Aug. 1, 1944. C. K. KU 2,354,998

READING STAND

Filed Dec. 1, 1941 2 Sheets-Sheet 1

Fig. 1

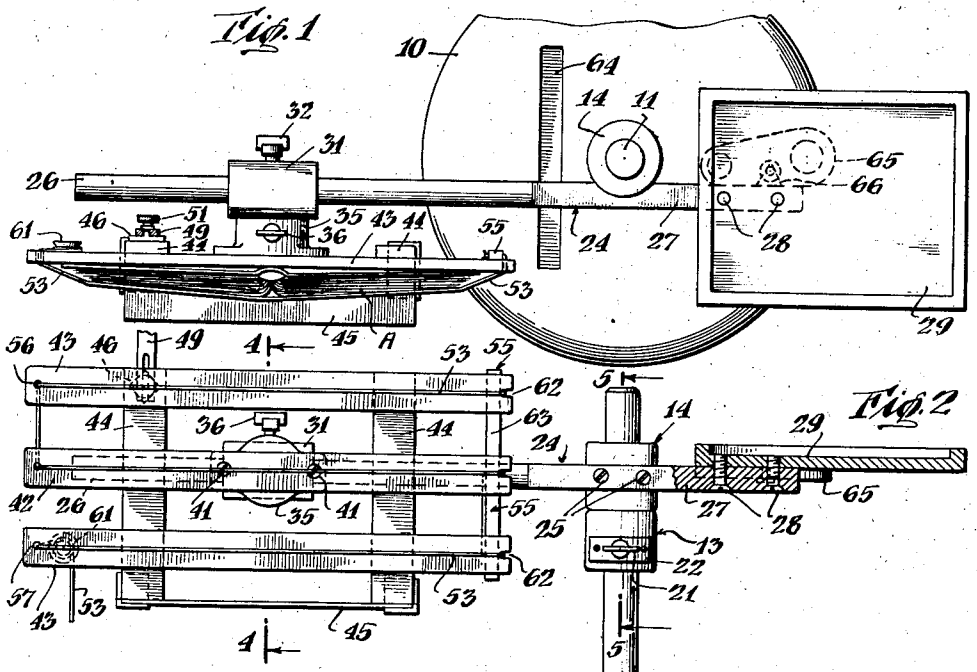


Fig. 3

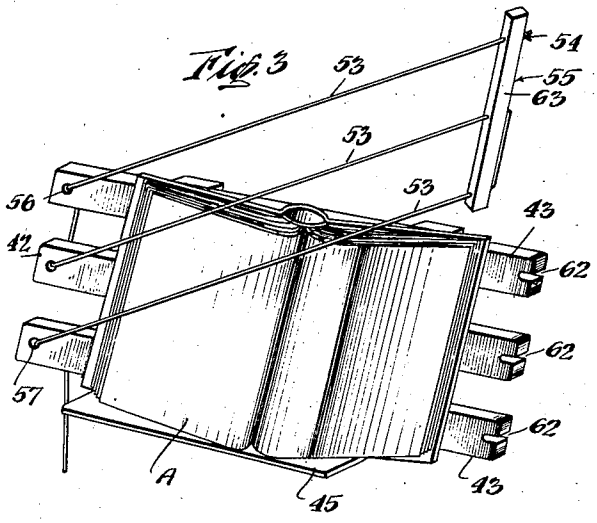
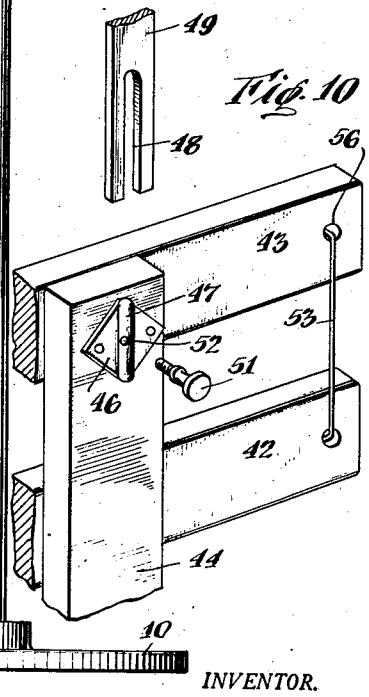


Fig. 10





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READING STAND

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Fig. 8

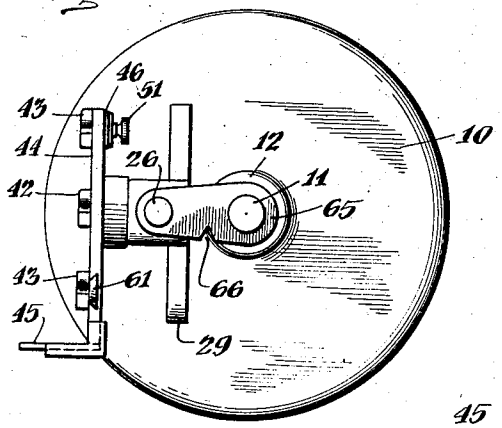


Fig. 4

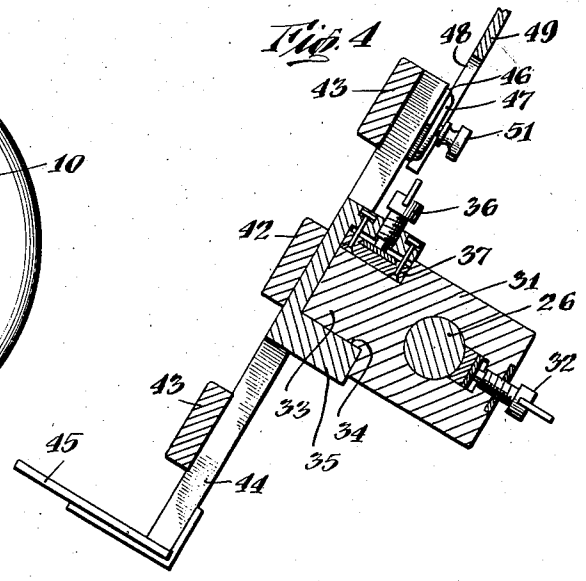


Fig. 9

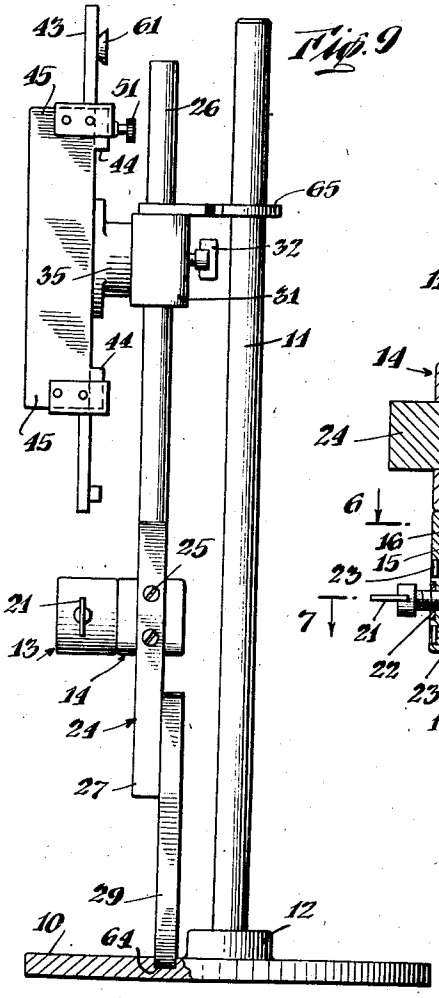


Fig. 5

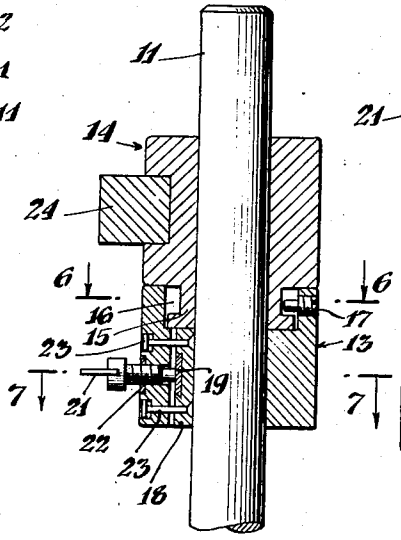


Fig. 6

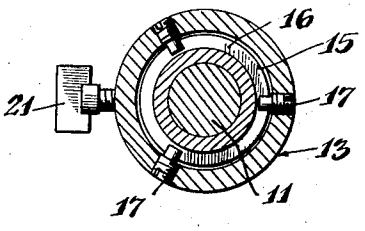
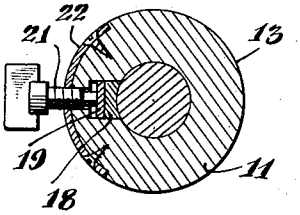


Fig. 7



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UNITED STATES PATENT OFFICE

2,354,998

READING STAND

Chain Ki Ku, Kowloon, Hong Kong, China; vested in the Alien Property Custodian

Application December 1, 1941, Serial No. 421,166

3 Claims. (Cl. 45—60)

This invention relates generally to book holders and has particular reference to what are usually referred to as reading stands.

One object of the invention is to provide a reading stand which will hold a book in substantially any position desired by the reader. This involves making provision for adjustments as to height and the angle at which the book is held, while the stand is so constructed as to be light in weight and therefore readily movable to set it at any desired distance from the reader.

Another object is to provide a reading stand of the character mentioned which can be partially knocked down or in effect collapsed so as to occupy a small space when not in use. This involves in the novel structure shown and described, the loosening of only one set screw to permit removal of a book holder unit from its normal position on a vertical standard, coupled with a simple and new means for holding the removed unit close to and in substantially parallel relation to the vertical standard.

Another object of the invention is to provide a support for an open book comprising convenient and novel means for preventing the leaves from turning except when turned by the reader. This means is readily adjustable to accommodate books of different sizes and thicknesses.

Still another object of the invention is to provide a novel device for holding the book holder unit in adjustment at different heights on a support while leaving the book holder free to rotate around the support. This is accomplished by providing an element, such as a sleeve, which can be adjusted at the desired height on the support and then secured in position; and a second element, preferably also a sleeve, which is rotatable on the support and to which the book holder unit is attached with a connection between the two sleeve elements which will prevent them from separating while making the height adjustment. This connection is also useful in collapsing the device for storage as the connection is maintained and the connected parts are therefore in proper relations when the book stand is taken from storage and set up for use.

With the foregoing and incidental objects and advantages in view, all of which will become more apparent later on, the invention consists in a novel construction and relative arrangement of parts, a preferred embodiment of which is hereinafter described with reference to the drawings accompanying and forming a part of this specification, the novel features of the invention being pointed out in the claims appended hereto.

In the drawings:

Fig. 1 is a top view of the reading stand set up ready for use.

Fig. 2 is a front view of the reading stand with some of the parts at the right of the figure being shown in cross-section.

Fig. 3 is a view of the book holder or rack with a book in position and the means for holding the book open about ready to be applied.

Fig. 4 is a section along the line 4—4 of Fig. 2.

Fig. 5 is a section along the line 5—5 of Fig. 2.

Fig. 6 is a section along the line 6—6 of Fig. 5.

Fig. 7 is a section along the line 7—7 of Fig. 5.

Fig. 8 is a top plan view.

Fig. 9 is a side view of the reading stand collapsed ready to be stored away when not in use, and

Fig. 10 is a perspective view of the portion of the rear of the book holder showing the means for holding a holder for a reading lamp.

The construction illustrated in the drawings comprises a rather wide base 10 on which is mounted a vertical standard 11. An escutcheon 12 may be employed to provide a socket for the standard or the part 12 may be integral with the base 10. Slidably mounted on the standard 11 are two elements 13 and 14. These two elements are connected together as shown in Fig. 5. The elements 13 and 14 will from now on be referred to as sleeves, but it is understood that this term is used mainly for convenience. The sleeve 14 has a reduced section 15 constructed to provide a peripheral groove 16. The sleeve 13 is constructed to provide a socket to receive the reduced portion 15 and around the periphery of the socket are set screws 17 which have their ends extended into the groove 16. This provides a connection which permits relative rotation of the sleeves 13 and 14 but the two sleeves are normally held against longitudinal separation. This permits the raising and lowering of sleeves 13 and 14 as a unit in adjusting the height of the book holder on the standard 11.

The sleeve 13 has a longitudinal groove along one side in which is mounted a friction block 18 backed up by a metal strip 19. Working against the metal strip 19 is the end of a set screw 21 threaded into the body of the sleeve 13 or into a metal plate 22 which is used when the sleeve 13 is constructed of wood. Loosening and tightening the set screw 21 will relieve and restore pressure by the friction block 18 against the standard 11 so as to free the sleeve for adjustment and then secure it at the desired level on

the standard 11. Plungers 23 extend from the exterior of the sleeve 13 into holes in the friction block 18 so as to prevent the latter from falling out when the sleeve is not in position on the standard. The plungers are preferably provided with heads fitting snugly in holes in the sleeve 13, although frictional fit between the plungers and the holes for them in the sleeve 13 and friction block 18, may be sufficient for all practical purposes.

Secured to and at right angles to the axis of the sleeve 14 is a bar 24 which is rectangular in cross-section at the point where it is connected to the sleeve. Screws 25 may be used for connecting the bar to the sleeve.

The bar 24 is given a circular cross-section 26 at one side of the sleeve 14 and is preferably rectangular in cross-section at the portion 27 lying at the other side of the sleeve.

Secured to the upper surface of the rectangular portion 27 as by screws 28 is a tray 29. This tray may be of any desired size or shape and weight and is used mainly to hold books or any desired article which, in addition to the weight of the tray, serves as a counterbalance when heavy books are on the holder at the other end of the bar 24.

Slidably mounted on a circular or tubular section 26 of the bar 24 is a member 31 provided with a clamping set screw 32 and associated construction similar to that described in connection with the set screw 21. The set screw 32 may be tightened and loosened to hold the member 31 in any longitudinal or angular relation with the bar 26. By this means the block or member 31 may be moved toward and away from the supporting vertical standard 11 and may be turned around the tubular or circular bar 26 so as to adjust the book holder supported by the member 31 in the desired position and then secure the adjustment by means of the set screw 32. As shown in Fig. 4, the member 31 is provided with a circular portion 33 normally fitting within a correspondingly shaped socket 34 in a member 35. The member 35 is provided with a set screw 36 and friction block 37 by means of which the member 35 may be turned around the projection 33 and then fastened by tightening the set screw 36. This adjustment is to permit changing the angle of the book holder relative to the shaft or bar 26 whenever such adjustment may be desired.

The member 35 is attached by means of screws 41, Fig. 2, to one of the bars 42 of the book holder or rack. In addition to the bar 42 the rack comprises two or more additional bars 43 spaced apart from and extending parallel to the bar 42. The bars 42 and 43 are held together and in the relation stated by bars 44. The latter bars preferably extend below the lower bar 43 and carry a ledge 45 for supporting a book A. This ledge may be of sheet metal or any other desired material and may be attached in any desired way to the bars 44.

On the rear side of one of the bars 44 is a metal plate 46, Fig. 10, provided with a ridge 47 to engage a slot 48 in an arm 49, which at its upper end is provided with any suitable kind of a holder for a reading lamp. The arm 49 is held in adjusted position by a set screw 51 which may be tightened in a threaded hole 52 in the plate 46.

From all of the foregoing it is apparent that by manipulating the set screws 21, 32 and 36 the height and angle at which the book holder will be held may be adjusted as desired, thereby providing a very flexible arrangement adapting the device to the requirements of the user.

After a book has been placed on the ledge 45 and opened to the desired page, the pages are held against accidental turning by threads 53 which are drawn across the open book and then secured. While the term "threads" has been used it is intended to include in that term any suitable cord or elastic which will serve the purpose. The threads 53 are all really a part of one thread which is secured at the end 54 in a bar 55 and which passes down through holes 56 at the end of the top bar 43, then up through a corresponding hole in the bar 42 through spaced apart holes in the bar 55 and down through another hole 57 in the lower bar 43. The number of threads and the arrangement of the threads relative to the bar 55 will vary according to the number of bars 42 and 43 comprised by the book holder. On the back of the lower bar 43 is a hemispherical chock 61. The thread 53 is let out or taken up as needed to get the desired adjustment and the free end of the thread is then wound around the chock 61. The threads 53 are drawn across the open book by manual movement of the bar 55 to engage the threads with notches 62 in the ends of the bars 42 and 43 and the bar then held with its flat face 63 on the undersides of the bars 42 and 43. The slots 62 are deep enough and the arrangement is such that the threads will be held across the open book and prevent the turning of the leaves. This is best illustrated in Fig. 1 of the drawings. It is apparent, of course, that the bar 55 may be seated under the bars 42 and 43 with the threads in the notches 62 and the threads then adjusted endwise and secured by the chock 61 when such an operation is desired. It is apparent that by this arrangement and way of holding the threads books of various sizes may be accommodated in reading position.

When it is desired to put the reading stand away it may be knocked down or collapsed as previously stated. This involves loosening the set screw 21 and then sliding the sleeves 13 and 14 and all of the parts attached to them off of the vertical standard 11. This assemblage is then turned and put in position parallel to the vertical shaft 11 with the edge of the counter balancing tray 29 in a slot 64 in the upper surface of the base 10. The parts are held in this relation by a flat member 65 having two circular openings, one to engage the standard 11 and the other to engage the circular part 26 of the main horizontal bar of the reading stand. The entire apparatus will then appear as shown in Figs. 8 and 9. When the stand is set up and in use the member 65 may be kept under the counterbalancing tray 29, preferably by engaging a slot 66 in its side with a headed stud on the underside of the tray. This is illustrated in Fig. 1.

The base 10 may be of any size or shape sufficient to give stability to the stand when it is in use. It is preferred to make the base wide and flat enough to hold books both as a matter of convenience and in order to serve as counterbalances in the direction desired for the stand, particularly when a heavy book is put on the book holder.

What is claimed is:

1. A reading stand comprising a base and a vertical standard supported by said base, a pair of aligned sleeves slidable and rotatable on said standard, a portion of one sleeve extending within the other sleeve and means on the other sleeve engaging said extending portion whereby the upper sleeve is rotatably adjustable with respect to the lower sleeve, means for adjustably securing

the lower of said sleeves in position on the standard, a connection between the sleeves constructed to permit relative rotation of the sleeves while preventing axial relative movement of the sleeves, a horizontal bar secured intermediate its length to the upper sleeve, and a book support on each end of the horizontal bar.

2. A reading stand comprising a base and a vertical standard supported by said base, a sleeve rotatable and slidable on said standard and having a circumferentially extending groove at its lower end, a second sleeve below the first sleeve adjustable up and down on the standard and having a plurality of screws projecting into the groove in the first sleeve to connect the two sleeves for substantially unitary movement up and down on said standard while permitting rotation of the first sleeve relative to the second sleeve, means for securing the second sleeve in adjusted position on the standard, a horizontal bar secured intermediate its length to the first sleeve, a book rack on one end of said bar and a book stand on the other end of said bar.

3. A reading stand comprising a base and a vertical standard supported by said base, a pair of sleeves slidable and rotatable on said standard, means for adjustably securing the lower of said sleeves in position on the standard, a connection between the sleeves constructed to permit relative rotation of the sleeves while permitting axial relative movement of the sleeves, a horizontal bar secured to the upper sleeve, a book holder comprising a back, means intermediate the back of the book holder and the horizontal bar for adjustably holding the book holder in different longitudinal and angular positions on the horizontal bar, a plurality of thread strands held at one end by the back of the book holder, a manually operable member holding the strands at their other ends, means carried by the book holder back for holding the strands when said strands have been drawn across the book and engage with said means by the manually operable member, and means whereby the lengths of the strands may be varied to accommodate books of various thicknesses.

CHAIN KI KU.