

[54] **BOOK PLATFORM STRUCTURE**

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[51] Int. Cl. .... **A47b 65/00**

[58] Field of Search ..... 211/43; 312/233

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*Primary Examiner*—Nile C. Byers, Jr.

[57] **ABSTRACT**

The invention described herein is to be found within an improved book platform structure which comprises a combination of useful purposes and particularly, because of its unique simplistic structure, results in a potential product that is easily manufacturable over devices which may partly possess some vaguely similar elements; thus it is therefore financially more reasonable to produce on a mass production basis and is capable of being considered practical for not only the reading room facilities of business or industrial establishments, or of places for the general public such as libraries, schools, et cetera, but also for domestic usage by the general consumer which, heretofore, has not been accomplished for a structure which is capable of performing the tasks described herein.

**9 Claims, 15 Drawing Figures**

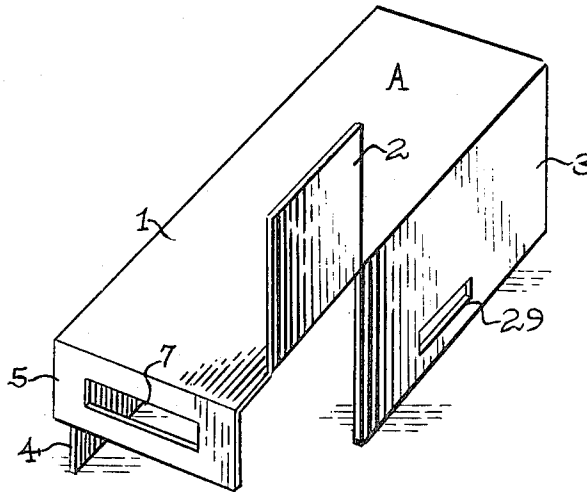


Fig. 1.

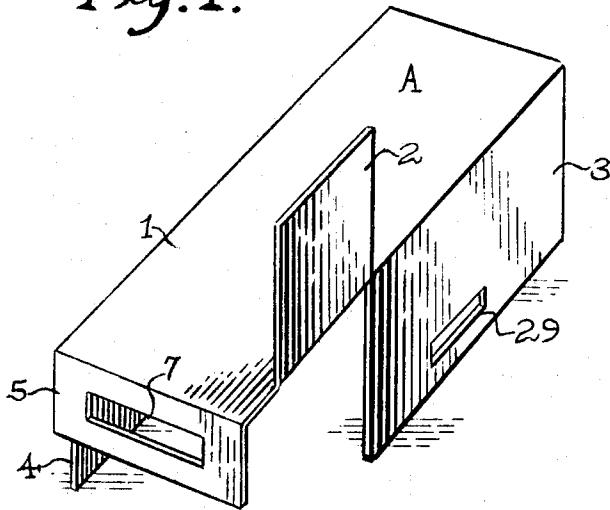


Fig. 2.

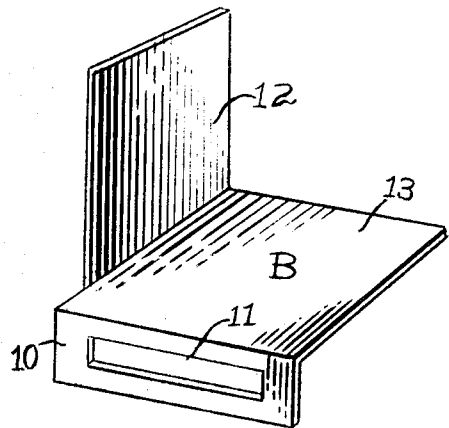
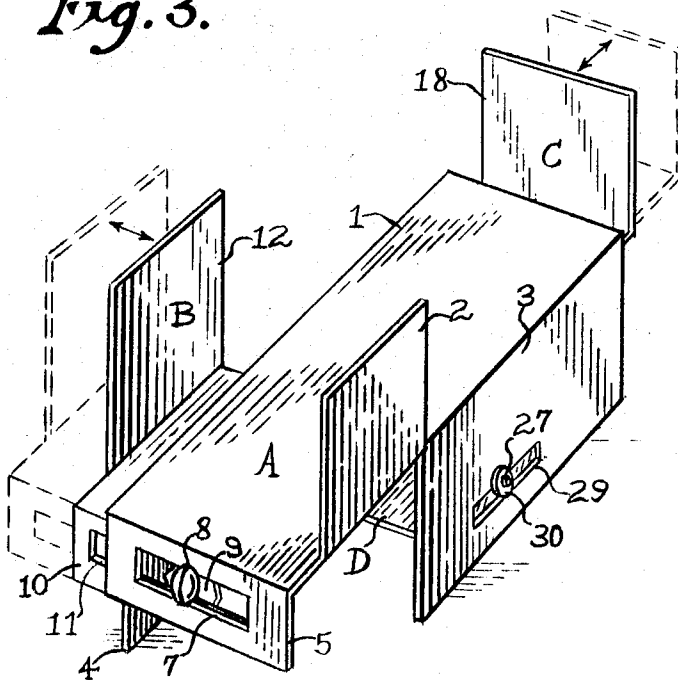


Fig. 3.



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Fig. 4.

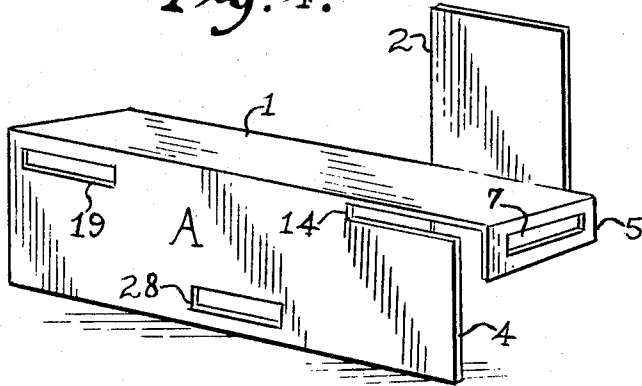


Fig. 7.

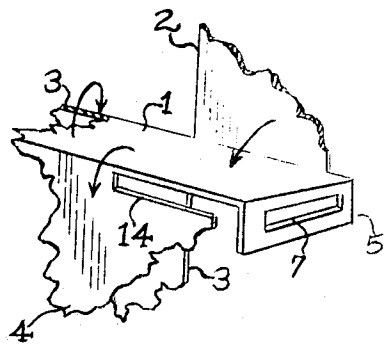


Fig. 5.

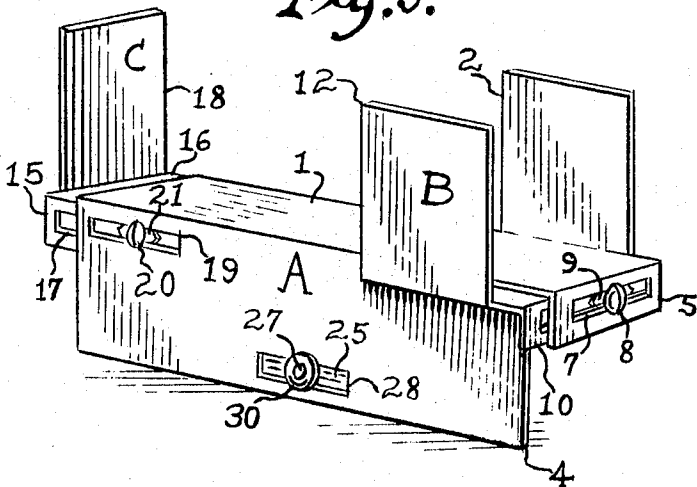


Fig. 8.

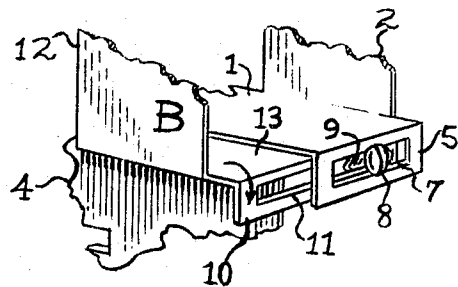
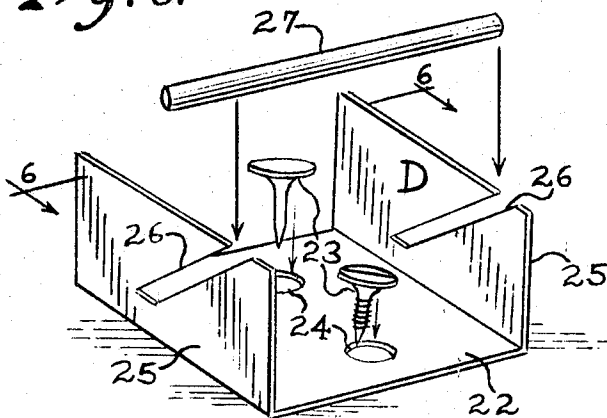
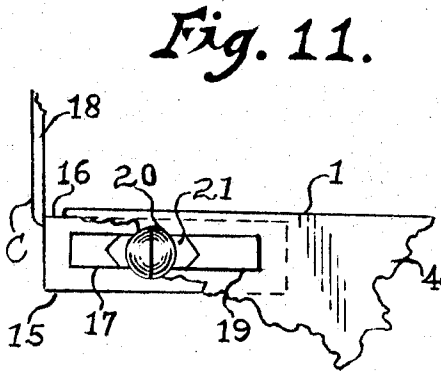
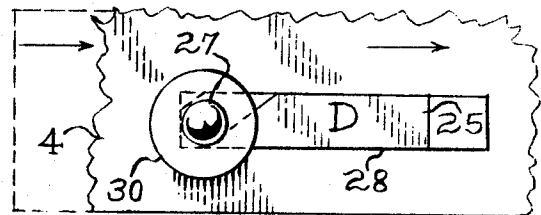
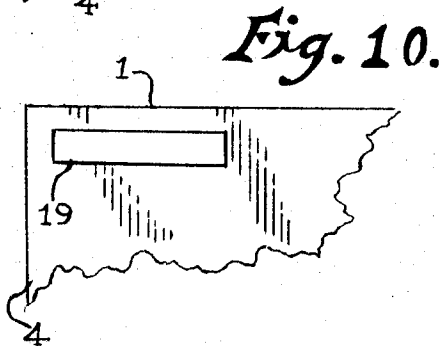
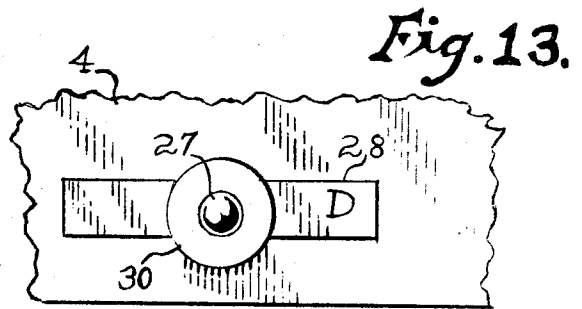
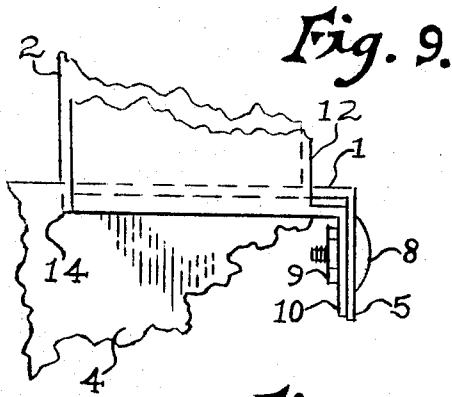


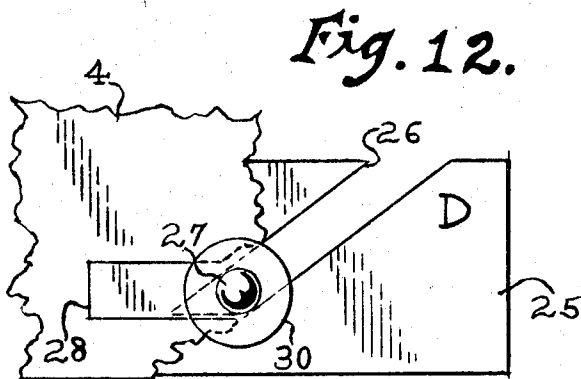
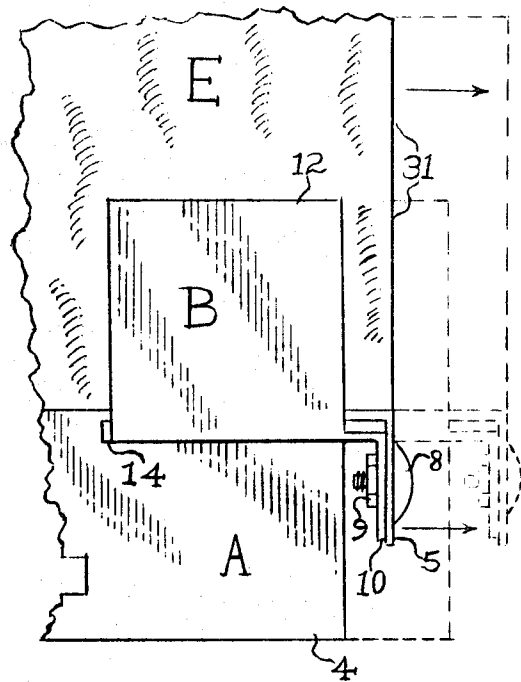
Fig. 6.



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*Fig. 15.*



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### BOOK PLATFORM STRUCTURE

One of the manifold purposes of this structure is to provide a means for a person to easily eject a desired book from a library shelf or a similar structure without having to strenuously finger or scratch thereat in an effort to obtain a grasp, as frequently happens when especially large books are crammed together. It is especially more difficult when such an arrangement of closely adjoined books is found upon a high shelf, and of which presents an equally frustrating problem when the person attempting to withdraw the book lacks the proper manual strength to easily do so, as one would expect from a relatively young juvenile or possibly a member of the female gender. Ostensibly, this difficulty is eliminated when a book is placed within this structure, and further results in the protection of the book's binding from unnecessary wear and tear.

Another of its objectives is to keep a book in a vertical upright position at all times while it is upon the platform, regardless to whether or not an adjacent book is removed. This can be especially beneficial to rather large and vertically tall reference books such as encyclopedias; for when such a book is removed from the shelf, more than likely an adjacent volume will fall towards the space left by the removed book. For this reason, there is within the apparatus two oppositely adjacent side supports, one of which enables the capacity of the structure to horizontally extend to the thickness of a large or smaller book and to keep same, as stated, in an upright position. Conjunctively, this further prevents books in neighboring identical units from being cramed against each other.

The most advantageous novelty lies within the fact that after the parts for this structure are manufactured it can be completely and easily assembled by its user, which again has not been achieved by devices that may have offered a few features vaguely similar; for it should be noted that none of its structure either in whole or in part, including its adjustable components, is in need of soldering or welding or other forms of permanently unifying processes or elements. It should be further noted that the basic parts can be made of metal or of a durable plastic and need only to be molded or shaped while in the process of manufacture.

This structure is also capable of maintaining the desired forward protrusion of the book in relation to adjacent books as later detailed; for still additional advantages and features shall be made apparent from a study of the following description in conjunction with the accompanying drawing in which:

FIG. 1 is a perspective view of the improved book platform's central structure without its adjustable components, showing the top of same, the front, a side support, and what will be referred to as the "shorter skate", and a small forward portion of the "longer skate" as partially seen through, and also below, the left portion of the slotted pull flange.

FIG. 2 is an enlarged perspective view of the adjustable side support component, showing its right angled structure, and a slotted flange protruding from its lower angled portion. It should be noted here that the structure of this side component is exactly identical to that of a said adjustable back wall component and thus can serve in both capacities.

FIG. 3 is the same perspective view as in the first Figure, showing the book platform, in this instance, with its adjustable components in place, specifically the adjustable side component, the adjustable back wall component, a small portion of the base and skate guide component D, and the protruding edge of an internally transversing rod as it is seen protruding through a skate slot and washer.

FIG. 4 is an opposite perspective view of the central structure A, again without its adjustable components, showing in detail the "longer skate," again the slotted pull flange, and again the side support 2.

FIG. 5 is the same perspective view as in FIG. 4 but with the structure's adjustable components again in place.

FIGS. 6 through 14 will be viewed as the elements which I deem to be the specific physical improvements, as shall be detailed in the following continuance:

FIG. 6 is an enlarged perspective view of the anti-tilt base and skate guide component, showing its acutely slotted protrusions and apertured base mass in relation to the transversing rod and nail provisions, which are seen in an exploded type view.

FIG. 7 is a fragmented perspective view of the forward portion of the central structure, showing what will be referred to as its "triad structure" with the arrows indicating how the side support and opposite skate members are structurally positioned from the book platform, in conjunction with the side component slot and slotted pull flange.

FIG. 8 is another fragmented perspective of the upper forward portion of the central structure with a fragmented view of the adjustable side component B in its designated slot, illustrating how the said component's lower angled portion fits under the front portion of the book platform; and further showing the adjustable side component's slotted flange as it is linked, by a screw, to the slotted pull flange.

FIG. 9 shows a fragmented side view of the upper forward portion of the central structure.

FIG. 10 is a fragmented side view of the slotted upper rear portion of the longer skate.

FIG. 11 is another fragmented side view of the upper rear portion, this time with the adjustable back wall component's lower portion adjacently linked to the slotted portion by a screw.

FIG. 12 is a view of the protruding edge of the transversing rod as it is seen with a fragmented side view of a rod slot provision; and also showing the rod resting in the acute angled slot provision of the base and skate guide component along line 6-6 of FIG. 6.

FIG. 13 is a similar view and shows the rod in its normal state protruding through its washer and the rod slot provision of a fragmented skate member.

FIG. 14, in sequence with FIG. 13, illustrates how the protruding edge of the rod will arrest the forward movement of the fragmented skate member when the terminated rear edge of the rod slot is forced against same by the forward movement of the central structure.

FIG. 15 is a fragmented side view of the forward portion of the central structure with the fragmented portion of a book sitting atop the book platform, further illustrating the forward mobility of same.

As seen in FIGS. 1, 3 and 4 but more specifically in FIG. 7, the first notable improvement is found in the triad structure of the central structure A which results in a vertical side support 2 that is structurally positioned at a right angle from the horizontally oblong book platform 1 and to a comparatively straight angle from the right front third of an anti-friction skate 3; the said skate 3, being structurally positioned downward at a right angle from the said book platform 1, is adjacent to an opposite anti-friction skate 4 which is also structurally positioned downward from the said book platform 1. The said triad elements 2, 3, and 4, and book platform 1 can thusly be forged or structured from the same sheet of matter or mold and are in no need of soldering, welding, or other forms of permanently unifying processes or elements as opposed to vaguely similar structures. The stated platform 1 is intended to support a single book.

As observable in the first five odd numbered Figures and also FIGS. 4 and 8, there is, protruding downwardly from the terminated forward edge of the platform, a horizontal pull flange 5 which provides a means for a person to manually pull the central structure forward to enable the supported book to be easily grasped, as animated in FIG. 15. The pull flange 5 also possesses a horizontal slot 7 that provides a means for a connecting screw 8, as seen in FIGS. 3, 5, and 8, which acts to link the slotted pull flange 5 to an adjacent slotted flange 10 of which belongs to the forward facing lower angled protrusion of an adjustable right angled side support component B specifically shown in FIG. 2. As illustrated in FIG. 3, this enables the horizontal movement of the side component B to the appropriate width of either a larger or smaller book. The side

component is structured to easily fit through the horizontal side component slot 14 which is found along the upper front portion of the said longer skate 4, as clearly seen in FIGS. 4 and 7 and specifically with the side component attached in FIGS. 5 and 8. The structured top of the said side component slot 14 forwardly tapers to the angularly bent edge of the said platform's pull flange 5, with the lower structured portion of the said slot 14 forwardly tapering to the front terminated edge of the said longer skate 4 thus allowing a vertical opening for the entrance of the said side component's flange 10.

To the rear of the stated platform 1 is an adjustable back wall component C which is structurally identical to the adjustable side support component, being right angled and possessing a flange 15 on its lower angled portion 16. This lower angled portion of the back wall component partially fits under the rear portion of the book platform 1, as specified in FIG. 11. The stated flange 15 possesses a horizontal slot 17 which is designated to the upper rear portion of the longer skate 4 and is thus adjacent to the slot 19, therefore providing for the accommodation of an inner-connecting screw 20 which links the slotted flange 15 of the back wall component to the stated upper rear portion of the longer skate, as again seen in FIG. 11. The screw 20 has a nut 21 on its inner protrusion which frictionally encloses the said wall flange 15 to the said upper rear portion of the longer skate thusly allowing the said rear portion of the platform 1 to extend. This, as the results are seen in FIG. 15, permits the visible forward protrusion 31 of the book E to protrude in direct vertical lineage to the pull flange 5; the overall purpose being found in the fact that when adjacent books in identical units are enabled to all protrude in vertical lineage to their pull flanges they will inevitably protrude evenly in relation to each other, regardless to whether or not they are of the same size.

Underneath the central portion of the book platform is an antitilt base and skate guide component D, as seen in FIG. 6, which has a horizontally flat base mass 22 that is secured to a shelf or cabinet structure by nail or wood screw provisions 23 which are inserted through adjacent apertures 24 thereon. The said base component has two acutely slotted vertical protrusions 25—25 which are internally relegated to adjacent skate members 3 and 4. The acute angled slots 26—26 are open at their upper ends to allow a transversing rod 27 to be placed therein in a horizontal position; for in the process of assembly the transversing rod is first inserted through the lower central portion of the central structure A through oppositely adjacent rod slots 28 and 29 which are found on the adjacent skate members 3 and 4 through which the rod protrudes. The rod can thus be vertically lowered into the acute angled slots 26—26 in a horizontal position while protruding and lying through the rod slot provisions 28 and 29. As seen in sequence in FIGS. 13 and 14, the rod 27 in conjunction with the rod slot 28 serves to arrest the forward movement of the skate member 4 when the terminated edge of the rod slot 28 is forced against the said rod 27. This serves to halt the central structure A at a specific designation. The acute angled slots 26—26 in conjunction with the rod 27 also prevent the central structure A from tilting when a disproportionate amount of weight is localized to the side of the platform 1 possibly by a heavily thick book. When such a book is placed on the platform 1 the central structure is prevented from tilting when the lower edge of a skate member's rod slot is forced against the protruding edge of the said rod. The rod, in turn, is inevitably jamed against the slanting edge of an acute angled slot, thereby, preventing the central structure A from tilting, as one may understand by studying FIG. 12. The said rod 27 possesses washers 30 adjacent to its externally protruding edges, the purpose of which is to prevent the rod from accidentally slipping out of the said rod slots. The protrusions 25—25 also serve as an internal guide for adjacent skate members and thus prevents the central structure and its components from interfering in the path of adjacent units.

It is to be understood that the overall results are to be construed as the basic, though not necessarily the entire, improve-

ment; those results being found in a device as described which comprises a stated combination of elements which can be economically produced on a mass production basis for the general consumer and is easily assembled by its user, thereby, diminishing the necessity for the costly assemblage of its said parts by the manufacturer.

Though I have illustrated the structure in a specific manner, it is not to be understood that any of the parts thereof should necessarily be regimented to the particular scale of the drawings and, therefore, certain modifications in regard to this aspect may be found desirable possibly with other changes such as the reversal of certain elements from one side of the structure to the other et cetera, said changes naturally being within the scope of the claims as described in the following:

1. A book platform structure for ejecting a book from a shelf or similar structure and vertically supporting said book thereon and facilitating a desired frontal protrusion of said book, said structure comprising, a mobil central structure that embodies a platform having depending laterally parallel skate members and a frontal means for pulling said platform forward, a plurality of side support means on said platform one of which is adjustable for facilitating the thickness of a book; an anti-tilt base and skate guide component means beneath said platform, said base component further having means operatively associated with said platform to arrest longitudinal movement of said central structure; and adjustable rear wall means on said platform for maintaining desired frontal protrudance of a book on said platform.

2. In a book platform structure as set forth in claim 1, wherein said means for pulling said platform forwards and said skate members and a side support means are structurally positioned angularly from said platform and have screw and rod slot provisions thereon for linking said adjustable side support component means and said anti-tilt base & skate guide component and said adjustable rear wall means to said central structure.

3. In a book platform structure as set forth in claim 2, wherein said adjustable side support component means has angular dimensions with one angled portion thereof engageable through a slot provision on a skate member and comprising a slotted flange thereon which is linked by a screw to the said means for pulling said platform forwards.

4. In a book platform structure as set forth in claim 2, wherein said anti-tilt base & skate guide component is stationed beneath said platform and comprises a flat rectangular mass with apertures thereon to stabilize its affixment to a shelf or shelf-serving structure by engaging nails or screws therethrough, said base component having laterally parallel flanges that are internally parallel to said skate members thus providing skate guide means, said flanges having acutely angled open-end slots thereon that wedges a rod transversely therein and enables said rod to be vertically lowered therein in a horizontal position while resting transversely through rod slot provisions on laterally adjacent skate members, said rod protruding through said rod slots and providing vertical stability and arrestment means for said central structure by acting as a jam when edges of said rod slot provisions are forced against said externally protruding ends of said rod; washer means adaptably engageable to said protruding ends of said rod to prevent lateral slippage thereof.

5. In an improved book platform structure as set forth in claim 2, wherein said adjustable rear wall means has angular dimensions with one angled portion thereof engageable beneath rear portion of platform and having a slotted flanged means thereon for attaching said rear wall means to a slotted rear portion of a skate member by way of screw linkage.

6. In a book platform structure as set forth in claim 2, wherein the angularity of said means for pulling said platform forwards provides a pull flange means.

7. A mobile book platform for removing and storing a book upon a shelf or similar structure, said platform having a plurality of upstanding side support means, one of which is adjustable relative thereto to facilitate the thickness of a book,

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anti-tilt base means operatively related to said platform to prevent tilting thereof, said platform also having a pulling means for pulling said platform forward on said base, said platform and base providing a means for halting forward movement of said platform, said base and platform further including a friction reducing means for reducing sliding friction between said platform and said base, second adjustable support means on said platform for maintaining desired frontal protrudance of a book.

8. An adjustable side support means for facilitating book thickness in a mobil book platform structure that includes means for easily ejecting a book from a shelf, said side support means being operatively connected to said platform structure, said platform structure having an adjacent side support means laterally opposite to said adjustable side support means, said platform structure further including a base means operatively related thereto for preventing said platform from tilting, a

means for halting longitudinal movement of said platform on said base, a means for reducing friction in platform movement on said base, and a means for maintaining frontal protrusion of said book from said platform.

9. A mobile book platform structure having frontal pull means for easily ejecting a book from a shelf when said structure is mounted thereon, said platform having side support means one of which is adjustably related thereto to facilitate the thickness of a book, said platform further including adjustable means for maintaining the desired frontal protrusion of a book, and depending skate means for accomodating platform movement; a base component associated with said skate means providing an anti-tilt means for said platform and guide means for said skate means, said base component further including an arrestment for halting longitudinal movement of said platform.

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