April 2, 1957 H. KRAUS 2,787,086

COLLAPSIBLE BOOK REST

Filed Nov. 30, 1953 2 Sheets-Sheet 1

Fig. 1.

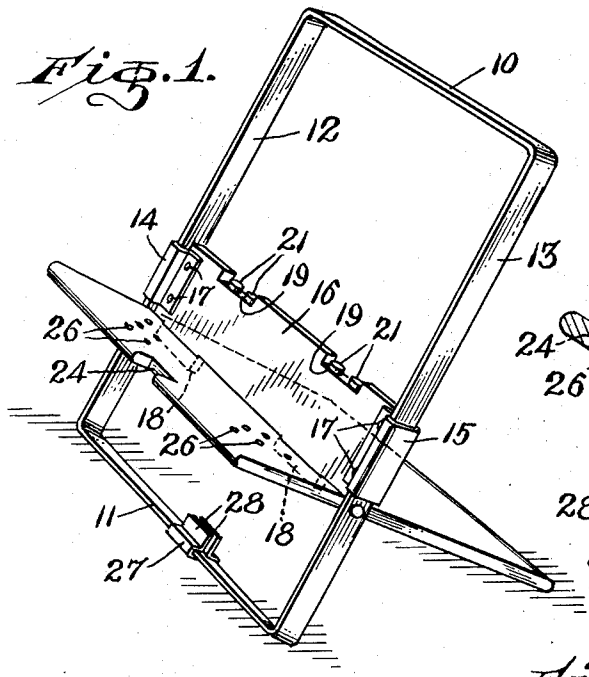


Fig. 2.

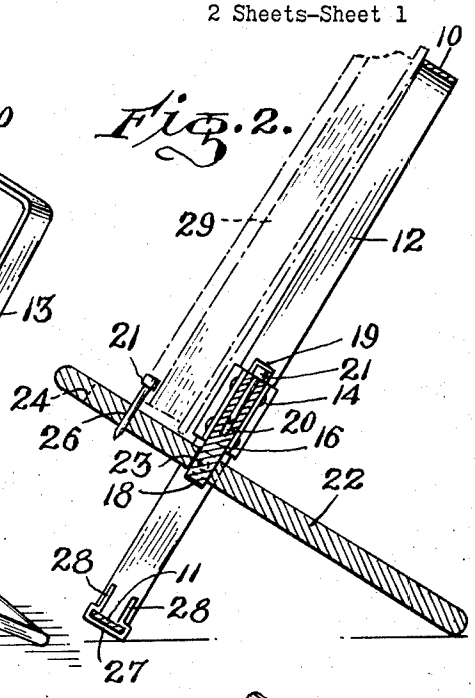


Fig. 3.

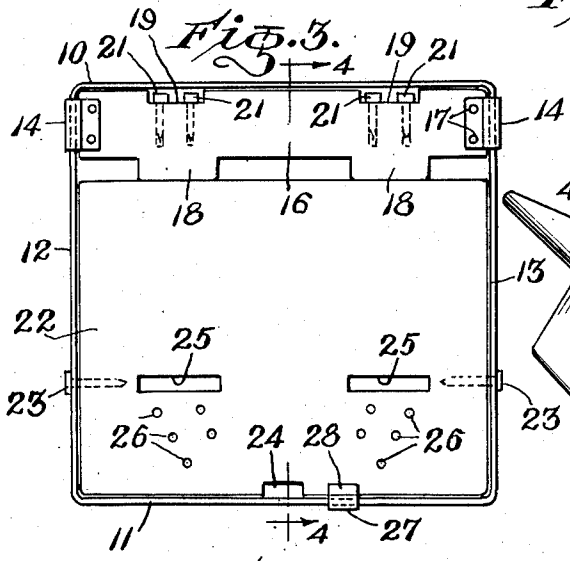


Fig. 5.

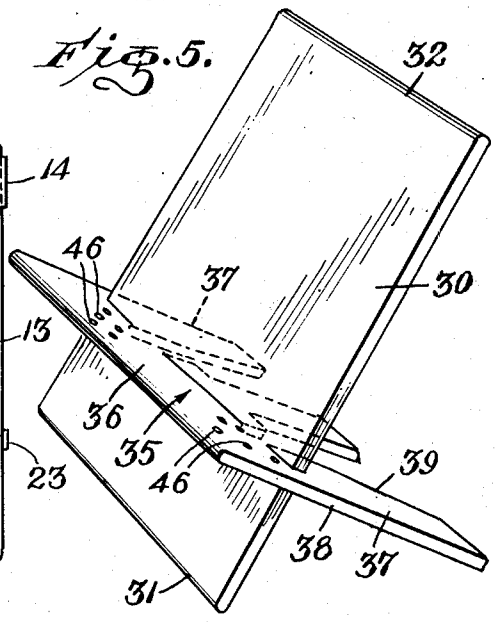
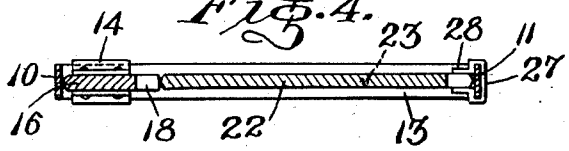


Fig. 4.



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April 2, 1957 H. KRAUS 2,787,086

COLLAPSIBLE BOOK REST

Filed Nov. 30, 1953 2 Sheets-Sheet 2

Fig. 6.

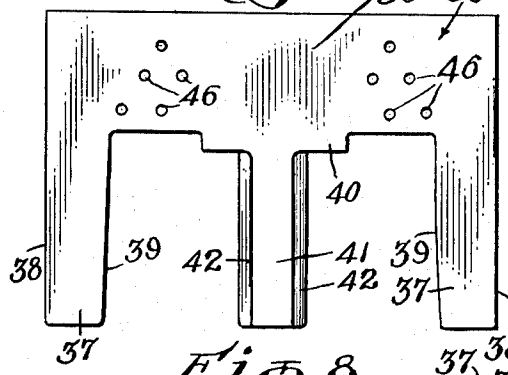


Fig. 7.

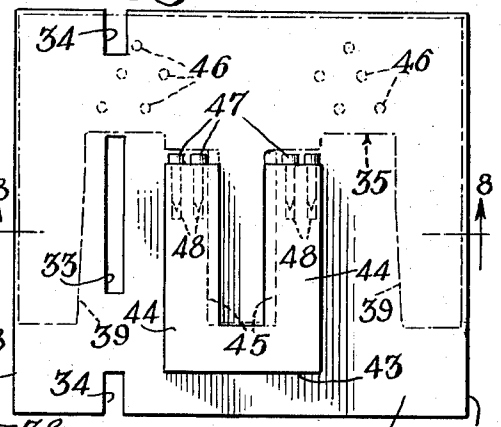


Fig. 8.

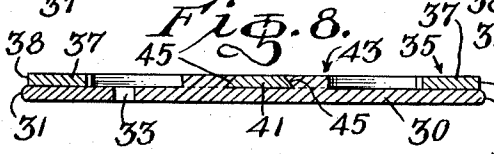


Fig. 10.

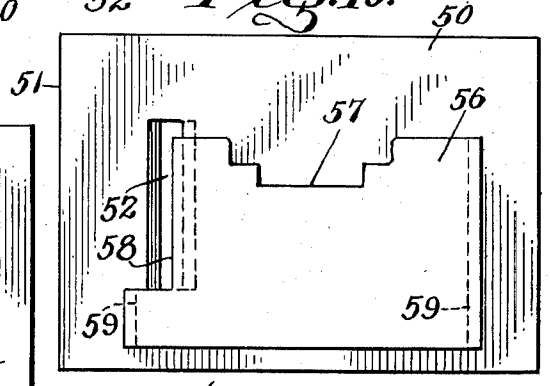


Fig. 11.

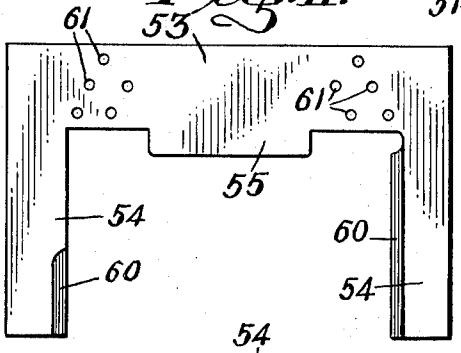


Fig. 12.

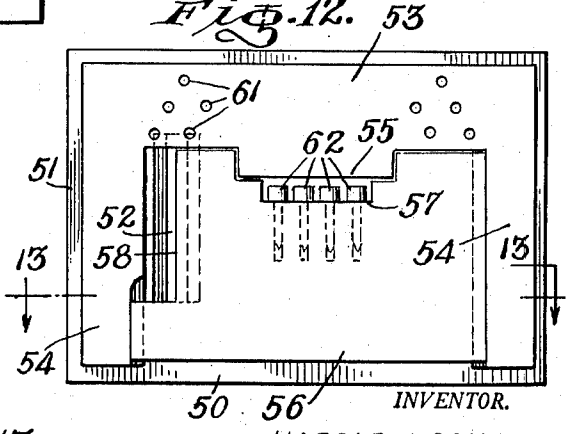


Fig. 9.

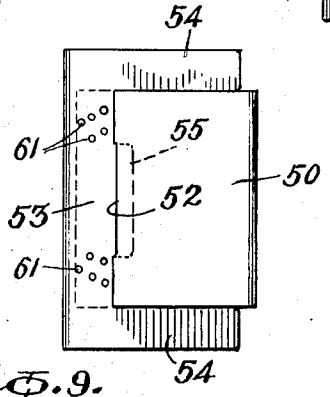
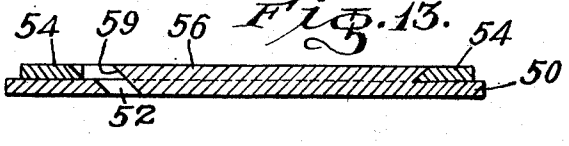


Fig. 13.



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COLLAPSIBLE BOOK REST

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Application November 30, 1953, Serial No. 395,154

2 Claims. (Cl. 45—57)

The present invention relates to a collapsible book support and it consists in the combinations, constructions and arrangements of parts herein described and claimed.

Generally there is provided a collapsible book support which, in its collapsed condition, assumes a generally flat form whereby it takes a minimum space which is particularly desirable for shipping purposes and which, when placed in operative position, provides an upwardly and forwardly extending shelf upon which a book may be placed and an upwardly and rearwardly extending wall for supporting the rear of an opened book. Novel means is provided for maintaining the book in an opened condition at a preselected page. In one form of the invention, a novel frame is provided as a part of the invention and, in all forms of the invention, the device is so constructed as to be capable of manufacture from common composition board material. Novel interlocking means is provided for maintaining the device in its operative position and novel means is provided for locking the parts of the device in their collapsed condition.

It is accordingly an object of the invention to provide a novel collapsible book support.

Another object of the invention is to provide a device of the character set forth which is simple in construction, inexpensive to manufacture and yet effective and efficient in use.

Another object of the invention is to provide, in a device of the character set forth, novel means for holding a book in open condition at a preselected page.

A further object of the invention is to provide, in a device of the character set forth, novel interlocking means for maintaining the device in operative position.

A further object of the invention is to provide, in a device of the character set forth, novel means for locking the component parts of the device in their inoperative position.

Other and further objects of the invention will become apparent from a reading of the following specification taken in conjunction with the drawing, in which:

Figure 1 is a perspective view of an embodiment of the invention illustrating the same in operative position,

Figure 2 is a vertical sectional view of Figure 1,

Figure 3 is a plan view of the device showing the same in collapsed condition,

Figure 4 is a sectional view taken along line 4—4 of Figure 3,

Figure 5 is a perspective view of a modified form of the invention,

Figure 6 is a plan view of a shelf portion of the device shown in Figure 5,

Figure 7 is a plan view of a body portion of the device illustrated in Figure 5,

Figure 8 is a sectional view taken along line 8—8 of Figure 7,

Figure 9 is a reduced plan view of still another form the invention may assume,

Figure 10 is a plan view of a body section of the device illustrated in Figure 9,

Figure 11 is a plan view of a shelf section of the device shown in Figure 9,

Figure 12 is a plan view of the device illustrated in Figure 9, showing the same in assembled collapsed condition, and

Figure 13 is a sectional view taken along line 13—13 of Figure 12.

Referring more particularly to the drawings, there is shown therein, in Figures 1 to 4, inclusive, a book support comprising a hollow rectangular frame preferably formed of a continuous piece of metal and having end flights 10 and 11 and side flights 12 and 13. Slidably mounted upon the side flights 12 and 13 of the frame by means of brackets 14 and 15 which encompass the flights 12 and 13, respectively, is a relatively narrow back board 16 whose end portions are affixed to the brackets 14 and 15 by means of rivets 17 or the like. Adjacent each end of the back board 16 but spaced inwardly therefrom is an integrally formed tongue 18 which extends toward the flight 11 and upon the opposite side to that side carrying the tongues 18 there is, in each case, provided a recess 19. Each of the recesses 19 is provided with a pair of inwardly extending holes 20 for storage therein of headed pegs 21.

A relatively wide shelf board 22 is hingedly mounted between the flights 12 and 13 by means of pins 23 or the like and is centrally provided adjacent the plate 11 with a notch 24. A pair of transversely extending slots 25 is provided in the board adjacent the pins 23 and the slots 25 are adapted to receive therein the tongues 18 when the device is in operative condition. A plurality of pin-receiving openings 26 is formed in the board 22 between each of the slots 25 and that portion of the board 22 adjacent the flight 11. The flight 11 has slidably mounted thereon a latch member 27 of generally U-shaped construction provided with inwardly extending inwardly biased legs 28.

In the operation of this form of the invention, it will be apparent that in its collapsed condition, as illustrated in Figures 3 and 4, the device assumes a generally flat condition which occupies a minimum of space and presents the device in a condition for easy packaging and shipping. In this state, it will be apparent that the tongues 18 will abut against the adjacent edge of the board 22 which will be held in the same plane as the frame by means of the latch 27, the legs 28 of the latter securely holding opposed sides of the board 22 to thus maintain the same in this collapsed condition. When, however, it is desired to utilize the device for the support of a book such as that shown in dotted lines at 29 in Figure 2, it is only necessary to move the latch 27 upon the flight 11 until the legs 28 thereof are positioned within the notch 24 whereupon the board may be pivoted upon the pins 23 until it assumes the position shown, for example, in Figures 1 and 2. Thereupon the board 16 is moved downwardly as viewed in Figures 1 and 2 until the tongues 18 extend through the slots 25 to thus securely and rigidly hold the device in book-supporting position. If it is desired to maintain the book open at a particular page, it is only necessary to rest the same upon the exposed portion of the board 22 on the left side of the frame as viewed in Figures 1 and 2 and to thereafter remove a pair of the pins 21 from their storage openings 20 and place the same in selected holes 26 adjacent each of the slots 25 whereby to prevent the pages of the book 29 from accidental movement, as clearly shown in Figure 2.

In the form of the invention illustrated in Figures 5 to 8, inclusive, there is shown a substantially square back board 30 having a rounded bottom edge 31 and a rounded top edge 32 and, in spaced relation to the edge 31, is provided with a transversely extending centrally disposed slot 33 and a pair of end slots 34 which are in alignment with the slot 33.

There is also provided a shelf board 35 having a transversely extending relatively narrow body 36 from one longitudinal side of which extends a pair of side tongues 37 having straight outer edges 38 which are flush with the adjoining edges of the body 36 and outwardly tapering inner edges 39. Centrally extending from the body 36 and integrally formed therewith and on that side having the tongues 37 is a shoulder 40 from which, in turn, centrally extends a tongue 41 having beveled side edges 42. A U-shaped bracket 43 is affixed in any suitable manner, as by gluing, to the rear face of the back board 30 with its legs 44 extending in parallel relation to the edges 31 and 32 and the inner faces of the legs 44 are beveled, as indicated at 45 whereby to provide a keyway for the beveled faces 42 of the tongue 41. Inwardly adjacent each end of the body 36 there is provided a plurality of holes 46 for the reception of headed pins 47 which may be normally positioned in inwardly extending openings 48 formed in the end portions of the legs 44.

In the operation of this form of the invention, it will be apparent that the pins 47 may normally be stored in the openings 48 and that the tongue 41 may be slidably keyed between the legs 44 of the bracket 43 so that the exposed longer side of the body 36 will lie flush with one side of the board 30, as indicated in Figure 7.

When it is desired to use the device illustrated in Figures 5 to 8, inclusive, as a book support, it is only necessary to withdraw the shelf board 35 from engagement with the bracket 43 and to thereafter place the edge 31 of the board 30 upon a table or the like after which the tongue 41 may be extended through the slot 33 while at the same time the tongues 37 may be extended through the end slots 34. Due to the tapering sides 39 of the tongues 37, it will be apparent that the boards 30 and 35 will be frictionally held together as a unit whereupon a book may be placed with its bottom upon the shelf 36 while its back may rest against the upper portion of the back board 30. The pins 47 may then be inserted into appropriate openings 46 to maintain the book at a particular opened page.

Referring now to that form of the invention illustrated in Figures 9 to 13, inclusive, it will be seen that there is provided therein a rectangular back board 50 having a bottom edge 51 and provided with a transverse slot 52 which lies in parallel spaced relationship to the edge 51.

A shelf 53 has integrally formed at each end thereof a laterally extending leg 54 and, centrally positioned between the legs 54, with an integrally formed foreshortened tongue 55.

A bracket 56 in the form of a flattened block, is affixed to the rear face of the board 50 and is provided on one side with a recess 57 adapted to receive therein the tongue

55 when the device is in collapsed condition and is cut away, as indicated at 58, upon another side to expose the slot 52. Those edges of the bracket 56 which lie parallel to the edge 51 are beveled, as indicated at 59 and the inner faces of the legs 54 are complementarily beveled, as indicated at 60, whereby to engage the beveled portions 59 in keyed relation when the device is in collapsed condition as aforesaid. Adjacent each end of the shelf 53 there is provided a series of holes 61 for receiving pegs therein, such pegs being indicated at 62.

In the operation of this form of the invention, it will be apparent that when it is desired to place the device in inoperative condition, it is only necessary to slide the shelf 53 upon the rear face of the board 50 until the beveled edges 60 engage the beveled portions 59 and the tongue 55 is received in the recess 57.

If, however, it is desired to support a book upon the device shown in Figures 9 to 13, inclusive, it is only necessary to remove the shelf 53 from engagement with the bracket 56 and to thereupon insert the tongue 55 into the opening 52. It will be seen that when this occurs the legs 54 will extend downwardly to engage the table or other object upon which the device is mounted. The use of the pins 62 with the holes 61 will be as above described with the other forms of the invention.

While but three forms of the invention have been shown and described herein, it will be readily apparent to those skilled in the art that many minor modifications may be made without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. A device of the character described comprising a square open frame having a bottom flight, a top flight, and a pair of side flights, a relatively short back board slidably mounted upon and extending between said side flights, a relatively wide shelf board pivotally mounted upon and extending between said side flights, means for latching said boards in end-to-end abutting relation within said frame, and means for interlocking said boards in book-supporting condition.

2. A device as defined in claim 1 wherein said shelf board is provided with pin-receiving openings, wherein pins are provided for selective insertion into said openings, and wherein storage space for said pins is provided in one of said boards.

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