Sept. 1, 1931. M. ISAACSON 1,821,060

ADJUSTABLE BOOKREST

Filed Dec. 9, 1929 2 Sheets-Sheet 1

Fig. 1.

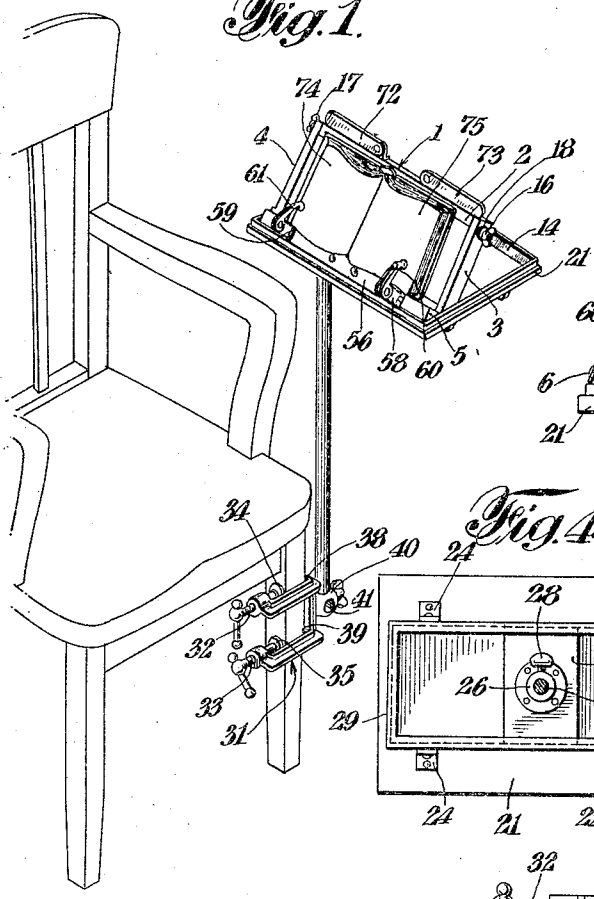


Fig. 2.

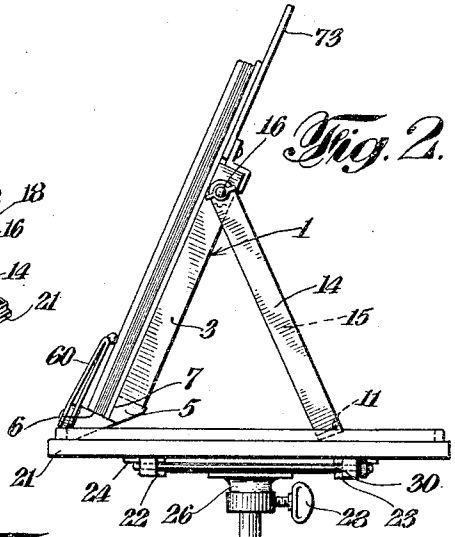
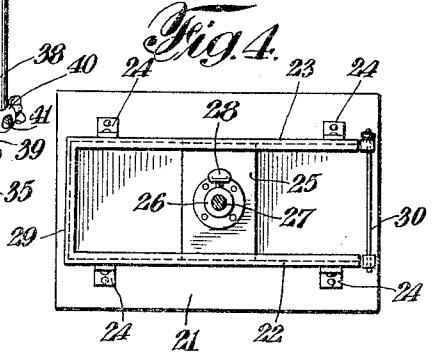


Fig. 4.



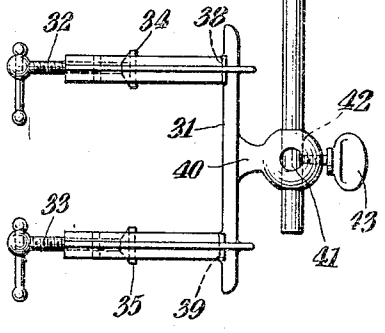
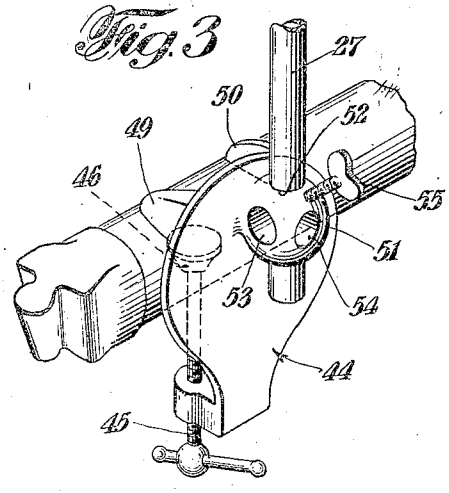


Fig. 3



INVENTOR
Morris Isaacson
BY
ATTORNEY

Sept. 1, 1931. M. ISAACSON 1,821,060

ADJUSTABLE BOOKREST

Filed Dec. 9, 1929 2 Sheets-Sheet 2

Fig. 5

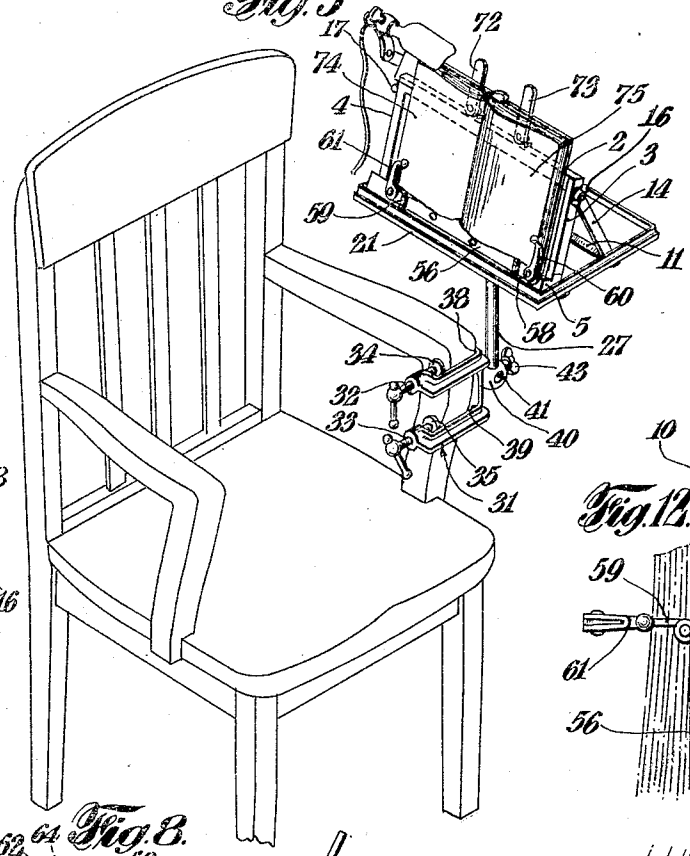


Fig. 10.

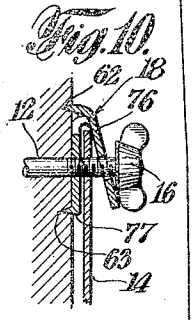


Fig. 12.

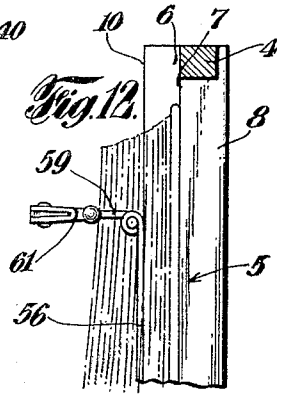


Fig. 7.

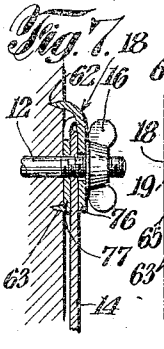


Fig. 8.

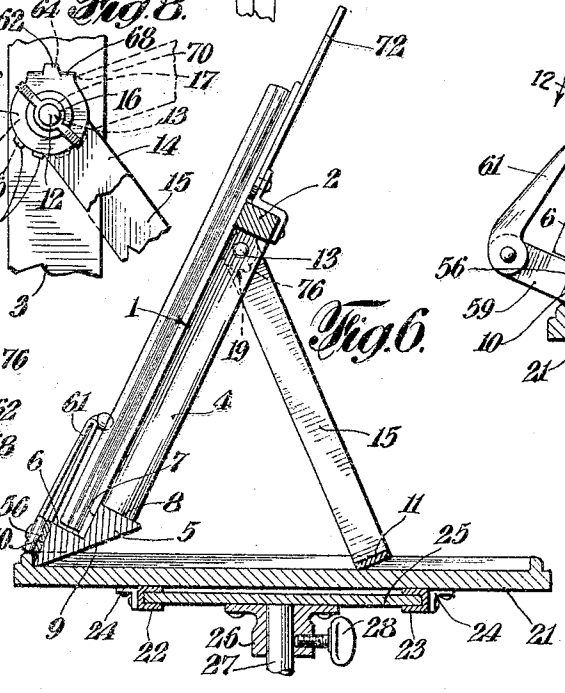
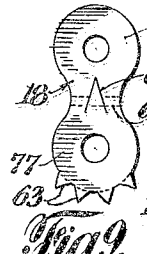


Fig. 6.

Fig. 9.



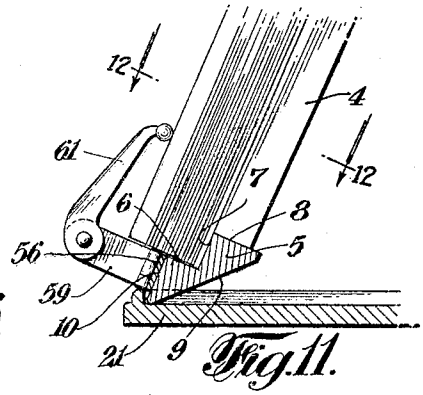


Fig. 11.

INVENTOR
Morris Isaacson
BY
ATTORNEY

Patented Sept. 1, 1931 1,821,060

UNITED STATES PATENT OFFICE

MORRIS ISAACSON, OF BROOKLYN, NEW YORK

ADJUSTABLE BOOKREST

Application filed December 9, 1929. Serial No. 412,735.

This invention relates to improvements in adjustable book rests, and particularly to the type adapted for attachment to a bedpost, the arm of a chair, or some other suitable support, so that a book placed thereon might be easily and conveniently read by a person in a sitting or reclining position who wishes to be relieved of the burden or inconvenience of holding the book in his hands.

An object of this invention is to provide, in a device of this kind, adjusting means for readily varying the position and angle of the book to suit the requirements of the reader. Another object is to provide adjustable clamping means to enable a book rest of this class to be secured to differently positioned and variously sized supports. A further object of my invention is to provide means to hold and support the pages of a book to prevent a downward sag and to keep the book fixed in its open position. Still another object is to provide a simple device of this class adapted to accommodate books of various heights and thicknesses. Other objects and advantages of my invention will appear from the drawings and the description hereinafter given.

Referring to the drawings:

Fig. 1 is a perspective of the invention attached to the leg of a chair, and showing a book thereon.

Fig. 2 is a side elevation of the device illustrating the clamp and rod attachment.

Fig. 3 is a fragmentary perspective, showing a modified form of clamp attached to a bed.

Fig. 4 is a bottom view of the table supporting the frame.

Fig. 5 is a perspective of my invention attached to the arm of a chair, and showing how a book of greater than average height is supported.

Fig. 6 is an enlarged fragmentary side sectional elevation of this invention.

Fig. 7 is a fragmentary sectional elevation, illustrating the construction of the hinged double washer used in this device.

Fig. 8 is a fragmentary front view of Fig. 7.

Fig. 9 illustrates the flat pattern of the washer shown in Figures 7 and 8.

Fig. 10 illustrates the hinged double washer with the wing nut partly backed off.

Fig. 11 is a partial side section showing the position a book of greater than average thickness, and the combination page holder and supporter.

Fig. 12 is a sectional plan of Fig. 11 taken along line 12—12.

In the drawings, the frame 1 comprises the cross bar 2, the uprights 3 and 4, and the supporting bar 5 of bitriangular cross section, which contains the surfaces 6, 7, 8, 9, and 10. The support 11 is pivotally attached to the frame 1, the uprights 3 and 4 thereof containing the threaded pins or bolts 12 and 13 respectively. Upon these bolts are mounted the sides 14 and 15 of said support, the wing nuts 16 and 17, and the hinged double washers 18 and 19 which have a number of prongs that are imbedded into the uprights 3 and 4, as shown.

The table 21 contains, on its under side, the two parallel rails 22 and 23, shown in the drawings as channel bars secured to the table by the angle bars 24. In sliding engagement with the said rails is the adjustable base plate 25, serving as a support for the table 21. This plate contains the socket 26 which fits over the upper end of rod 27 and contains the set screw 28 adapted to lock the said base plate 25 in fixed position relative to the rod 27. The stop 29 and the latch 30 serve as barriers to confine the movement of said base plate to the space between these members, the latch 30 being removable to permit the base plate to be disengaged from the table whenever necessary.

The adjustable clamp 31 contains the clamp bolts 32 and 33, the former having thereon the saddle 34 and the latter the saddle 35, felt pads (not shown) on the clamping jaws 38 and 39, and the extension 40 having the holes 41 and 42 therethrough, each of said holes being adapted to slidably receive the rod 27,—the set screw 43 serving the purpose of holding the said rod 27 locked within the clamp, in a predetermined position.

A modified form of clamp is that represented by the numeral 44, comprising the clamp bolt 45 having thereon the saddle 46,

felt pads (not shown) on the arms or clamping jaws 49 and 50, and the extension 51 having the holes 52, 53 and 54 therethrough,—the said holes being mutually perpendicular to each other and being adapted to slidably receive the rod 27. The set screw 55 holds the said rod 27 against movement and in a fixed position within the clamp.

The combination page holder and supporter 56 is attached to the surface 10 of the bar 5, the hinged segments 58 and 59 having pivotally attached to their free ends the stems 60 and 61 respectively, the pivotal connection being under sufficient frictional tension to enable the said stems to remain in their projected positions without dropping down due to their own weights.

The bottom edges or squares of a book are set upon the surface 6 of the supporting bar 5, the shelf back and covers of the open book resting against surface 7 of said bar 5 and against the face of the cross bar 2. To vary the inclination of the book, the nuts 16 and 17 are loosened, thereby permitting the sections 76 and 77 of washer 18, and the corresponding sections of washer 19 to spread and release the sides 14 and 15 respectively; the support 11 is then rotated either in a clockwise or counterclockwise direction, depending upon the angle desired; and the said nuts 16 and 17 are then tightened against the yieldable outward pressure of said washers. Normally the said sections of the washers are spread to permit the free pivotal movement of the sides 14 and 15 (Fig. 10); but the tightening of the nuts 16 and 17 brings these sections into frictional engagement with the said sides, so that the support 11 is held in its projected position.

It will be noticed that the hinged washers 18 and 19 are in fixed positions relative to the frame 1, due to the fact that the prongs 62, 63, 64 and 65 are imbedded into the bodies of the uprights 3 and 4. It is hence obvious that the said washers will always remain stationary, regardless of any movement of the sides 14 and 15 of the support 11. As the nuts 16 and 17 are in abutment with the outer surfaces of said washers, no movement of the said sides 14 and 15 will affect these nuts. If, however, loose washers were used instead, the movement of the sides 14 and 15 might, due to their frictional engagement with these washers, carry them along and cause a loosening of the abutting wing nuts.

The upward swing of the support 11 is limited by the position of the peripheral juncture 68 of the washers, the maximum position being reached when the edge 70 comes into abutment with the said juncture (Fig. 8).

It should be observed that although the said washers 18 and 19 each contain a plurality of prongs, two sections and two holes, the pattern therefor can be produced in a single stamping operation, as becomes evident from an inspection of Fig. 9.

The combination of adjustable features in the support 11, table 21, and the clamp and rod attachments above described results in an exceedingly flexible arrangement as to the position of the frame 1 supporting the book, and makes this device particularly adaptable for use in hospitals and sanitariums where patients and invalids, in various sitting and reclining positions, desire to read without subjecting themselves to the burden of holding the books in their hands. By adjusting the angle of the frame 1, by moving the base plate 25 horizontally along the table between the rails 22 and 23, by loosening the set screw 28 and turning the table 21 in a horizontal plane around rod 27 as an axis, and by loosening the set screw 43 to permit a movement of the clamp 31 along the rod 27 or by loosening the set screw 55 to permit a movement of the clamp 44 along the rod 27, a book supported by this device can be brought into any and every position suitable to the needs and convenience of the reader, and limited only by the dimensions of the structure. It is of course apparent that not every one of the adjustments above referred to need be made as a single adjustment, such as the raising or lowering of the table 21, may be sufficient.

The clamp 31 is adaptable for attachment to both horizontal and vertical supports; and the clamp 44, having three holes therethrough, is somewhat more flexibly adjustable, the hole 54 being adapted to receive a rod running longitudinally through the extension 51 and transversely crossing the support to which the clamp is secured. The clamp 44, having three point contact, is better suited to being secured to cylindrical supports than the clamp 31.

If the book to be supported is of greater than average height, the extension brackets 72 and 73 are swung upwardly to the position shown in Figures 2, 5, and 6, so that the covers of the book will now repose against the surface 7 of the bar 5, the cross bar 2 and the said extension brackets 72 and 73.

If the thickness of the open book is greater than the width of surface 6 so as to protrude beyond the plane of surface 10, or if there is a tendency of the pages to sag downwardly, the combination page holder and supporter 56 is brought into play. The hinged segments 58 and 59 are swung out, so that the upper edges of these segments will support the protruding or sagging pages of the book, thereby supplementing the surface 6 in supporting the book. To keep the upper pages 74 and 75 flat against the underlying pages, and to prevent said upper pages from being blown over by a current of air, the stems 60 and 61 are turned upwards so

that they are contiguous or sufficiently close to the plane of the exposed surface of said upper pages to keep them in place.

The bitriangular cross section of the supporting bar 5 effects a simple construction that serves the purpose not only of supporting the bottom end as well as the back covers of a book, but serves the additional functions of acting as an anchorage and support for the combination page holder and supporter 56, and for the uprights 3 and 4.

The above description and the drawings refer to but one of several different mechanical forms that may be embodied in my invention.

What I claim is:

1. In an adjustable book rest, a frame containing a plurality of uprights, a horizontally disposed polyhedral supporting bar of pentagonal cross section, two adjacent sides thereof being adapted to support the lower portions of a book, a third side being adapted to support the said uprights, and one of the longitudinally disposed edges of said supporting bar being adapted to rest upon a suitably positioned table.

2. In an adjustable book rest, the combination of a frame comprising a horizontal polyhedral supporting bar, a plurality of uprights secured to said supporting bar, and a cross bar; adjusting means attached to said frame for varying the inclination thereof; a table for supporting said frame; clamping means connected to said table and adapted for attachment to a suitable support; means for raising and lowering said table; and means for moving said table in an horizontal plane.

3. In an adjustable book rest, the combination of a frame comprising a horizontal polyhedral supporting bar, a plurality of uprights, and a cross bar; adjustable supporting means for varying the inclination of the said frame, said supporting means being pivotally mounted on said uprights; a table for supporting said frame, the underside of said table containing a base plate in slidable engagement with two parallel rails attached to said table; means for limiting the movement of said base plate; and means to enable said plate to be detached from the table.

4. In an adjustable book rest, the combination of a frame; adjustable supporting means for varying the inclination of said frame, said supporting means containing two sides pivotally mounted upon bolts fixed to said frame, each of said sides being positioned between the two sections of a hinged washer mounted on one of said bolts and fixed to said frame; and nuts in threaded engagement with said bolts and in abutment with the outer surfaces of said washers.

5. In an adjustable book rest, the combination of a frame comprising a horizontal supporting bar of bitriangular cross section, two uprights secured to said supporting bar, and a cross bar; adjustable supporting means pivotally attached to said uprights and adapted to vary the inclination of said frame; washers fixed to said uprights and adjacent said supporting means; and means to yieldably bring said washers into frictional engagement with said supporting means.

6. In an adjustable book rest, the combination of a frame, adjustable supporting means for varying the inclination of said frame, horizontally disposed pins attached to the sides of said frame, a double-sectioned washer mounted on each of said pins and fixed to said frame, the said supporting means having its two sides mounted upon said pins and positioned between the sections of said washers, said sections being normally spread to permit the free pivotal movement of said sides therebetween, and means to yieldably hold the sections of said washers in frictional abutment with the said sides.

7. In an adjustable book rest, the combination of a frame, horizontally disposed threaded pins attached to the sides of said frame, hinged washers each consisting of two sections joined peripherally and mounted on each of said pins, each of said washers containing a plurality of inwardly projecting prongs imbedded into the sides of the said frame, an adjustable support for said frame having its two sides pivotally mounted on said pins and positioned between the two sections of said washers, and nuts mounted on and in threaded engagement with said pins and in juxtaposition with said washers.

8. In an adjustable book rest, the combination of a frame comprising a horizontal supporting bar of bitriangular cross section, a plurality of uprights secured to said supporting bar, and a cross bar attached to said uprights: an adjustable support pivotally attached to said frame: means for frictionally engaging said support to hold it in its projected position; a table for supporting said frame and support, the underside of said table containing a base plate in slidable engagement with two parallel rails: said base plate containing a socket adapted for attachment to the upper end of a rod; a clamp adapted to slidably engage said rod; and means to secure said rod to said clamp.

9. In an adjustable book rest, the combination of a frame comprising a polyhedral supporting bar of bitriangular cross section, a plurality of uprights, and a cross bar; the said supporting bar having four of its surfaces disposed upwardly, the first lowest of said surfaces having attached thereto supplementary suporting means for upholding the protruding portion of the bottom end of a book; the second of said surfaces being adapted to support the bottom squares and the adjacent bottom end of the book; the

third of said surfaces together with said uprights and said cross bar being adapted to support the covers of the book; and the fourth of said surfaces having attached thereto the said uprights.

In testimony whereof, I affix my signature.

MORRIS ISAACSON.