(No Model.) 3 Sheets—Sheet 1.

J. M. LLOYD.

BOOK SUPPORT AND LEAF HOLDER.

No. 513,402. Patented Jan. 23, 1894.

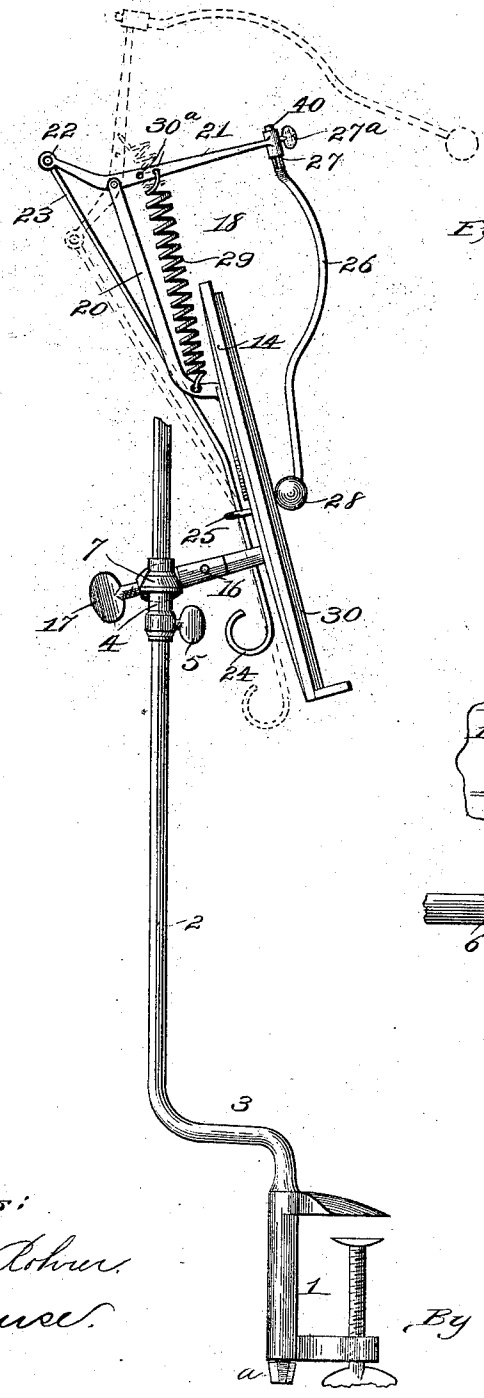

Fig. 1.

Fig. 4.

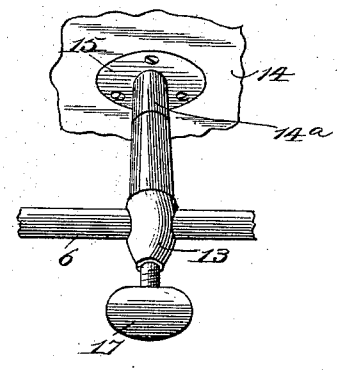

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Fig. 2.

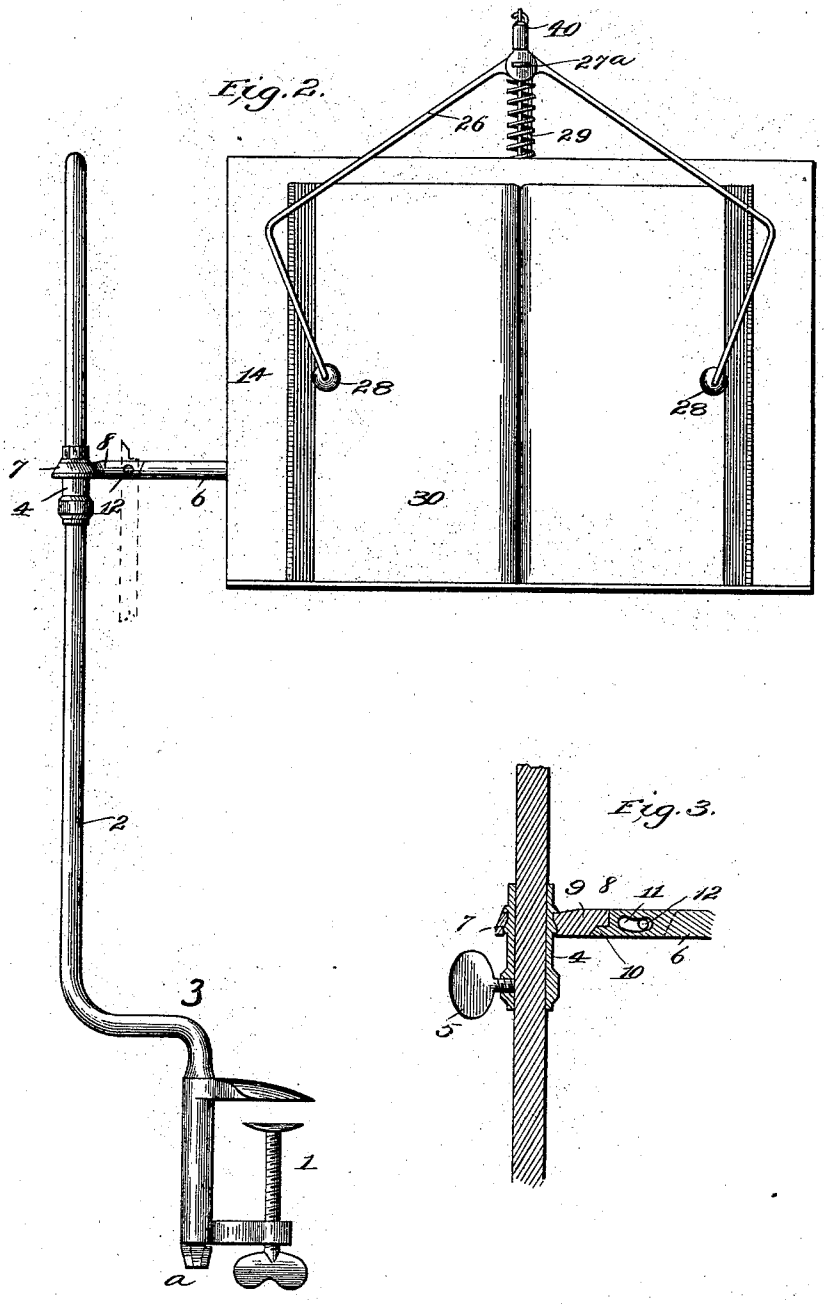

Fig. 3.

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Fig. 5.

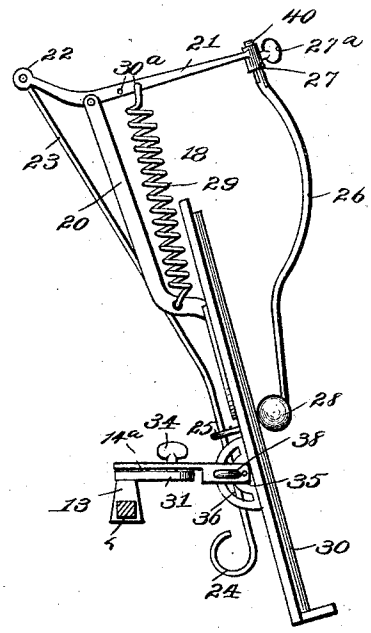


Fig. 6.

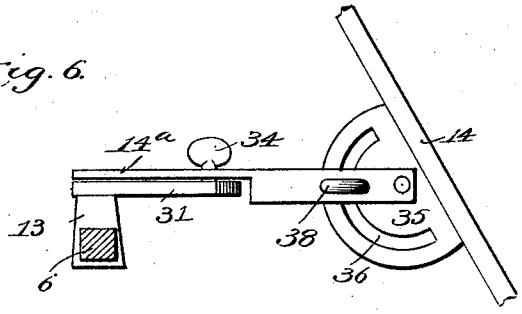
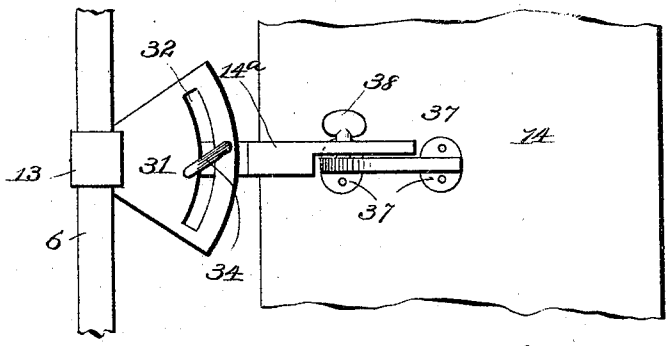


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN M. LLOYD, OF LUVERNE, MINNESOTA.

BOOK-SUPPORT AND LEAF-HOLDER.

SPECIFICATION forming part of Letters Patent No. 513,402, dated January 23, 1894.

Application filed March 1, 1893. Serial No. 464,267. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. LLOYD, a citizen of the United States, residing at Luverne, in the county of Rock and State of Minnesota, have invented certain new and useful Improvements in Book-Supports and Leaf-Holders, of which the following is a specification.

My invention relates to improvements in book-supports and leaf-holders, whereby the support may be adjusted to any height, position or angle, and the leaf-holder so adjusted as to securely hold the leaves of any sized book that may be supported by the said book-support, and my invention consists of certain features of novelty to be hereinafter fully described with reference to the accompanying drawings and specifically pointed out in the claims.

In the said drawings—Figure 1 is an end view of my improved book-support and leaf-holder. Fig. 2 is a front view of the same. Figs. 3 and 4 are detail views. Fig. 5 is an end view of a modification of my book-support with the leaf-holding device attached. Fig. 6 is an enlarged end view of the same, and Fig. 7 is a bottom plan view.

Referring to the drawings: 1 represents a screw clamp, which may be provided with cushions to prevent any injury to the article of furniture to which it is clamped, for attaching the device to a chair, table, &c., and 2 is a vertical rod secured to said clamp and adapted to turn therein. The said rod may be secured in any plane by means of the nut *a*. Just above the clamp 3, the said rod 2 is bent in a horizontal and vertical direction to avoid bringing the rod too near the person, and to give to the said rod a greater amount of adjustability.

4 represents a sleeve which works on the vertical rod 2, and can be secured to said rod at any desired point by means of the set screw 5.

6 represents the horizontal arm, which is secured to the sleeve 4 by means of a collar 7 and is adapted to rotate in a horizontal plane about the sleeve 4. The rod 6 is connected to the collar 7 by means of a hinge-joint 8, formed by mortising the projection 9 of the collar, and inserting within said mortise the tongue 10 of the rod 6. A slot 11 is formed in the tongue 10 and has passed through it a pin 12, so that when the parts are in locked position (as seen in Fig. 3) the rod 6 is held in a horizontal plane, and when in unlocked position, the said rod can be dropped down out of the way as seen in dotted lines Fig. 2.

13 represents a sleeve which works on the horizontal rod 6, and has attached to it the book-support 14. The said book-support in Figs. 1 and 4, is attached to the sleeve 13 by means of a short rod 14^a which is secured to the book-support by means of a plate 15, and which fits, and is adapted to be rotated in the sleeve 13. The rod is prevented from leaving the sleeve 13 by a pin 16. The book-support is adjusted on the horizontal rod 6, either horizontally or at an angle by means of the set-screw 17.

18 represents my leaf-holding device which is secured to the back of the book-support 14, by means of the strip of metal 20 which is secured to the support at its lower end and mortised at its upper end, and has pivoted thereto the bell-crank lever 21.

Secured to the bell-crank lever at 22 is a rod 23 provided at its lower end with an operating handle 24, and which rod passes through a guide 25.

26 is a pair of arms, hinged together at their upper ends and secured to the bell-crank lever at 27 by means of a joint 40 which enables the arms to accommodate themselves to the unevenness of an open book, and 27^a is a set-screw which adjusts the arms to the different sizes of books.

28 are cushions placed on the lower ends of the arms 26 to prevent them slipping off the book and to prevent any injury which might occur to the books, while on the support.

29 is a spring having one end connected to the bell-crank lever and the other end to the strip of metal and adapted to bring the arms to bear upon the book 30 on the support, and to return the same to their normal position after they have been elevated by the rod. The tension of the spring is regulated by changing one end of the spring 29 from one of the openings 30^a in the bell-crank lever to the other.

In Figs. 5, 6 and 7 I have shown a modification of my book-supporting device. In this modification the horizontal arm 6 is made square, and thus the necessity of clamping the

sleeve 13 on the said rod by means of a set-screw to prevent the sleeve from slipping around the rod is obviated. The sleeve 13 has formed integral with it a quadrant portion 31 provided with a slot 32. Hinged to the sleeve 13 is the short rod 14^a the lateral movement of which is limited by means of a pin 34 working in the slot 32.

35 is a semi-circular piece of metal pivoted at the end of the rod 14^a provided with a curved slot 36 and wings 37 by which the book-support is secured thereto. The movement of the semi-circular piece of metal and the leaf-holder is limited by the piece 38. By this construction as in the construction shown in Figs. 1 to 4, the leaf-holder can be adjusted in any plane by means of the quadrant 31 and pin 34 and at any angle by means of the semi-circular piece of metal 35 and pin 38.

The operation of my device is as follows:—A book is placed on the support, opened, and the arms 26 adjusted to suit the same, the cushioned ends of said arms resting on the margin of the book. The desired height of the support is obtained by adjusting the sleeve and set-screw on the vertical arm, and the desired position and angle of the support obtained by adjusting the said support on the horizontal arm by either of the means above described. When it becomes necessary to change the page in the book, the operating handle is grasped in one hand and pulled downwardly and the arms raised, while the page is changed by the other hand. When the book is to be removed or a book is on the support which does not require the spring arms to hold the same open, they can be held up off the book by drawing the operating handle downward as far as the guide 25 will permit it to come, and when they are in this position the spring has no tendency to return them to their normal position.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a book-support and leaf-holder, the combination of the base support, a vertical rod provided with a bent portion attached to said support, a horizontal rod attached to said vertical rod by means of a sleeve and set-screw, and adapted to work thereon, a book support adjustably secured to said horizontal arm, and a leaf-holding device secured to said book-support and consisting of a bell-crank lever pivoted to the support, and carrying at one end a pair of adjustable arms, and at its other end an operating handle substantially as shown and described.

2. In a book-support and leaf-holder, the combination of a clamp or base support, the vertical rod secured to said support, the horizontal arm adjustably secured to said vertical arm, the book-support adjustably secured to said horizontal arm, and a leaf-holding device secured to said book-support, consisting of the strip of metal, a bell-crank lever pivoted to said strip of metal, a pair of adjustable arms, pivotally secured to one end of said lever, the rod and operating handle secured to the other end, and the spring, substantially as shown.

3. In combination with a book-support, a leaf-holding device consisting of a lever pivoted to the support, provided at one end with a pair of adjustable arms and at its other end with an operating handle, and a spring secured to the end of the lever carrying the adjustable arms and to the support, for holding the arms against the support, substantially as shown and described.

4. In combination with the flat support upon which the book rests, the herein described leaf-holder consisting of the lever pivoted above said holder and having at one end the arms projecting downward over the leaves to hold them down upon the support, and a spring between said arms and the lever fulcrum for drawing down said lever, and having upon its other end an operating handle, by which the lever is raised in opposition to the spring extending down to the lower part of the support, all substantially as and for the purposes set forth.

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