United States Patent [19]

Hainault

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[54] **BOOK HOLDER**

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[52] **U.S. Cl.** **248/460,** 211/42

[51] **Int. Cl.** **A47b 97/04**

[58] **Field of Search**.....248/454, 455, 460, 461, 462; 211/42, 43; 40/125 H, 152.1, 152.2, 158

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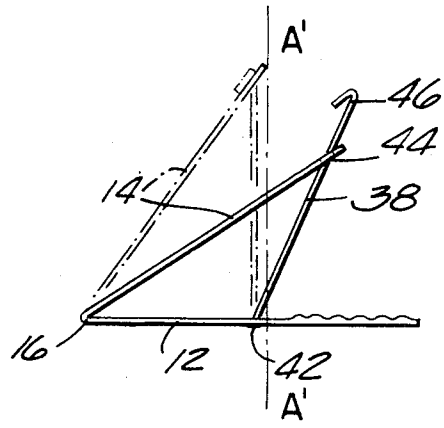
Primary Examiner—William H. Schultz

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[57] **ABSTRACT**

A book support includes a horizontal tension member and a compression member and has a hinged connection between the two about which they can pivot between a collapsed position wherein one overlies the other and an extended position wherein the later is generally upright and at an angle to the former. A second tension member is connected to both of the already mentioned members and is arranged to be extended in a taut condition between the two when they are pivoted to the extended position. The horizontal tension member has an end extending beyond the point of connection of the second tension member thereto, this end has a non-skid surface for engaging a book edge as the book is rested against the compression member.

15 Claims, 9 Drawing Figures



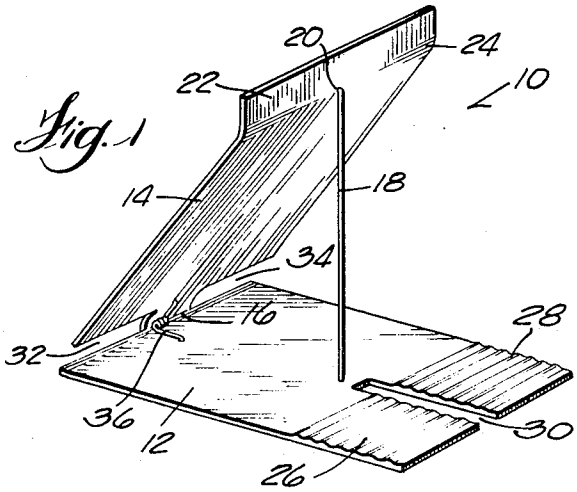


Fig. 1

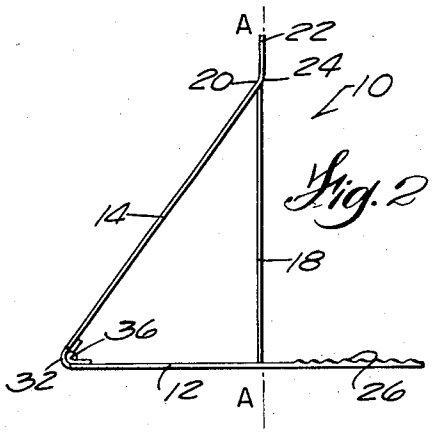


Fig. 2

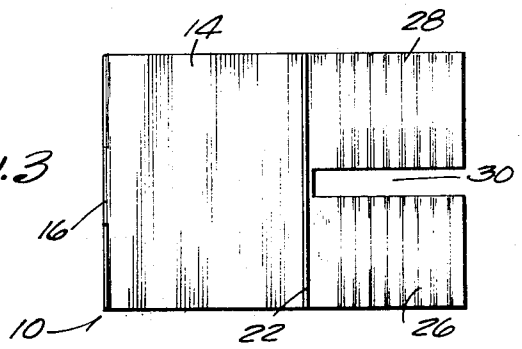


Fig. 3

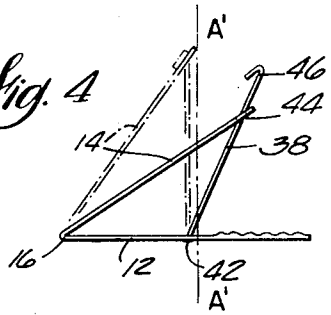


Fig. 4

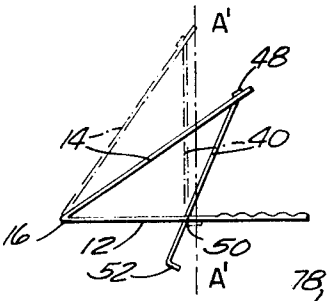


Fig. 5

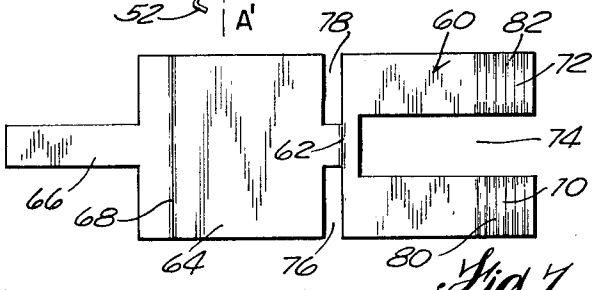


Fig. 7

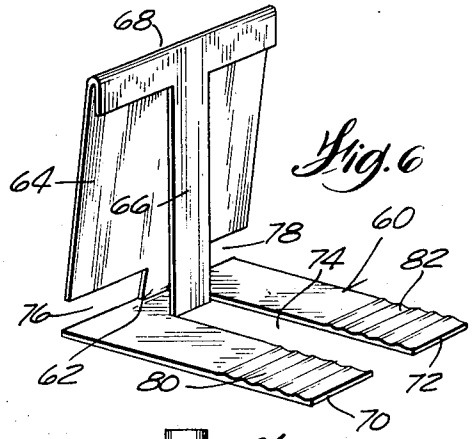


Fig. 6

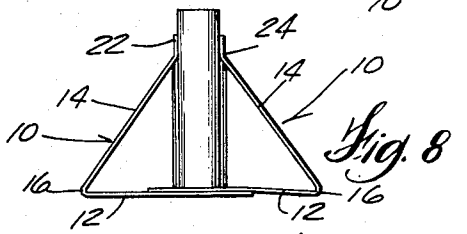


Fig. 8

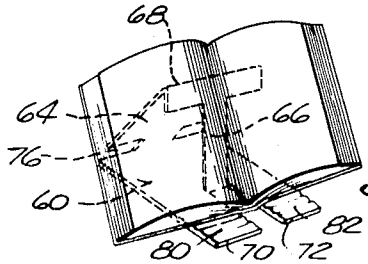


Fig. 9

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BOOK HOLDER

This invention relates to book supports such as book ends, book holders, and the like.

Among the general objects of this invention are to provide a book support which is relatively simple in construction, and economical to produce and yet is effective in function; and, moreover, is capable of functioning, with equal facility, as a book end or book support.

For the acheivement of these and other objects, this invention proposes an arrangement wherein first and second generally planar members are connected for relative movement to an extended position wherein one member is upright and at an angle to the other when the later is horizontal. A third member is connected between the two already mentioned so that when those two are in the extended position the third is generally upright and extends between the two thereby limiting further extending movement therebetween.

The member which is adapted to assume the horizontal position in the extended position can also include an end extending beyond the point of engagement by the third member. A book can then engage that end as it rests against the generally upright planar member. In this connection, the end extending beyond the third member can also be provided with an upper non-skid surface to facilitate supporting a book or books.

In accordance with more specific aspects of this invention, the book support elements are also constructed and arranged to permit overlapping a pair of supports, and, in addition, to permit the support to be fabricated as a one piece member.

Other objects and advantages will be pointed out in, or be apparent from, the description and claims, as will obvious modifications of embodiments shown in the drawings.

DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a book support embodying this invention;

FIG. **2** is a side elevation thereof;

FIG. **3** is a top plan view thereof;

FIG. **4** is a side view of an alternative construction;

FIG. **5** is a side view of another alternative construction;

FIG. **6** is a perspective of yet another alternative construction;

FIG. **7** is a developed plan view of the embodiment of FIG. **6**;

FIG. **8** illustrates two supports functioning as book ends; and

FIG. **9** illustrates one support functioning as a book holder.

DESCRIPTION OF PREFERRED EMBODIMENT

With particular reference to the drawings, book support **10** constructed in accordance with this invention includes a first member **12**, which may be referred to as a horizontal tension member, and a second member **14** which may be referred to as a generally upright compression member. Members **12** and **14** are connected at **16** by any suitable means capable of providing a hinge about which members **12** and **14** can pivot, or move angularly, with respect to each other. For example, members **12** and **14** can be made in one piece and **16** can be a fold line or a pin-type hinge can be provided between

two separate members. The type of hinge connection will be dictated at least in part by the material from which members **12** and **14** are made. In this regard, the members can be made of any thin sheet type material having some stiffness. For example, they can be made of cardboard, corrugated paper box board or made of metal, wood, or plastic, as desired. The same material would preferably be used for both members **12** and **14**.

With the hinge connection, member **14** can be pivoted between a first or collapsed position wherein it overlies and is generally parallel to member **12** and an extended position wherein it is generally upright and disposed at an angle to member **12**. The later position is illustrated in FIGS. **1** and **2**. A tension member **18** is connected to both members **12** and **14**. This tension member extends between the horizontal tension member and the generally upright compression member and serves to limit angular movement of member **14** away from member **12**. In the illustrated embodiment, tension member **18** extends to an area **20** adjacent the end of member **14**. Member **14** has an end **22** extending beyond that point of connection and having a hinge connection **24** with the remainder of member **14**. More specifically and as is evident from FIG. **2**, and FIGS. **4** and **5**, of the drawings, the point of connection of tension member **18** to member **12** is located to the left of a plane A—A, plane A—A being a plane perpendicular to member **12** and passing through end **22** of member **14**. As illustrated, this condition obtains when the members **12** and **14** are pivoted apart and tension member **18** is fully extended. In other words, the point of connection of the tension member to member **12** is located in the area between the hinge connected ends of members **12** and **14** and plane A—A thereby leaving the area to the right of plane A—A in FIG. **2** (and similarly to the right of plane A′—A′ in FIGS. **4** and **5** and like planes in the other embodiments illustrated and discussed) open and unobstructed so that the book support can function both as a book end as illustrated in FIG. **8** and as a book rest as illustrated in FIG. **9**. Again, the hinge connection can take any suitable form, such as a fold line, depending upon the material used.

Tension member **18** is illustrated as a flexible light weight cord, it can also be a chain, or made of cloth, paper, or sheet material similar to the material of members **12** and **14**. In this regard, an embodiment to be discussed hereinafter will show this tension member as being of the same material as the members **12** and **14**.

As illustrated in FIG. **1**, and FIGS. **2** and **3**, the generally horizontal tension member **12** has a bifurcated end consisting of two legs **26** and **28** divided by an opening **30**. Opening **30** is generally in alignment with tension member **18** and, for reasons which will appear from the following discussion, has a width which is greater than the tension member.

In operation, a book can be placed on the legs **26** and **28** of member **12** and rested against the upper end of compression member **14**. With the tension member **18** preventing further angular movement of member **14** away from member **12**, the book is supported against that upper edge. The book may be supported in an upright closed position wherein the book support functions in a nature of a book end as illustrated in FIG. **8** or can be supported in an open position such as illustrated

in FIG. 9 wherein the arrangement functions as a book holder.

It is also desirable that the upper surfaces of legs 26 and 28 be skid-resistant to better hold the books in place, whether functioning as a book end or a book holder. Any suitable non-skid material can be provided and as illustrated in FIGS. 1 and 2, the upper surface of legs 26 and 28 is provided with a generally undulating surface. The troughs of the corrugated surface extend at right angles to the legs of the bifurcated end of member 12 or generally parallel to the upper end of member 14. For example, where cardboard or paper box material is used in the book support, the undulating surface can be provided by the corrugated filler with one of the outer surfaces having been removed to expose that corrugated filler. With this arrangement, the edge of a book, either closed or opened as illustrated in FIGS. 8 and 9, can be engaged in the trough or troughs of the non-skid surface to assist in supporting the book.

In order to facilitate functioning as a book end, a pair of cut-out areas 32 and 34 are provided at the hinge connection 16. These areas are in alignment with legs 26 and 28 and are of a width equal to or greater than the legs. With this arrangement, the legs of one such book support can extend through the notches of the other book support if necessary. This is perhaps best illustrated in connection with the embodiment of FIGS. 6 and 7, but can also be realized with the other embodiments and for that reason the notches have been shown in all embodiments.

In operation the weight of the book whether the support is used as a book end or a book holder, is applied to legs 26 and 28 of the horizontal tension member 12. Thus the weight of the book tends to hold the book support in place whereas the combination of the tension member 18, the horizontal tension member, and the generally upright compression member tend to hold the book upright. This arrangement is relatively simple and is readily fabricated and yet is extremely effective.

If desired, a light torsion spring 36 can be positioned at hinge 16 and engaged between members 12 and 14 to provide a biasing force tending to separate members 12 and 14, i.e. urging them toward the extended position.

FIGS. 4 and 5 illustrate alternative constructions of the book support embodying this invention. Like elements in FIGS. 4 and 5 have been given the same numbers as in FIGS. 1–3 to better correlate the embodiments. In the embodiment of FIGS. 4 and 5 the flexible tension number 18 has been replaced by a rigid tension member, 38 in FIG. 4 and 40 in FIG. 5. With reference to FIG. 4, the rigid tension member has a fixed connection at point 42 on member 12 and passes through a ring 44 attached to the upper edge of member 14. It will be noted at this point that the pivotal end 22 of member 14 has been eliminated in both the embodiments of FIGS. 4 and 5. Rigid tension member 38 can be a wire member and with this arrangement it pivots about a hinge connection at 42 and can slide freely in ring 44 to permit member 14 to move angularly with respect to member 12. When member 14 is in its extended position, i.e. the ring being engaged at hook end 46 of wire 38, a book can be supported on the outer end of member 12 and rest against the upper end of member 14 in the same manner as discussed in connection with the embodiment of FIGS. 1–3. The wire tension member prevents further movement of member 14 in an extending direction, i.e. away from member 12.

In FIG. 5, rigid member 40, again a wire member, has a hinge connection 48 to the upper end of member 14 and extends through a hole 50 in member 12. The lower end of wire 40 is provided with a hook portion 52. With this arrangement the wire member 40 pivots about hinge connection 48 as member 15 is moved angularly away from member 12 and slides freely in hole 50 until hook 52 engages the underside of member 12. In this position a book can be supported on member 12 and against member 14.

It will also be appreciated that rigid members 38 and 40 can be strip material (metal, plastic, wood, etc.) in addition to wire.

FIGS. 6 and 7 illustrate yet another embodiment of this invention. In this embodiment, the book support is fabricated in one piece. The one piece member is shown in developed form in FIG. 7. This type of construction lends itself well to use wherein the material of the book end or book holder is to be corrugated paper box board or other similar material such as light metal. In this embodiment, a horizontal tension member portion 60 is connected by a fold line 62 to a compression member 64. A vertical tension member 66 is in turn connected to compression member 64 at a fold line 68. To form the book support, a fold is made along line 62 placing compression member 64 in a generally upright position with respect to tension member 60. A fold is then made along line 68 turning tension member 66 down into engagement with horizontal tension member 60. Vertical tension member 66 can then be fixedly attached to the horizontal tension member to complete the configuration illustrated in FIG. 6. In this embodiment, as in the previous embodiments, member 60 has a bifurcated end providing legs 70 and 72 having a space 74 therebetween. The width of space 74 is equal to or greater than the width of tension member 66 and the hinge at fold line 62. Notches 76 and 78 are provided at fold line 62 in alignment with and having a width equal to or greater than the width of legs 70 and 72. This is to permit two such book ends to overlap as illustrated in FIG. 8 and in addition to allow legs 70 and 72 to extend beyond member 64 of the opposing book end. Again, legs 70 and 72 are provided with non-skid material 80 and 82 as in the other embodiments.

In the alternative embodiments of FIGS. 4, 5, 6, and 7, the book supports function in the same manner as discussed in connection with the embodiments of FIGS. 1–3. The weight of the book rests on the legs of horizontal tension member 12, or 60, and that assists in maintaining the book supports in position. The vertical tension member limits movement of the compression member in the extending direction, i.e. angularly away from member 12 or 60, so that a book can rest against the upper edge of the compression when being supported.

The construction and arrangement of the overall book support is relatively simple and can be fabricated from a variety of materials. It can be made of relatively substantial materials such as metal, wood, plastic, or the like, or can be fabricated of relatively inexpensive materials, such as, paper board, corrugated paper, etc. These also afford the advantage that the book supports

can be used as a promotional item with the upright compression member providing a rather substantial area to carry any suitable indicia which might be related to a given promotion, advertising, or the like.

Although the present invention has been disclosed in connection with a particular embodiment thereof, it will be apparent to those skilled in the art that various changes and modifications may be made therein without departing from the spirit of the invention or from the scope of the appended claims.

I claim:

1. A book support comprising, in combination,
a first generally planar member,
a second generally planar member,
means connecting adjacent ends of said first and second planar members for relative movement of said first and second members to an extended position wherein said first member is generally upright at an angle to said second member and terminates in an end above said second member when said second member is horizontal,
a third member,
and means connecting said third member to said first and second members with the connection of said third member to said second member, when said first, second, and third members are extended and said second member is horizontal, being located in an area between said connected adjacent ends and a plane generally perpendicular to said second member and including said end of said third member so that said third member limits further relative movement of said first and second members in the extending direction and said book support can function as a bookend.

2. A book support comprising, in combination,
a first member,
a second member,
means forming a hinge connection between said first and second members about which said members can be pivoted to an extended position wherein said members are disposed at an angle to each other so that said first member is generally upright and terminates in an end above said second member when said second member is horizontal,
and a third member connected to each of said first and second members at areas spaced on each from said hinge connection,
the area of connection of said third member to said second member located, when said first and second members are pivoted to said extended position and said third member is extended and said second member is horizontal, in an area between said hinge connection and a plane generally perpendicular to said second member and passing through said end of said first member so that said third member limits further pivotal movement in the extending direction and said book support can function as a bookend.

3. The book support of claim 2 wherein said first and second members are pivoted between said extended position and a collapsed position wherein one overlies the other.

4. The book support of claim 3 said third member comprises a flexible member characterized by being collapsible when said first and second members are in said collapsed position and being extended to a taut condition when said first and second members are pivoted to said extended position.

5. The book support of claim 2 wherein said third member is a relatively rigid member.

6. The book support of claim 4 wherein said rigid member has a hinged connection to one of said first and second members and a sliding engagement with the other.

7. The book support of claim 2 wherein said second member includes an end portion extending beyond the area of engagement of said third member with said second member and away from the hinge connection between said first and second members.

8. The book support of claim 7 including means defining a non-skid surface on said end portions facing, upwardly for engagement with a book edge when said first and second members are in said extended position.

9. The book support of claim 8 wherein said non-skid surface defining means defines an undulating in cross-section surface.

10. The book support of claim 7
wherein said end portion is bifurcated having outwardly extending spaced legs,
including means defining a pair of notches in the hinge connection between said first and second members in alignment with said legs,
and the space between said legs being in alignment with and wider than said third member.

11. The book support of claim 10 wherein said support is a one piece member and in a developed position includes said first member and the said bifurcated end portion thereof at one end, said third member extending from the other end thereof and oppositely relative to said bifurcated end portion, said second member being positioned between said first member and third member and having a fold line connection with both said first and third members, and said notches being generally at the fold line in alignment with said legs.

12. The book support of claim 7 said third member comprises a flexible member characterized by being collapsible when said first and second members are in said collapsed position and being extended to a taut condition when said first and second members are pivoted to said extended position.

13. The book support of claim 12 including means defining an undulating in transverse cross-section surface facing upwardly when said first and second members are in said extended position.

14. The book support of claim 7 wherein said third member is a relatively rigid member.

15. The book support of claim 14 including means defining an undulating in transverse cross-section surface facing upwardly when said first and second members are in said extended position.

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