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SLOTTED BOOKSHELF AND BOOK SUPPORT

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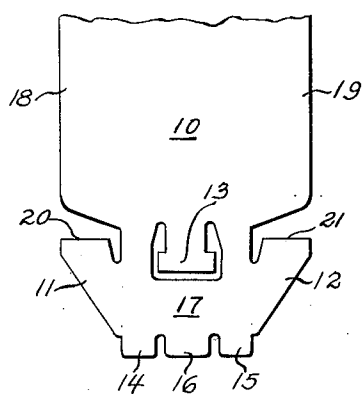


FIG. 6

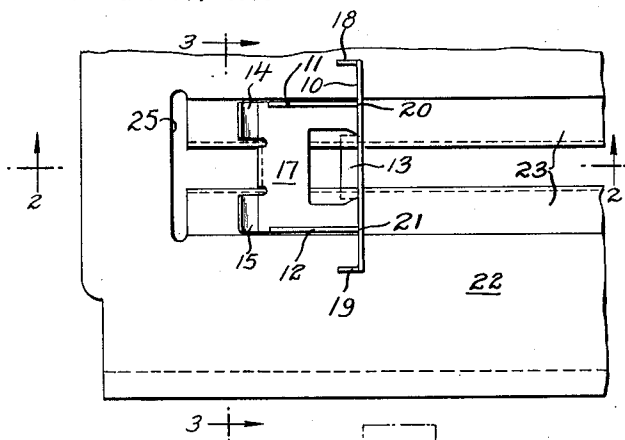


FIG. 1

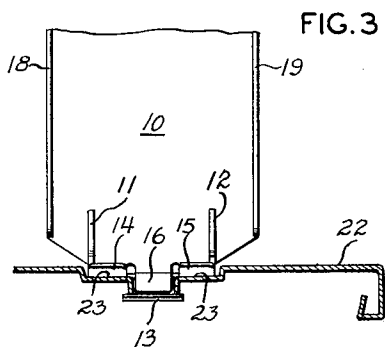


FIG. 3

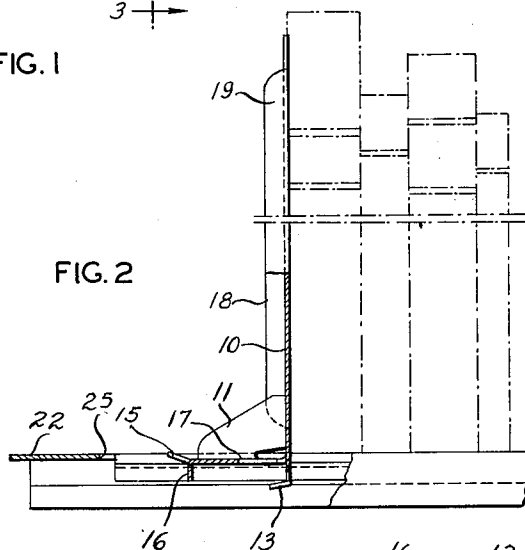


FIG. 2

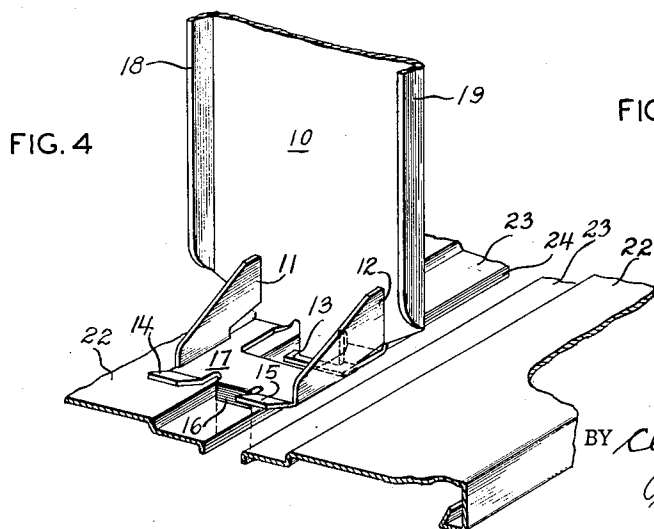


FIG. 4

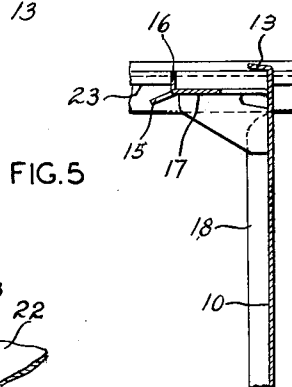


FIG. 5

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SLOTTED BOOKSHELF AND BOOK SUPPORT

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This invention relates to new and useful improvements in bookshelves and book supports.

The object of the invention is to provide a bookshelf and a book support so related that the book support is slidably connected to the shelf, whether the support is resting on top of the shelf or hanging therefrom.

Another object is to provide a construction of shelf and book support such that in whatever position the support may be disposed the construction will permit the support to maintain a substantially vertical position resisting the lateral pressure of books thereon.

In brief and general terms the invention includes a shelf having a longitudinally extending slot provided at its ends with transversely extending portions. The book support is in the form of a stamped metal plate, having a dependent portion extending through the slot with an enlarged head thereon lying closely adjacent the underside of the shelf. The support is provided with bracing flanges and supporting legs disposed at the bottom of the support and at right angles to the main body of the support. The leg portion at its outer end is provided with a dependent lip disposed in the slot of the shelf to prevent lateral swinging of the support as it is moved along the shelf.

The support is cooperatively associated with the shelf by introducing the downwardly extending portion of the support into the transverse slot at either end of the longitudinal slot in the shelf, and then sliding the support along the shelf to the desired position.

The construction of the shelf is of any well known form except that the slots therein are formed by a simple stamping operation. The book support is stamped out in blank form after which the portions are bent to their desired relative positions. This affords a simple, efficient, and economical construction.

The present preferred form of the invention is illustrated in the drawings of which,

FIG. 1 is a partial plan of the shelf with the book support thereon;

FIG. 2 is a longitudinal vertical section taken on the line 2-2 of FIG. 1;

FIG. 3 is a transverse vertical section taken on the line 3-3 of FIG. 1;

FIG. 4 is a perspective view with the book support raised above the shelf for the sake of clarity;

FIG. 5 is a partial longitudinal section showing the book support connected to the shelf but dependent therefrom; and,

FIG. 6 is a partial plan view of the blank from which the book support is formed.

Referring now particularly to the form shown, there is a blank of sheet metal formed to provide a book-engaging plate portion 10, lateral plate-bracing flanges or supporting members 11 and 12, a T-shaped locking tongue 13, spaced lips 14 and 15, a slot-engaging finger 16, a foot portion 17, and stiffening flanges 18 and 19. When the blank is formed to its operative condition (see FIG. 4) the plate 10 is disposed substantially vertical, the flanges 11 and 12 are bent up with their forward edges 20 and 21 bearing against the rear surface of the plate 10. The foot portion is bent rearwardly at right angles to the plate 10 and adapted to rest upon the adjacent surface of the shelf 22.

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The shelf 22 is formed with a longitudinally extending offset section 23 providing a central recess portion below the book supporting surface thereof. The central portion of offset section 23 is formed with a longitudinal slot throughout intermediate portions and terminating at opposite ends in transverse slots 25. The offset section 23 of shelf 22 has depending flanges 24 on the inner edges along the longitudinal slot.

The lips 14 and 15 are disposed rearwardly from the edge of the foot 17 and are bent up slightly as shown. The T-shaped tongue 13 extends downwardly from the lower edge of plate 10 and the T-head thereof is bent rearwardly at an angle to the main body of the tongue and in inclined relation to foot 17. This tongue with the T-head is adapted to be slipped into the transverse slots 25 to a position beneath the under surface of the shelf after which the support may be moved along the shelf as desired. This movement of the support can be facilitated by grasping the lips 14 and 15 with the hand.

When the downwardly extending projection 13 is inserted in one of the transverse slots 25 the support can be slid along the shelf to the position where the face of the plate 10 bears against an adjacent book as shown in FIG. 2. It will be seen from FIG. 3 that the width of the foot 17 permits it to slide on offset sections 23 and that finger 16 is adapted to project downwardly into the slot in offset section 23. This will prevent any lateral swinging of the plate 10. The foot 17 rests upon the adjacent surface of the offset section 23 to stabilize the device and hold the plate 10 against the pressure of books bearing against the plate. This resistance to pressure is also facilitated by the enlarged head portion of tongue 13 which head lies closely adjacent and beneath the lower edges of depending flanges 24. The side flanges 11 and 12 with their forward ends bearing against the back of the plate 10 hold the plate against sliding movement on the shelf under the pressure of the books and distribute stresses from said plate to foot 17.

As shown in FIGS. 5 the support is now engaged with the shelf, but is dependent therefrom to engage books on the shelf below. The formations on the shelf and the support are so made that they provide means for guiding and locking the support in any desired position. In this inverted position it will be noted that the offset section 23 in the shelf supports the plate 10 with the end of the tongue 13 and the turned down finger 16 below the top surface of the shelf whereby books disposed on the top of the shelf will not contact any portion of the dependent support.

In operation, the book support is mounted for sliding movement along offset section 23. When plate portion 10 supports books on the shelf, as indicated in FIG. 2, it may be moved into a new position by tilting plate 10 so that the upper end is moved slightly to the right, as indicated in FIG. 2, for raising the free end of foot portion 17 slightly outward of contact with the shelf. When the book support is moved into this slightly tilted position, it can be manually moved either into the position shown in FIG. 2 or moved back and forth along the shelf. Whenever the book support is released from this manual operation, it will again assume the position illustrated, FIG. 2, and it will lock in position on the shelf so that the pressure of books against the plate will not cause it to slide.

What I claim is:

1. A book support formed from an integral sheet of stamped material and comprising a plate portion, an integral T-shaped member extending from the bottom of the plate, an integral foot portion connected at right angles to the bottom of the plate, an integral downwardly extending finger formed on the outer edge of

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the foot, spaced upwardly tilted integral lips on the outer edge of the foot on opposite sides of the downwardly extending finger, and upwardly turned intergal flanges at the sides of the foot with vertical edges abutting the back surface of the plate.

2. A book support comprising a book-engaging plate, a foot extending laterally from one side of the plate at one end thereof, at least one supporting member extending between said foot and one side of said plate for cooperation in distributing stresses from said plate to said foot, a finger on the free end of said foot extending laterally therefrom in a direction opposite to said plate, and a T-shaped member extending from said one end of said plate in substantially parallel relation to said finger.

3. The combination of a bookshelf and book support, comprising a bookshelf having a longitudinally extending offset section formed in an intermediate portion thereof between the side edges to provide a recess portion below the book supporting surface, said shelf being formed with a longitudinal guide slot in said offset section and a transverse slot at one end thereof, and a book support having a book-engaging plate, a T-shaped member extending from an intermediate portion at one extremity of said plate slidably engaging through the longitudinal and transverse slots in said shelf with the T-head thereon engaged over the opposite side of said shelf for retaining said book support slidably engaged with said shelf, said member being positionable to project outwardly from either the top or bottom side of said bookshelf, a foot extending laterally from said one extremity of said plate slidably engaging a surface of said offset section for supporting said plate in laterally projecting relation from said shelf on either side thereof, and a finger on the free end of said foot extending laterally therefrom and slidably engaging in the longitudinal slot in said shelf for holding said plate in transversely aligned relation on said shelf in cooperation with said T-shaped head, said book support being engageable and disengageable from said shelf by inserting and removing said T-shaped head through said transverse slot in said shelf, and said recess portion in said shelf accommodating the end of said T-shaped head and the end of said finger when said plate is engaged with said shelf on the side opposite that formed with said recess portion.

4. The combination of a bookshelf and a book support, comprising a bookshelf having a longitudinally extending offset section formed in an intermediate portion thereof between the side edges to provide a recess portion below the book supporting surface of said shelf, said shelf having said offset section formed with a longitudinal guide slot extending between opposite end portions thereof, and a book support having a book engaging plate, a T-shaped member extending from an intermediate portion at one extremity of the plate through the longitudinal slot in the offset section of said shelf with the T-head thereon engaged on the opposite side of said offset section for slidably retaining the book support on said shelf in transversely extending relation, a foot extending laterally from said one extremity of said plate and slidably engaging the surface of said offset section for supporting said

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plate in laterally projecting relation from either the top or bottom side of said shelf, a finger on a free end of said foot extending laterally therefrom and slidably engaging in the longitudinal slot in said shelf for holding said plate in transversely aligned relation on said shelf in cooperation with said T-shaped head, and supporting means extending between said foot and said plate for cooperation to retain said foot and plate in a substantially fixed relation to each other for distributing stresses from said plate to said foot and the adjacent portion of said shelf, said book support being adapted for slidable engagement with said shelf on either the top or bottom side thereof, said recess section in said shelf accommodating said T-shaped head and finger when said plate member extends from the opposite side of said shelf.

5. The combination of a bookshelf and book support as claimed in claim 4, having said supporting means formed by a pair of spaced substantially parallel sections extending between the side edges of said foot and the lower end portion of said plate, and a lip extending in inclined relation outwardly from the free end of said foot.

6. A library shelf structure having means for attachment to a framework, comprising a shelf of sheet metal having longitudinal edge flanges forming box-like reinforcements along the front and rear edges thereof, said shelf having a continuous central longitudinal recess extending substantially from end to end thereof, said recess formed by flanges depending from the top surface of the shelf and terminating in additional flanges parallel to the plane of the shelf and being spaced apart to form a longitudinal slot, and a transverse slot formed near the ends of each recess and in communication with said longitudinal slot.

7. In combination, a shelf having means for attachment to a framework, and a compressor for said shelf, said shelf having substantial thickness and having a central longitudinal slot extending over substantially its entire length, a pair of mutually opposed track elements disposed longitudinally of said slot and wholly intermediate the thickness of said shelf, said compressor having pairs of track element engaging means which are spaced apart and adapted to loosely engage said track elements, said track elements terminating short of the length of said slot whereby said compressor may occupy alternatively a position extending upwardly from said shelf or depending downwardly from said shelf with said spaced track engaging elements in operative engagement with said track elements and without interfering with books resting on said shelf or extending up to said shelf from beneath.

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