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Weir

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[54] **READING TABLES**

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[52] **U.S. Cl.** **248/445;** 108/49

[51] **Int. Cl.**[2] **A47F 5/12;** A47B 23/00

[58] **Field of Search** 108/46, 43, 49; 248/444, 248/445, 457, 124

[56] **References Cited**

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Primary Examiner—Casmir A. Nunberg

[57] **ABSTRACT**

A reading table arranged for support on a bed, chair or floor including a table top with members for holding a book or other reading matter thereon, the top mounted for changed inclination, lateral and vertical positions relative to upright legs and supporting feet, each of the latter being arranged for adjustment to vary disposition of the table top and to enable fold-up into a storage position.

3 Claims, 1 Drawing Figure

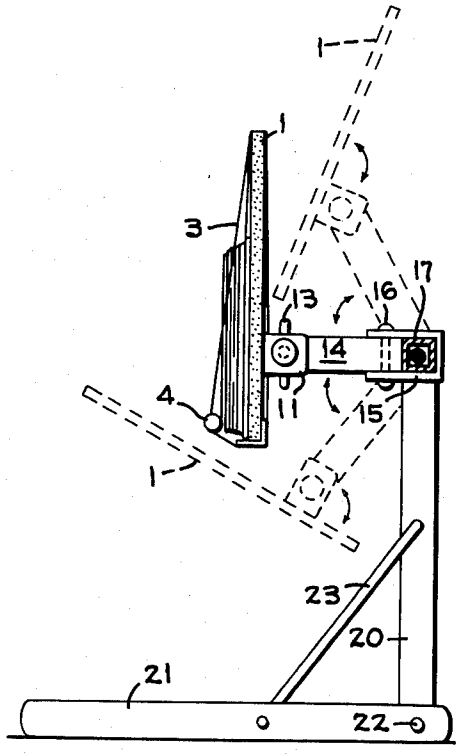


Fig-1

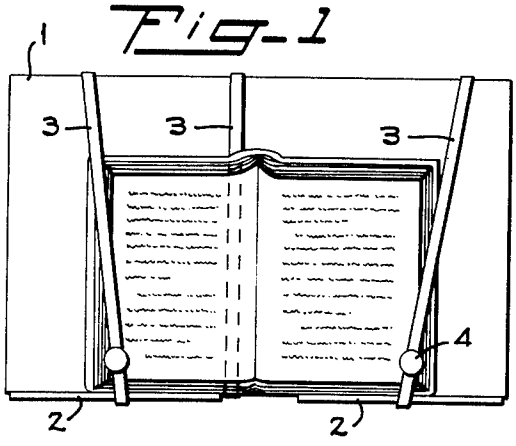


Fig-2

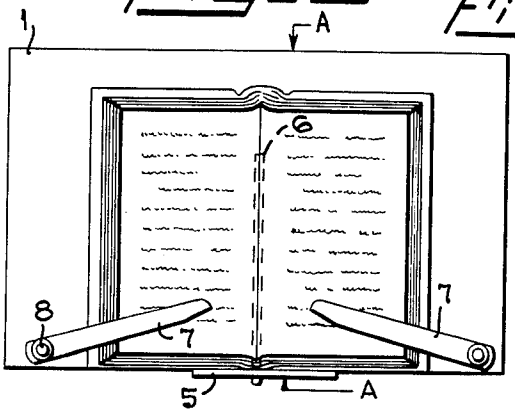


Fig-3

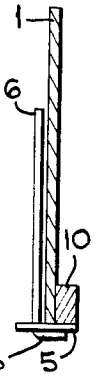


Fig-4

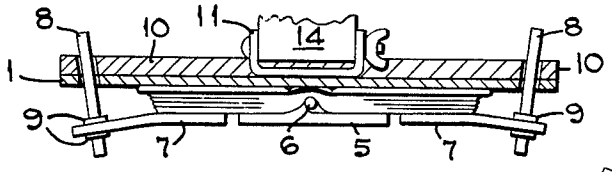


Fig-5

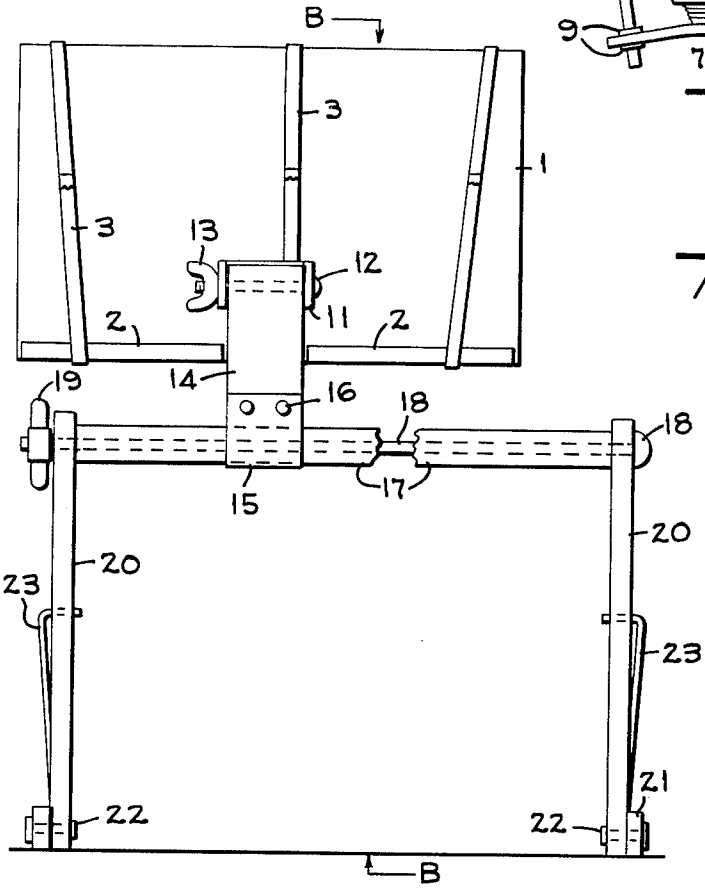
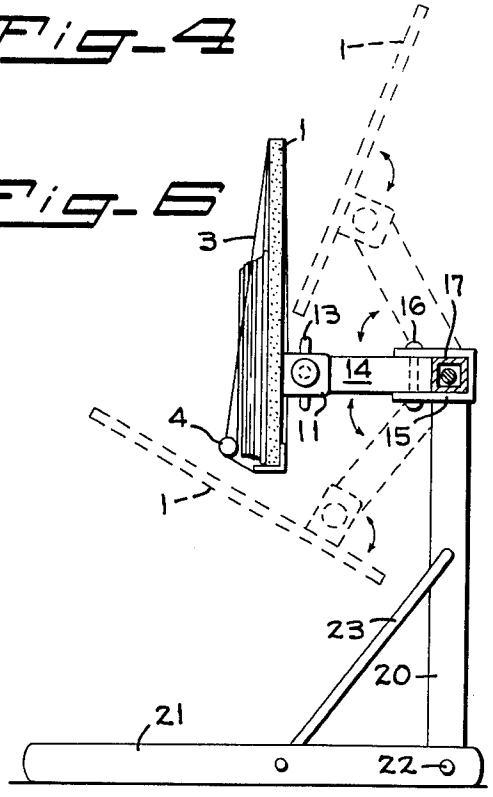


Fig-6



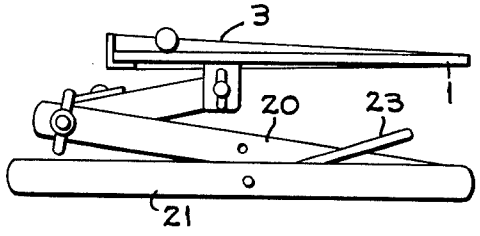


Fig-7

READING TABLES

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3,698,328	10/1972	Weir	108/6

This invention relates to a table for facilitating reading of books, magazines and other reading matter. The table may also serve any other purpose for which it is found useful.

One important objective of the present invention is to permit placement of a book at any convient height for reading.

Another object of importance is to permit placement of a book at any desired inclination for reading.

Another object of importance is to provide means for moving a book sideways so that either page of an open book may be placed in front of the reader.

Another object of importance is to permit a book to be placed at any convient distance from the reader.

Another object of importance is to provide holdown members for holding books of different sizes and thicknesses open on a table top, yet permit unobstructed view of reading matter and easy turning of pages even when a book on the table top is turned up-side-down.

Another object or importance is to provide readers with the means for supporting reading matter for readers, who read while lying down.

Another object of importance is to provide a table that is light weight and may be folded into a compact bundle to facilitate portability and storage.

Other objects of importance will appear from the following description, the claims appended thereto, and from the annexed drawings in which like reference characters designate like parts throughout the several views and wherein FIGS. 1 and 2 show two different means for holding a book on the table top.

FIG. 1 is a frontal view showing means No. 1 for holding a book on a reading table top.

FIG. 2 is a frontal view showing means No. 2 for holding a book on a reading table top.

FIG. 3 is a side elevational crossection view taken along line A—A of FIG. 2.

FIG. 4 is a top view of FIG. 2.

The remaining FIGS. 4, 5 and 6 show means No. 1 for holding a book on the table top.

FIG. 5 is a back elevational view of the reading table.

FIG. 6 is a side elevational view of the reading table.

FIG. 7 shows the reading table in the process of being collapsed into its fold-up position for storage.

The preferred embodiment of the invention is shown in FIG. 1 and FIGS. 5 thru 7 wherein the table is constructed as follows:

The table top 1 may be formed from a single rectaugular sheet of masonite. Fastened to the top 1 along one edge are ledges 2 that prevent books and other reading matter placed on the table top from sliding off when the top is inclined. Ledges 2 are lengths of extruded angles, one side of the angle being fastened to the back of this top 1 near its edge and the other side protruding outward at a right angle to the table top edge to form a ledge.

Elastic straps 3 are used for holding a book, or other reading matter down on table top 1. If a book is to be read when turned up-side-down, its top cover is slid under the center strap and the other two straps are placed across book covers as illustrated. These latter two straps are threaded through beads 4 which may be slid to any position along the straps 3 and are used to reduce friction of straps on book pages. A strap 3 consists of a length of flat-elastic joined at its ends to form a loop. These straps furnish the streach necessary to accomodate books of varying thicknesses.

To turn pages, the reader lifts up on the upper corner of the right-hand page. This causes the lower corner of the page to slide out from under the right-hand strap streached across the lower right-hand corner of the book. The page is turned and this corner is slid under the left-hand strap streached across the lower left-hand corner of the book. If the page corner will not slide under the left-hand strap, the strap is lifted by the left hand as the right hand slides the corner of the page under it. The table top 1 is fastened to a U-shaped bracket 11. Bracket 11 is pivotally connected to one end of arm 14, which is a rectangular block of wood. Legs of bracket 11 straddled an end of block 14. A bolt 12 passes through a hole in each bracket leg and a hole through end of block 14. Bolt 12 serves as an axis around which bracket 11 can pivot to permit changing the inclination of table top 1 relative to arm 14. A wing-nut 13 is screwed onto one end of bolt 12. The tightening or loosening of wing-nut 13 increases or decreases the friction between bracket 11 and arm block 14 thereby increasing or decreasing the resistance to changing the inclination of the table top.

Arm 14 is slidably connected to shoulder 17. Shoulder 17 is a square tube. Channel 15 surrounds square-tube-shoulder 17 on three sides and is fastened to arm 14 on the fourth side by rivets 16. Sufficient clearance is left between square-tube-shoulder 17 and channel 15 to permit the channel to slide along shoulder 17 when table top 1 is pushed sideways left or right.

Square-tube-shoulder 17 is pivotally connected at each end to leg 20. Bolt 18 which passes through a hole near the top end of each leg 20 and through the center of shoulder 17 serves as an axis around which shoulder 17 can pivot. When arm 14 is swing up or down, shoulder 17 pivots about bolt 18. A wing-nut 19 when screwed in or out on bolt 18 increases or decreases the friction between legs 20 and shoulder 17 thereby increasing or decreasing the resistance to changing the inclination of arm 14 relative to the legs and therefore the height of the reading table top 1 is changed.

Pivotally connected to each leg 20 is a foot 21. Axis of the pivot for each leg is rivet 22 which passes through a hole near one end of each leg 20 and foot 21. A wire brace 23 holds each leg in an upright position. One end of each wire brace 23 which is formed in a Z-shape, fits at one end in a hole in a leg 20 and its other end fits in a hole in foot 21. When one end of a brace 23 is slipped out of hole in a leg 20, the leg and foot can be collapsed to a fold up position as illustrated by FIG. 7.

FIGS. 2, 3, and 4 illustrate means No. 2 for holding a book on table top 1 wherein the table top and book holding means is constructed as follows:

The table top may be formed from a single rectangular sheet of masonite. Fastened to the back of table top 1 along one edge is rectangular molding **10.** Fastened to a side of molding **10** is a ledge **5** that prevents books and other reading matter placed on the table top from sliding off when the top is inclined. Ledge **5** is a thin extruded rectangular bar that extends outward at a right-angle to the table top to form a ledge.

Rod **6** is used to hold the center-line along binding of an open book from falling off table top **1** when the top is facing in a downward direction. As illustrated in FIG. **3,** rod **6** is parallel to and spaced a short distance from table top **1.** Rod **6** is perpendicular to and passes through a hole in ledge **5** then bends at a right angle to the top **1** and is fastened to the underside of ledge **5.** When placing a book on the reading table top **1,** the book is opened and its center is slid between rod **6** and table top **1** until the lower edge of its cover comes to rest on ledge **5.**

As illustrated by FIGS. **2** and **3,** two oppositely disposed page hold-down finger ensembles are used to hold pages of a book down. A page hold-down finger ensemble is an assembly of four parts consisting of a transparent elongated bar finger **7,** a rod **8** and two fasteners **9** which are pushnut fasteners part number PS **250385** manufactured by Palnut . . . a Division of United Carr Inc. The rod **8** passes through a hole in one end of finger **7.** Finger **7** is held in place near one end and perpendicular to rod **8** by pushnut fasteners (flat round type) **9** which are pushed on rod **8** from opposite ends until they sandwich finger **7** between them. Due to their construction, fasteners **9** can not be backed-off rod **8.** Rod **8** at its end opposite where finger **7** is attached is slidably and rotatably held in a hole whose axis passes at an angle through table top **1** and rectangular molding **10.** As finger rods **8** emerge from holes through top **1** and molding **10,** they slant toward each other so that fingers **7** when pointing toward each other also point inward toward center of ledge **5.** This finger slant-in construction is to provide the means for holding fingers **7** in the position that they are placed. When a rod **8** is manually pushed into its associated hole, finger **7** moves toward then makes contact with a page of an open book. When rod **8** is pushed further into its hole, the finger pressure on the page is increased. FIG. **7** is made of transparent acrytic plastic so that as it is pressed against a page, it acts as a flat spring that cocks rod **8** in its hole causing it to bind in the hole. Rod **8** therefore holds in the hole position in which it is placed so long as there is pressure on finger **7.** When table top **1** is facing downward, the weight of book pages against fingers **7** create the aforementioned pressure-spring-action causing rods **8** to stay in the hole positions placed.

When loading a book a book on the table top **1,** fingers **7** are rotated outward away from the center of the top. Once a book has been placed in an upright position on the ledge **5** its center behind rod **6** as previously described, fingers are rotated back to the desired page hold-down positions. Finger **7** pressure on pages may be increased by pushing on one end of rod **8** and reduced by pushing on the opposite end of rod **8.** It is noted that the page hold-down construction described permits hold-down finger ensembles to be quickly and easily adjusted to accomodate different page. stack thicknesses as well as pressure of a finger on a stack of pages.

The procedure for turning pages is as follows: The reader picks-up the upper right hand corner of a book page with the thumb and forefinger of his left hand while his right hand rotates rod **8** so that righthand page hold-down finger **7** is rotated outward until it clears the page, then back again under this top page to the desired hold-down position on the page below. The page is turned with the left hand then held down by the right hand while the reader's left hand is used to rotate the lefthand page hold-down finger first out away from the underlying page, then back on top of the page just turned and brought to rest again in the desired hold-down position. The above described reading table and bookholding means facilitate reading by making it unnecessary to hold a book while reading whether the reader is sitting up or lying down and provides the flexibility required to rapidly position a book as eyes move from top of page to bottom and from one page to the next. As a reader reads from top of page to bottom, the top may first be brought closer to the eyes by tilting the upper portion of the table top closer to the eyes. As the eyes move toward the bottom of the page, the lower portion of the page may be brought closer by tilting the table top in the opposite direction. This action is facilitated by wing nut **13** which may be turned to a setting just tight enough to provide the right amount of arm block **14** to bracket **11** friction or pressure required to permit changing of the table top inclination, yet hold it in the position set. When a reader moves from one page to another, the top may be quickly slid sideways to bring a new page into convient reading position. Pages are easily turned.

Reading tables of which I have a knowledge, except for my invention U.S. Pat. No. 3,698,328 issued Oct. 17, 1972, do not provide the combination of features described above for facilitating reading and permiting the table to be folded-up for storage and portability. The present invention represents an improvement over my former invention U.S. Pat. No. 3,698,328 in the following respects:

1. The vertical height of the table top can be more easily adjusted up or down. To change table top vertical height my former invention requires the independent adjustment of two separate legs, each adjustment requiring the steps of (1) loosening a knurled-lock-nut (2) changing the length of a telescoping leg and (3) tightening the knurled-lock-nut. In the present invention, the height adjustment arm **14** may be swung up or down merely by pushing up or down on top **1.** This action is facilitated by wing-nut **19** which may be turned to a setting just tight enough to provide the right amount of shoulder **17** to leg **20** friction required to permit changing of the table top height, yet hold it in the position set.

2. Construction of table legs and feet are considerably simplified by the present invention compared to my former reading table invention U.S. Pat. No. 3,698,328.

3. The table top of my former reading table invention is very limited with respect to how far it can be inclined because it can only be inclined slightly toward the facing down position before further inclination in this direction is obstructed by the table's own legs. In the present invention, arm **14** holds the table top **1** out away from legs **20** so that the top can be inclined to a completely up-side-down position if desired.

4. Fold-up of the present invention is quicker and easier to understand since it works on a simple four-fold principle whereas my former reading table invention requires a combination of four-fold, collapsing of telescoping legs and rotation of feet to achieve a fold-up position.

5. Book hold-down straps 3 are of simpler construction than those of my former reading table invention since each strap consists of a simple flat elastic loop whereas each strap of my former invention consisted of three components (1) a cord (2) spring and (3) hooks.

Furthermore some features illustrated and described in my previous reading table invention U.S. Pat. No. 3,698,328 were not claimed and therefore are included in the claims below. It is believed apparent that the present invention is not necessarily confined to the specific use described above since it may to utilized for any purpose to which it may be suited. Nor is the invention recessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles of operation, it being considered that the invention comprehends any minor change.

What is claimed is:

1. A reading table which comprises:
- a table top,
- a pair of legs each with a foot projecting outwardly from its lower extremity,
- a horizontal crosspiece pivotally connected at each of its opposite ends to the upper extremity of a leg,
- means for locking said legs in adjusted disposition around the axis of said crosspiece,
- an arm projecting outwardly from the crosspiece, said arm free at one end to slide along the length of the crosspiece,
- means for pivoting the arm in unison with the crosspiece around the axis of the crosspiece,
- said arm pivotally connected at its other end to the table top, and
- means for reasonably locking said table top in adjusted angles relative to the arm.

2. A reading table with foldable legs which comprises:
- a table top,
- a pair of equal length legs each with a foot pivotally connected to its lower extremity,
- means for connecting the upper extremity of said legs to the table top,
- a pair of elongated braces pivotally connected at their lower extremities to opposite feet,
- means for locking the upper extremites of the braces to at least one pair of points on opposite legs to form equal leg-to-foot angles.

3. A reading table with foldable legs which comprises:
- a table top,
- a pair of equal length legs each with a foot pivotally connected to its lower extremity,
- means for connecting the upper extremity of said legs to the table top.
- a pair of elongated braces pivotally connected at their upper extremities to opposite legs, and
- means for locking the lower extremities of the braces to at least one pair of points on opposite feet to form equal leg-to-foot angles.

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