

June 28, 1932.

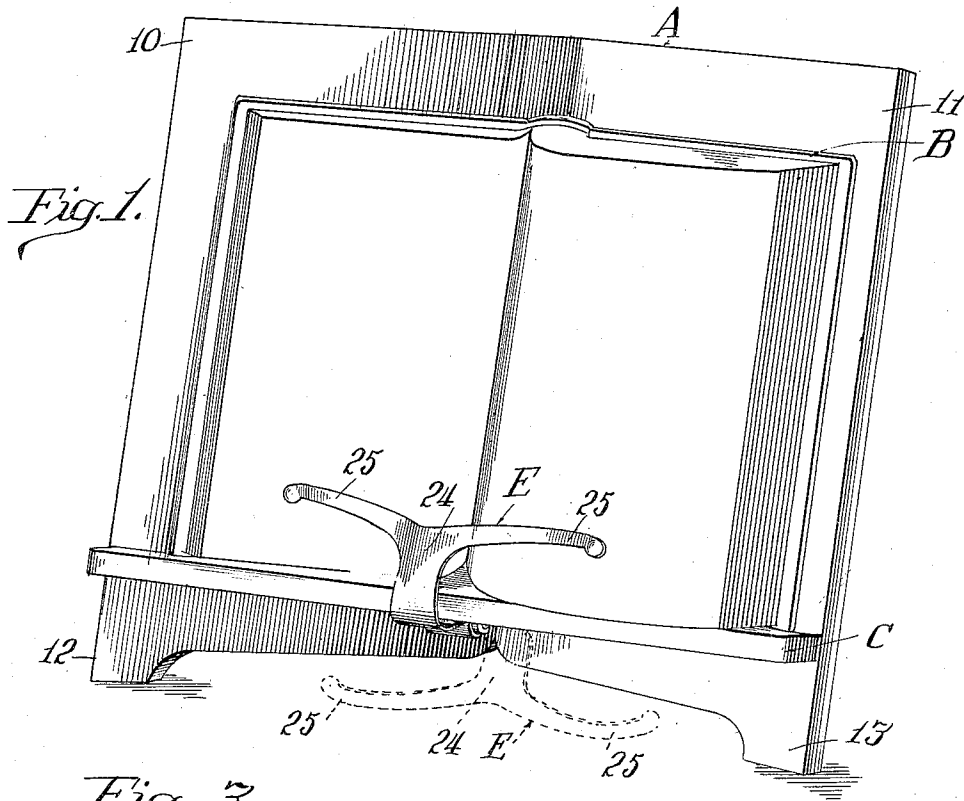
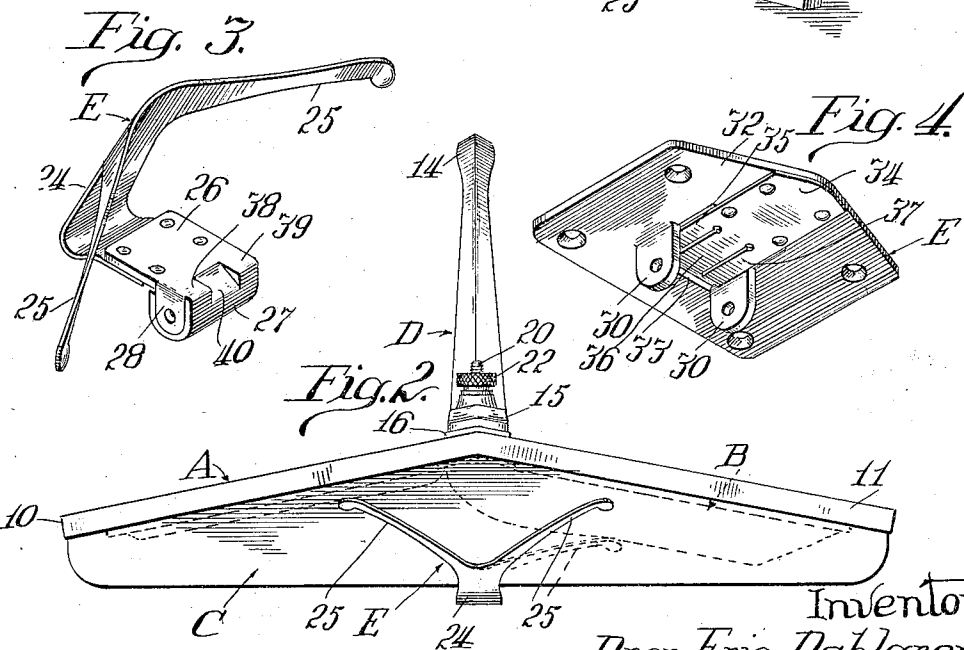
B. E. DAHLGREN

1,864,807

BOOK SUPPORT

Filed Nov. 8, 1928

2 Sheets-Sheet 1



Inventor
Bror Eric Dahlgren
By Thomas H. Ferguson
Attorney

June 28, 1932.

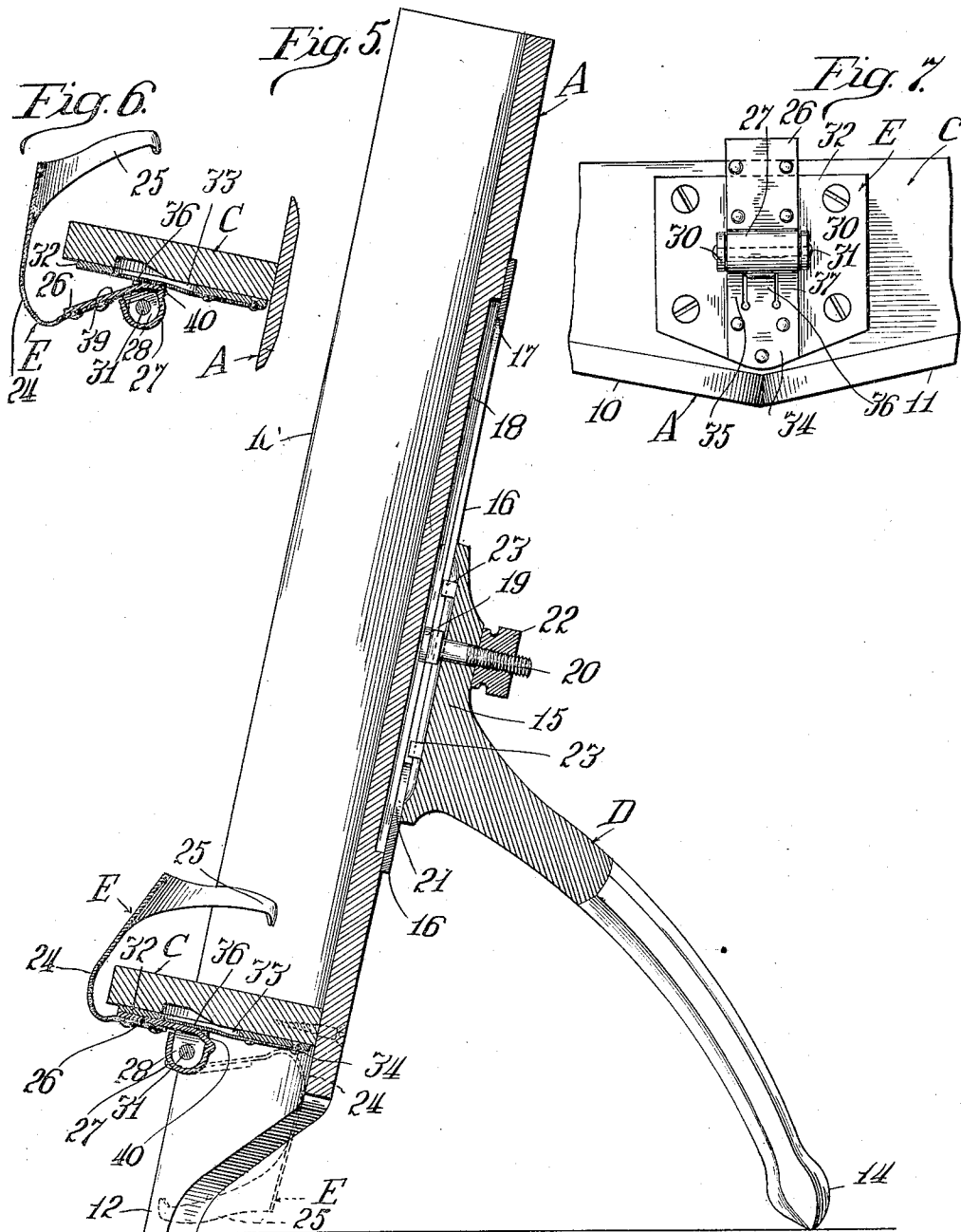
B. E. DAHLGREN

1,864,807

BOOK SUPPORT

Filed Nov. 8, 1928

2 Sheets-Sheet 2



Inventor
Bror Eric Dahlgren
By Thomas H. Ferguson
Attorney

UNITED STATES PATENT OFFICE

BROR ERIC DAHLGREN, OF CHICAGO, ILLINOIS

BOOK SUPPORT

Application filed November 8, 1928. Serial No. 317,920.

The present invention relates to book supports of the type which include a desk or rest for the book, a shelf near the bottom of the desk for engaging the lower edge of the book and a clip positioned adjacent to the shelf and operative to engage the opposing leaves of an opened book upon the desk.

One object of the invention is to provide a new arrangement of these parts such that the clip may occupy an opened position directly beneath the shelf and in being moved to that position will swing clear of any table or flat support upon which the device may be standing at the time.

Another object is to so position the desk and clip relative to each other and to so construct the clip that books of different thicknesses opened indifferently at any page shall be held in the desired position. The clip preferred for this purpose has a central shank and oppositely extending prongs all composed of extremely flexible metal. The ends of these prongs engage the opposing leaves of the open book. Not only do the prongs yield but there is also a torsional yield in the shank itself, all of which causes the clip to adjust itself to the different requirements of an open book upon the support. The clip also has a plurality of set positions to which the movable member of the clip may be moved bodily and therein yieldingly held, said positions being spaced different distances from the face of the desk. The setting of the clip in these different positions combined with the flexibility of the shank and prongs of its movable element gives a wide range of adjustment which is sufficient to care for books of widely varying thickness when open on the support at any page.

These and other objects and advantages of the invention will be more fully understood upon reference to the following detailed description taken in connection with the accompanying drawings and the scope of the invention will be particularly pointed out in the appended claims.

In said drawings Fig. 1 is a perspective view of a book support of the type mentioned constructed and arranged in accordance with the present invention; Fig. 2 is a plan view

of the same; Fig. 3 is a perspective view of the movable member of the clip; Fig. 4 is a perspective view of the fixed member of the clip; Fig. 5 is a central vertical section of the entire structure showing the movable clip member in its extreme closed position in full lines and in its extreme open position in dotted lines; Fig. 6 is a similar view of the shelf and associated clip showing the latter in a second closed position; and Fig. 7 is a bottom plan view of the fixed member of the clip secured to the under side of the shelf. Throughout these views like characters refer to like parts.

Referring to said drawings in detail, A designates the desk or rest for the book, B, C the shelf upon which the edge of the book rests, D the leg or brace for the desk A, and E the clip by which the book is held open on the desk.

The desk A is formed of two pieces 10 and 11 joined together at an angle and cut away on their under sides so as to provide legs 12 and 13. The material of the pieces 10 and 11 is preferably wood, although the same may be metal if desired. The face of the desk A is provided near its lower end with the shelf C which is preferably composed of the same material as the desk A. The shelf C is angular along its rear edge and fits snugly against the portions 10 and 11 of the desk A. The shelf C is secured to the desk A by any suitable means. It will be seen that the book B upon the desk A rests with its two covers against the members 10 and 11 and its lower edges upon the shelf C. The latter stands forward of the desk A for some little distance so as to provide suitable space for engaging the leaves of the book.

The third point of support of the structure is provided by the leg or post D. The latter is composed of wood or metal and may be made artistic in contour so as to add in beauty to the device, the present drawings showing metal. The foot 14 of the brace D will ordinarily rest upon the same support as the legs 12 or 13. At the opposite end of the brace D is a head 15. This head has a face which bears upon a plate 16 secured to the rear of the desk A along the line where the

members 10 and 11 are united. The plate 16 is secured to the desk in any suitable way and is provided with a central slot 17 and the material of the desk beneath the plate 16 adjacent to the slot 17 is cut away as indicated at 18. This is for the purpose of allowing the head 19 of bolt 20 to be moved back and forth in the direction of the plate 16. The head 19 is positioned beneath the plate 16 by passing it through an opening 21 at the lower end of slot 17. The hole 21 and slot 17 together form what is commonly called a key-hole slot. The bolt 20 is passed through an opening in the head 15 of the leg D and is threaded at its outer end for the reception of a nut 22 which has a knurled outer surface to enable it to be readily screwed home upon the head 15 to firmly secure the leg D to the desk A. For the purpose of centering the head 15 upon the plate 16, small projections 23 extend from the head 15 into the slot 17. By loosening up the nut 22 the leg D may be drawn downward so as to bring the bolt head 19 opposite the key-hole opening 21. When this point is reached the head will pass readily through the opening and the leg D will be detached from the desk A. A reverse movement with a tightening up of the nut 22 in the final position will firmly unite the leg to the desk. By moving the head 15 up and down with reference to the plate 16 any desired adjustment of the desk may be had. Obviously, other key-hole slot arrangements might be used equally well and where the leg D is composed of wood, might be preferred. Thus, a series of key-hole slots might cooperate with one or more shanks and heads like those formed by the bolt 20 and head 19.

The clip E is preferably hinged upon an axis extending lengthwise of the shelf C. In its book-engaging positions the movable clip member may occupy the positions of primary adjustment shown in full lines in Figs. 5 and 6; while in its extreme open position it will occupy the position shown in dotted lines in Fig. 5. The movable clip member comprises a central portion or shank 24 from which the flexible prongs extend outward in opposite directions. The movable clip member, shank 24 and branches 25, is composed of some suitable spring material. Phosphor bronze is very satisfactory for this purpose. Both the shank and spring prongs give, as the latter adjust themselves to the opposite pages of an open book, as indicated by the full line and dotted line positions of Fig. 2. This giving may be called the secondary adjustment of the clip. It is important to note that the shank 24 may be twisted considerably when this secondary adjustment takes place. This is indicated a little by the dotted lines of the shank 24 in Fig. 2. The condition shown in this figure is an extreme one for the particular book shown. In other words, it is an ex-

treme one for the secondary adjustment. This is because there are but a few leaves on the left-hand side of the book while the greater number of the leaves are on the right-hand side. The dotted position of the shank 24 and right-hand prong 25 clearly shows this. Thus the movable member of clip E by occupying the different positions illustrated in Figs. 5 and 6, adjusts itself to different-sized books and then by the twisting of the shank 24 and the flexing of the prongs 25, adjusts itself to the inequalities occasioned by opening the book at different pages.

The shank 24 has its lower end riveted, or otherwise secured, to a plate 26. The latter is composed of steel or other like material and is more stout than the shank 24. The plate 26 is preferably a punching, curled at one edge to form a sleeve or tube 27 and shaped and bent adjacent to the sleeve to provide depending lugs 28. These parts form a hinge member which cooperates with lugs 30 upon the fixed clip member 32. The lugs 28 and 30 are apertured for the passage of a pin 31 which is riveted at its opposite ends as clearly illustrated in Fig. 7. Obviously, the single pivot pin 31 might be replaced by two short pins, one for each pair of cooperating lugs 28 and 30. Thus the two members of the clip are hinged together, on a horizontal axis beneath the shelf C of the holder. The member 32 is in the form of a plate having a central opening formed in part by striking up the lugs 30. A spring plate 34 is secured to the plate 32 adjacent to the opening 33 and has three spring tongues 35, 36, and 37 extending from it over the opening 33. The plate 34 may be secured to the plate 32 in any suitable way. The spring tongues cooperate with surfaces upon the plate 26 to determine the setting of the movable member of the clip. The outer spring tongues 35 and 37 cooperate with the faces 38 and 39 formed upon the plate 26. The surfaces 38 and 39 are flat surfaces which lie substantially parallel with the surfaces of the spring tongues 35 and 37 when the latter are under the least strain. The position of the clip when these parts so engage each other is the full line position of Fig. 5. While the spring tongues 35 and 37 thus engage the faces 38 and 39, the central spring tongue 36 performs no particular function. However, there is a face 40 upon the movable member which cooperates with the spring tongue 36. The face 40 is formed by slitting a portion of the plate 26 at two points and then pressing down the intervening portion to form a different angle than the faces 38 and 39. When the movable clip member is moved into the position shown in Fig. 6 then the central spring tongue 36 engages the central face 40 and the movable member of the clip is set in its second closing position. At the time the spring tongue 36 engages the face 40 the corners of the plate 26 adjacent to

the faces 38 and 39 press against the spring fingers 35 and 37 and force them upward but the position of the parts is such that these outer spring fingers apply no force tending to move the movable member 24 of the clip. Hence, the parts remain in the position illustrated in Fig. 6.

Finally, there is the extreme open position of the clip. This is the dotted line position of Fig. 5. In such position the prongs 25 lie above any plane surface joining the feet 12, 13, and 14 and consequently the movable member of the clip is out of the way. Furthermore, the movement of the clip to this position may be accomplished without the prongs 25 engaging the surface upon which the device may be resting at the time. While the movable member of the clip is passing backward beneath the shelf C the spring tongue 35, 36, and 37 ride upon the curved outer surface of the sleeve 27 and consequently no set positions are provided through the cooperation of the spring tongue with flat surfaces as was the case when the full line positions of Figs. 5 and 6 were produced.

It will be apparent that in carrying out my invention some variation may be made in the details described and shown without departing from the spirit and scope of my invention. I therefore do not wish to be limited to the exact constructions illustrated and described, but aim to cover by the terms of the appended claims all the variations which rightly come within the spirit and scope of my invention.

What I claim as new and desire to secure by a patent of the United States is:

1. A book support comprising an inclined desk; a transverse shelf near the bottom of said desk; and a book-holding clip having a movable member hinged to the under side of said shelf upon an axis extending lengthwise of said shelf, means for yieldingly fixing said movable member in upper and intermediate book-holding positions and in a lower wide-open non-holding position, a shank having its outer end bent upward at an angle to its inner end so as to clear the forward edge of said shelf when said clip is rotated about said axis, and two oppositely extending spring prongs constituting continuations of said shank and operative to engage the opposite leaves of an open book resting upon said desk and shelf, said shank and prongs being yielding toward and away from the book to suit different numbers of leaves on its opposite sides, and the whole clip being movable about said axis into a fully open position beneath said shelf, the path of movement being at all times above any flat support upon which the desk stands.

2. A book support comprising an inclined desk; a transverse shelf near the bottom of said desk; the portion of said desk below said shelf being cut away at its center to provide

legs at its outer edges; and book-holding clip having a movable member hinged to the under side of said shelf upon an axis extending lengthwise of said shelf, means for yieldingly fixing said movable member in upper and intermediate positions, corresponding to different book-holding positions of the clip, and in a lowermost position, corresponding to the wide open position of the clip, a resilient shank having its outer end bent upward at an angle to its inner end at a point such as to clear the forward edge of said shelf when said clip is rotated about said axis, and two oppositely extending spring prongs constituting continuations of said shank and operative to engage the opposite leaves of an open book resting upon said desk and shelf, said shank and prongs being both yielding to and from the book to suit different numbers of leaves on its opposite sides and movable about said axis into a position beneath said shelf with parts thereof in said space between said legs, and said path of movement being at all points above any flat support upon which the desk stands.

3. A book support comprising an inclined desk; a supporting leg adjustably secured to the rear of said desk; legs formed at the lower end of said desk, thus providing with said first mentioned leg a three point contact on a plane surface; a transverse shelf on the front of said desk near its bottom; and a book-holding clip including a plate fixed to the under side of said shelf and a plate hinged to said fixed plate upon an axis located beneath said shelf and extending lengthwise of said shelf, an angular resilient shank secured to said movable plate and extending outward from said axis in a plane at right angles to said axis and adapted to extend upward at its outer end beyond the front edge of said shelf when said clip is in a book-engaging position, oppositely extending resilient prongs forming continuations of the free end of said shank and adapted to engage the opposite pages of an open book on said desk, said prongs and the free end of said shank being yielding in the direction of their travel about said axis, said plate, shank and prongs being movable as a unit into different book-holding positions and into a lowermost non-engaging position, the latter being beneath said shelf and between said desk-formed legs, the path of rotation into said lowermost position being at all points above a plane through the three point contact furnished by all three legs, and means acting between said fixed and movable plates to yieldingly fix said shank and prongs in said different book-holding positions and in said lowermost position.

In witness whereof, I hereunto subscribe my name this 3rd day of November, A. D. 1928.

BROR ERIC DAHLGREN.