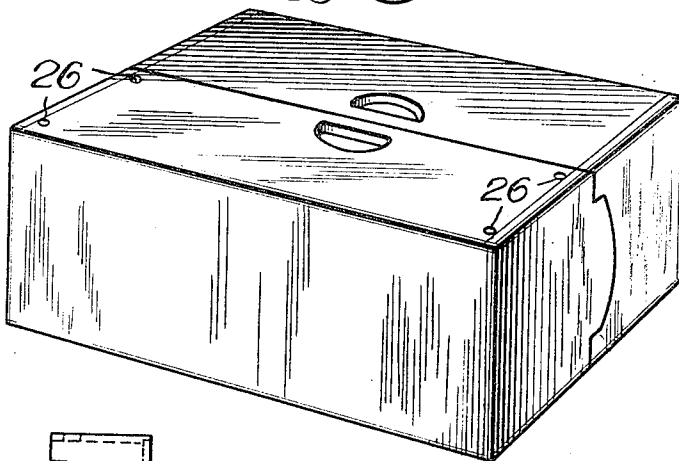


Fig. 2

Fig. 5

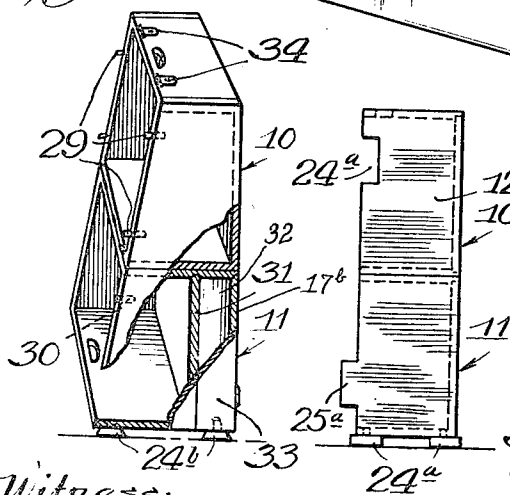


Fig. 4

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PORTABLE FOLDING BOOKCASE

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3 Claims. (Cl. 312—34)

This invention relates to improvements in portable folding book cases.

Folding book cases have been designed heretofore, which comprise two sections hinged together so as to enable the forward face of one section to be moved into contact with the forward face of the other section, the two sections thereby constituting a portable case or enclosure for the books. Latches have been provided for the sections to hold the same in such closed or folded position. In such constructions of which I am aware, no provision has been made for relieving the hinges from the stresses which are imposed in a direction tending to tear the hinges from the respective sections during the handling of the book cases with the books therein.

The principal object of the present invention is to provide a book case comprising two foldable sections, the forward edges of opposite walls of each of which are provided with complementary projections and recesses which inter-engage when the sections are in folded position to prevent relative sliding movement of the sections and the imposition of correspondingly directed stresses against the hinges and against the latches if such are employed.

A further object of the invention is to provide a folding book case, the forward edges of the side walls of which are so shaped as to present a pleasing unitary design when the sections are in unfolded position, but which inter-engage when the sections are in folded position to resist relative sliding movement of the sections during handling, to thereby prevent the marring of the finish of such contacting edges and the imposition of excessive stresses on the hinges or latches in a direction tending to disrupt the fastenings thereof.

In the accompanying drawing certain embodiments of my improvements have been selected for the purpose of illustrating the principle of the invention.

Figure 1 is a perspective view of a book case embodying the present invention.

Figure 2 is a perspective view of the book case in folded position.

Figure 3 is a side elevation of one of the detachable feet.

Figure 4 is an end elevation of a book case having modified end walls.

Figure 5 is a perspective view of another modified form of the book case.

In Figure 1 the case is shown as comprising an upper section 10 and a lower section 11. The upper section 10 comprises side walls 12, rear wall or back 13 and top and bottom walls 14 and 15 respectively.

The lower section 11 comprises side walls 16,

rear wall 17 and top and bottom walls 18 and 19 respectively.

The bottom wall 14 of upper section 10 and the upper wall 18 of the lower section 11 are secured together by hinges 20, three being shown. The hinges have their leaves secured by screws 21 extending vertically into the respective walls 14 and 18 when the sections are in the open position shown in Figure 1.

When the sections are in the folded position shown in Figure 2, the stresses imposed on the hinges in a direction tending to separate the sections at the hinged edges, act on the screws 21 at right angles thereto and not longitudinally thereof. By arranging the hinges in the manner illustrated, they are quite inconspicuous when the sections are in open position. The walls 15 and 19 are shown as being provided with openings 22 and 23 which, when the sections are in folded or closed position, provide a hand grip by means of which the case, with the books enclosed therein, can conveniently be carried.

As illustrated in Figure 1 the side walls 12 of the section 10 are provided with recesses 24 in the forward faces while the walls 16 of the lower sections are provided with projections 25. The recesses 24 and projections 25 are complementary, whereby the latter will seat within the former when the sections are folded together. This inter-engagement of the edges or faces of the walls, prevents relative sliding movement of the sections during transportation thereof which not only reduces likelihood of marring the finish of the contacting surfaces, but prevents imposition of stresses on the hinges in a direction parallel with the screws 21. The complementary formation of the contacting side walls thus precludes the imposition of stresses on the hinges in a direction tending to pull the screws from the walls 14 and 18 and retains the sections against relative sliding movement due to difference in weight of one section with respect to the other or due to the manner in which the sections are grasped by the person carrying the same. It will be noted that the arrangement of the recesses 24 and projections 25, in addition to the utilitarian advantages mentioned above, give the book case, when open, a pleasing unitary design.

It will be readily observed that when the user grips the hand grip means comprising openings 22 and 23 the hand of the user will hold the pair of complementary forward edges remote from the hinges in contiguous relationship with each other and in such a manner that there will be little, if any, possibility of movement between the recesses 24 and tongues 25 in a direction parallel to the main or longitudinal axis of the case. The recesses and projections 24 and 25 will thus not only be maintained in cooperative

relationship in a direction transversely of the box but also longitudinally.

The bottom wall 19 of the lower section 11 is provided with recesses 26 into which are inserted the dowel-like members 27 of the detachable feet 28, which when the case is to be closed, are detached and placed in one of the sections with the books, not shown.

In Figure 4, the book case is constructed similarly to the form shown in Figures 1 to 3 inclusive, except that the mating or inter-engaging recesses and projections of the form shown in Figure 4 are rectangular in shape. Thus the end walls 12 of the upper section 10 are provided with the rectangular recesses 24a while the walls 16 of the lower section 11 have complementary projections 25a which seat within the recesses 24a when the sections are in folded position. This interengagement of the projections with the recesses restrains relative sliding movement of the sections during transportation and prevents the application of excessive stresses on the hinges 20a as described above. Detachable feet 24a are also provided.

In the form of the invention illustrated in Figure 5 the book case comprises upper and lower sections 10 and 11, the forward edges of the side walls 12 and 16 of which are also provided with complementary projections and recesses for interengagement when the sections are in folded position. Thus the upper section may be provided with dowels 29, which seat in the complementary recesses 30 provided in the lower section 11. The dowels 29 may be fixed in the upper section, if desired, or may be removable and inserted in one section or the other when the case is to be folded. This section also is provided, as shown, with detachable feet 24b.

The end walls of the sections of Figure 5 are trapezoidal, with the base of each section wider, from front to rear, than the upper ends of the respective sections. It will be noted that when the sections are folded, the hand-holes 22b will be disposed off-center and nearer the rear wall 13b of the top section 10. This arrangement renders the carrying of the case more convenient.

Due to the fact that the lower section 11 is wider than the upper section and is wider than is necessary to accommodate books of conventional size, a partition 31 may be provided, parallel with the rear wall 17b, to provide a compartment 32 for writing material, magazines, or the like. One of the end walls 16b is provided with a door 33 which provides access to the compartment. The provision of the partition 31, as shown, renders the book receiving compartment substantially of the same depth as that of the upper section, and thus facilitates the arrangement of the books in the case generally a uniform distance from the forward face of each section.

If desired suitable latching or locking means may be provided on the top wall of the upper section and the bottom wall of the lower section for securing the sections together in folded relation. Latch members 34 are shown in Figure 5 for the purpose of illustration. The complementary inter-engaging formation of the sections as described above will prevent the application of stresses to the latching or locking means thereof in the same manner as described with respect to the hinges.

If desired, the sections can be locked in closed or folded relation by means of a pad-lock and

chain, the latter of which is passed through the hand holes.

While I have shown and described certain embodiments of my improvements for the purpose of illustration, I do not wish to be restricted specifically thereto except as so limited by the appended claims.

I claim:

1. A folding book case comprising two sections, each defining a book receptacle, said sections being hinged together so that when the book case is opened one section may rest upon the other and when closed the forward faces of the two sections are brought into approximate coincidence, complementary forward side edges of said sections being cut so as to form interengaging tongue and recess members adapted to be brought into interlocking engagement when the book case is in closed position, whereby the interengaging elements are adapted to cooperate with said hinges to resist relative movement of said sections and hand grip means disposed adjacent the pair of complementary forward edges remote from said hinges adapted to serve as a handle for the case and simultaneously maintain the interengaging tongue and recess members in cooperative relationship.

2. A folding book case comprising two sections, each defining a book receptacle, said sections being hinged together so that when the book case is opened one section may rest upon the other and when closed the forward faces of the two sections are brought into approximate coincidence, complementary forward side edges of said sections being cut so as to form interengaging tongue and recess members adapted to be brought into interlocking engagement when the book case is in closed position, whereby the interengaging elements are adapted to cooperate with said hinges to resist relative movement of said sections and hand grip means disposed adjacent the pair of complementary forward edges remote from said hinges adapted to serve as a handle for the case and simultaneously maintain the interengaging tongue and recess members in cooperative relationship, said handle members comprising openings formed in the sides of the case adjacent said complementary forward edges.

3. A folding book case comprising two sections, each defining a book receptacle, said sections being hinged together so that when the book case is opened one section may rest upon the other and when closed the forward faces of the two sections are brought into approximate coincidence, complementary forward side edges of said sections being cut so as to form interengaging tongue and recess members adapted to be brought into interlocking engagement when the book case is in closed position, whereby the interengaging elements are adapted to cooperate with said hinges to resist relative movement of said sections and hand grip means disposed adjacent the pair of complementary forward edges remote from said hinges adapted to serve as a handle for the case and simultaneously maintain the interengaging tongue and recess members in cooperative relationship, said handle members further serving when gripped to maintain the interengaging tongue and recess members against movement in a direction parallel to the longest axis of said case.

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