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3,147,948

ADJUSTABLE BOOK HOLDING MEANS

Filed Nov. 19, 1962

2 Sheets-Sheet 1

FIG. 1

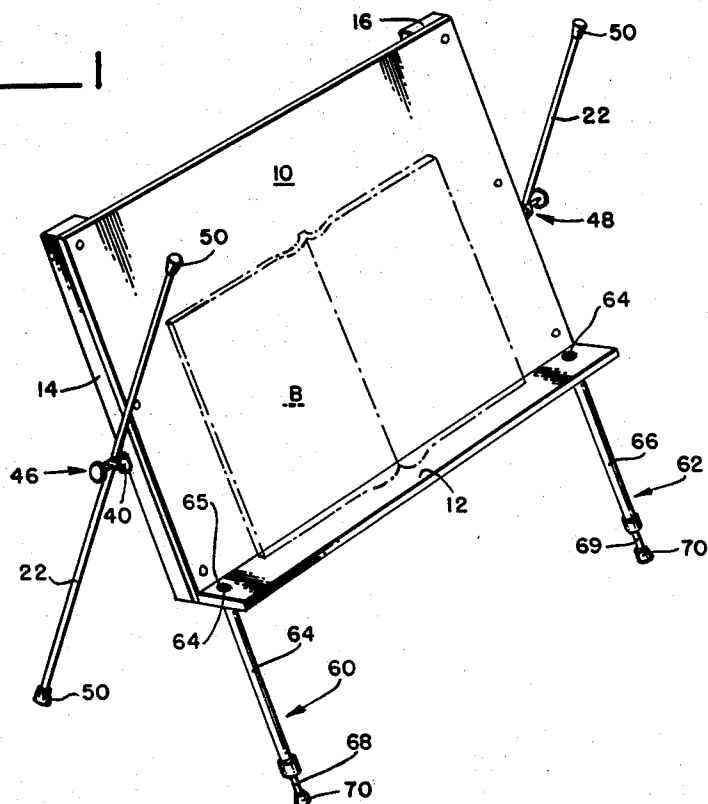
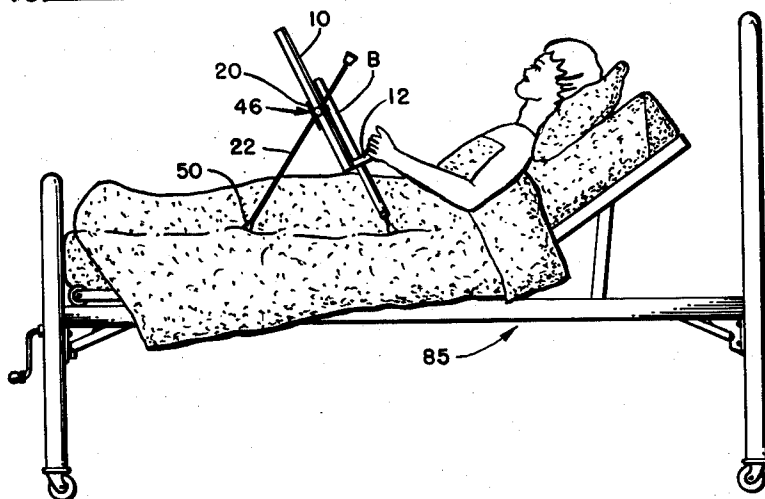


FIG. 2



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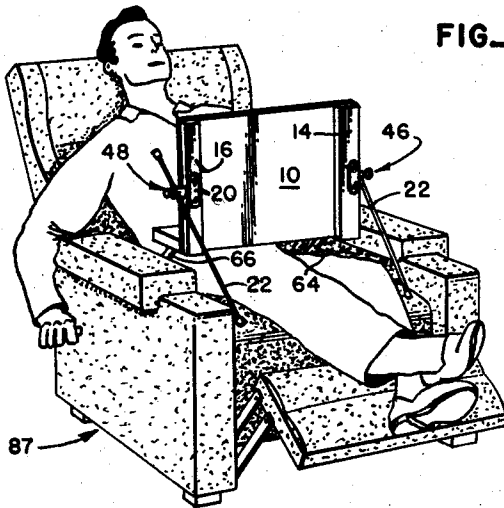


FIG. 4

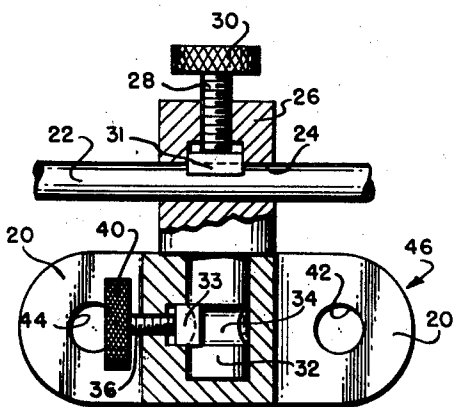


FIG. 6

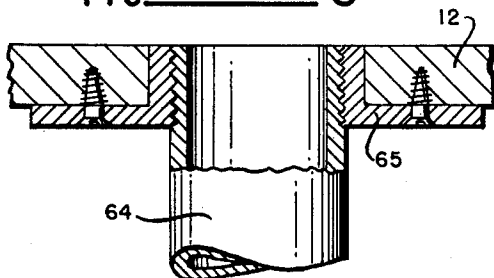
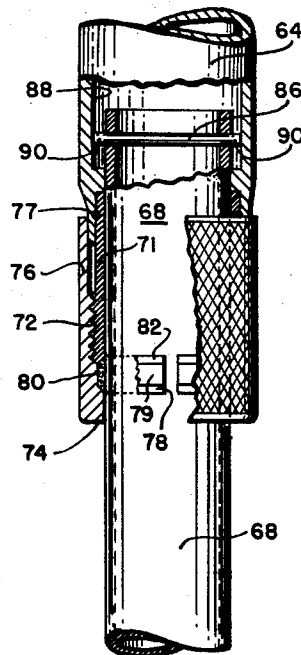


FIG. 5



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ADJUSTABLE BOOK HOLDING MEANS
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This present invention relates to the general art of devices intended to hold books and the like in a suitable position for convenient reading. More specifically, my present invention relates to an adjustable book holding device in which each of four positioning means are independently adjustable and lockable in their adjusted positions so as to adapt this device to a wide range of usefulness.

There are many persons who use book holding devices to assist them in reading; probably the greatest number of these are invalids or aged persons who are inclined to assume relaxed positions in bed or in various types of lounging chairs or couches. There is naturally considerable difference in the manner in which a book stand or rest is positioned on a bed and the one used on a lounging chair, for instance. For this reason it has been found that the adjustable devices employed to hold the various supporting elements of the book rest must be individually adjustable and be capable of being given adjustable friction contact when it is desirable to move the rest small amounts after the device has been put into use. This can be occasioned by a desire on the part of the person using the rest to make minor changes in his position. This present book rest is believed to offer many of the desirable adjustable characteristics which have not been available in any of the large variety of devices that have been examined.

A principal object of this present invention therefore is to provide a book rest that will hold a book at a backward inclined position so that the same will stay in position on the book rest.

A further object of this invention is to provide individually adjustable legs engaged in the lower portion of the book rest and which may be individually adjusted so as to take care of irregular surfaces and make it possible to have the book rest portion of this device in a substantially horizontal position.

A further object of this invention is to provide elongated rest members, which act as braces, slidably engaged with the upstanding portion of the book rest and these are to be provided with mounting fixtures which make it possible to apply a desired degree of friction to the rotary action of the fixture itself, and to further provide that a desirable degree of friction, up to full locking, can be applied to the elongated or rod-like rest members.

Further objects, advantages and capabilities will be apparent from the disclosure in the drawings or may be comprehended or are inherent in the device.

In the drawings:

FIGURE 1 is a perspective view illustrating one preferred arrangement of my book rest unit.

FIGURE 2 is a side elevation of my book rest as used by a person lying on an adjustable bed such as a hospital bed.

FIGURE 3 is a perspective view, on an enlarged scale, showing the adaptation of my book rest to the ordinary adjustable lounge chair and illustrating the wide range of adjustability possible with this equipment.

FIGURE 4 is a side elevation, partly in section and on an increased scale showing the construction of the fixture employed to permit the positioning of the elongated supporting members and to hold them in their final adjusted positions.

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FIGURE 5 is a vertical, sectional view on an increased scale, of one of the leg members and illustrating the friction locking device that makes it so convenient to adjust each of the two legs independently so that they may compensate for irregularities in the supporting bed or chair surface and make it possible to have the book itself held with its lower margin in a horizontal plane.

FIGURE 6 is a fragmentary view largely in section and on an increased scale showing the means for securing the adjustable legs to the book rest portion of my device.

Referring to the drawings, throughout which like reference numerals indicate like parts, the numeral 10 designates the planar back rest of my device which is inclined with its top backward from the supporting base so as to provide a slightly sloping rest for an open book. Disposed at the lower margin of back rest 10 is the substantially horizontal book supporting member 12. This is normally disposed at right angles to the plane of the back rest 10 so that the tendency will be to have a book well seated so that it will not be dislodged if the user should move the back rest in the normal course of movement of his body. The back rest and book rest portions may be made of any suitable material and for this purpose the lightweight hardwood faced plywoods appear to be the most satisfactory choice.

The back rest portion is provided at each end with marginal reinforcing members 14 and 16. These members give rigidity to lightweight sheet material which may be used in back rest 10 and also provide an adequate support for base 20 of the adjustable clamp member for the elongated positioning member 22. This member may be a solid rod or preferably a small diameter tube, in order to keep the over-all weight of the device at a minimum. Referring to FIGURE 4, member 22 passes through an opening 24 in the pivotable clamp member 26. Clamping action or adjustable friction is provided in the threaded screw 28 having the knurled finger disc 30 of considerable diameter so that adequate pressure can be exerted on saddle member 31 which has an arcuate underside to fully engage tube 22. Member 26 is pivoted within base 20 by means of the downwardly extending pivot portion 32. An annular groove 34 is made in the cylindrical portion 32 in order to accommodate the positioning and frictional screw 36. This screw has an end portion 38 which engages a pressure saddle member 33 having an arcuate inner surface to engage the bottom of groove 34 so that considerable frictional pressure can be provided. A finger disc 40 of ample size makes it possible to provide any reasonable pressure or friction desired. Base 20 is provided with two mounting holes 42 and 44 so that suitable securing means be passed therethrough to engage the side members 14 and 16 of the back rest and to thus hold the fitting indicated generally at 46 and 48 securely in position so that it can in turn position the elongated rod or tube 22. Each end of the tubes 22 are preferably provided with rubber cant tips as 50. Two foot support members as 60 and 62 are provided, each consisting of an upper tubular portion 64 or 66 fixedly secured to book supporting member 12 by a suitable flange 65 shown in FIGURE 6 and a lower, preferably tubular portion 68 and 69. Tubes 68 and 69 are preferably provided with rubber cushioning tips 70.

Referring to FIGURE 5, this is an enlarged scale detail, partly in section, of the friction joint or adjusting means disposed between the upper and lower members of legs 60 and 62. Tube 64 is provided at its lower end with an externally threaded portion 72, the inside of which is reamed to provide an accurate slidable bearing for the lower tube of the leg as 68. Portion 72 is preferably on a separate short tube 71 secured to tube 64 as by the snap ring 77. Engaging the outer tube 64 and serving as a lower guide at 74 for tube 68 is the threaded

clamp ferrule 76. This ferrule is provided with a lower sloping or beveled annular seat 78 for engaging the lower edge of the preferably ring type plastic friction member 79 having beveled edges and disposed on tube 68. The lower end of portion 72 indicated at 80 is similarly undercut to provide a beveled seat for the upper edge 82 of the friction member 79. The most suitable material for this friction ring is some of the newer cold flowing plastics, of which Teflon is a good example. However, if made in more generous proportions, an oil treated leather can be very practically employed. The lower tube 68 is shown near its lower adjustable position in order to indicate the stop pin 86 which is of a length to fit in the bore 88 of tube 64 and the overhanging portions as 90 provide adequate stops so that the lower tube portion will not be unconsciously pulled out too far and will not drop out when the friction band 79 has no pressure on it.

In FIGURES 2 and 3 have been illustrated two of the more common uses for my book rest. In FIGURE 2 it is shown on a hospital type bed 85 and in FIGURE 3 it is illustrated on the ordinary lounging chair 87. Many other uses may be made of this book holder which can be further adjusted so that the back rest portion 10 makes a small angle with the horizontal so that the device can be used as a lectern. Obviously it could also be used as a table for a person playing solitaire or writing letters. In adjusting the device it is common to adjust each support member separately. By so doing, one leg as 60 may be suitably adjusted and then the other leg member 62 adjusted so that the bottom book supporting portion 12 is substantially horizontal and at the height desired for clearance of the body of the user. The side or elongated support members 22 can then be suitably adjusted by the clamp fixtures 46 and 48. Here again, each should be adjusted separately as it may be desirable to have one leg at a considerable elevation over the other in order to have a good firm support for the book rest and it is for this reason that the adjustable features of the book rest, especially fittings 46 and 48, are preferably made of considerable size so that the bearing surfaces will be adequate to permit securing the different members, particularly the elongated support members 22, at unfavorable angles from the standpoint of mechanical advantage, and still be sufficiently rigid for their intended purpose.

It is believed that it will be clearly apparent from the above description and the disclosure in the drawings that the invention comprehends a novel construction of an adjustable book holding means.

Having thus described my invention, I claim:

1. An adjustable book holding means, comprising: (a) a planar back rest having a marginal reinforcing member secured thereto at each side; (b) a book supporting member disposed at right angles to the plane of said back rest and secured fixedly thereto; (c) adjustable and pivotable clamp members each having a base secured to one of the opposite sides of said marginal reinforcing members; (d) elongated positioning members adapted to slide through said adjustable clamp members and to be fixedly positioned thereby at the desired adjusted position; (e) two spaced apart leg members which extend downwardly and are adjustable for length secured substantially at right angles to the book supporting member; (g) said adjustable and pivotable clamp members each having a rotatable clamp member having a cylindrical portion with an annular groove and a pressure saddle member adjustably seated in said groove by a frictional screw, said rotatable clamp member having a through opening for the passage of said elongated positioning member and a saddle position to frictionally engage said elongated positioning member and a threaded screw disposed to apply adjustable pressures on said elongated positioning mem-

ber and (f) frictional locking means for holding said legs at an adjusted length.

2. An adjustable book holding means, comprising: (a) a planar back rest having a marginal reinforcing member secured thereto at each side; (b) a book supporting member disposed at right angles to the plane of said back rest and secured fixedly thereto; (c) adjustable and pivotable clamp members each having a base secured to one of the opposite sides of said marginal reinforcing members; (d) elongated positioning members adapted to slide through said adjustable clamp members and to be fixedly positioned thereby at the desired adjusted position; (e) two spaced apart leg members which extend downwardly and are adjustable for length secured substantially at right angles to the book supporting member; (h) said legs each comprising a flange secured to said book supporting member, a set of two telescoping tubes, the larger diameter tubes threadedly secured to one of said flanges and the other provided with a cushioning tip, a ring type resilient friction member having beveled edges, said large diameter tubes each provided with an externally threaded portion having a beveled seat to engage the upper edge of said friction ring members, a clamp ferrule threaded to engage said external threaded portion and having a beveled seat to engage the lower edge of said friction member; and (f) frictional locking means for holding said legs at an adjusted length.

3. An adjustable book holding means, comprising: (a) a planar back rest having a marginal reinforcing member secured thereto at each side; (b) a book supporting member disposed at right angles to the plane of said back rest and secured fixedly thereto; (c) adjustable and pivotable clamp members each having a base secured to one of the opposite sides of said marginal reinforcing members; (d) elongated positioning members adapted to slide through said adjustable clamp members and to be fixedly positioned thereby at the desired adjusted position; (e) two spaced apart leg members which extend downwardly and are adjustable for length secured substantially at right angles to the book supporting member; (h) said legs each comprising a flange secured to said book supporting member, a set of two telescoping tubes, the larger diameter tubes threadedly secured to one of said flanges and the other provided with a cushioning tip, a ring type resilient friction member having beveled edges, said large diameter tubes each provided with an externally threaded portion having a beveled seat to engage the upper edge of said friction ring members, a clamp ferrule threaded to engage said external threaded portion and having a beveled seat to engage the lower edge of said friction member; (g) said adjustable and pivotable clamp members each having a rotatable clamp member having a cylindrical portion with an annular groove and a pressure saddle member adjustably seated in said groove by a frictional screw, said rotatable clamp member having a through opening for the passage of said elongated positioning member and a saddle positioned to frictionally engage said elongated positioning member and a threaded screw disposed to apply adjustable pressures on said elongated positioning member and (f) frictional locking means for holding said legs at an adjusted length.

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