(No Model.) 2 Sheets—Sheet 1.

W. A. PHILLIPS.

REFERENCE BOOK HOLDER.

No. 533,232. Patented Jan. 29, 1895.

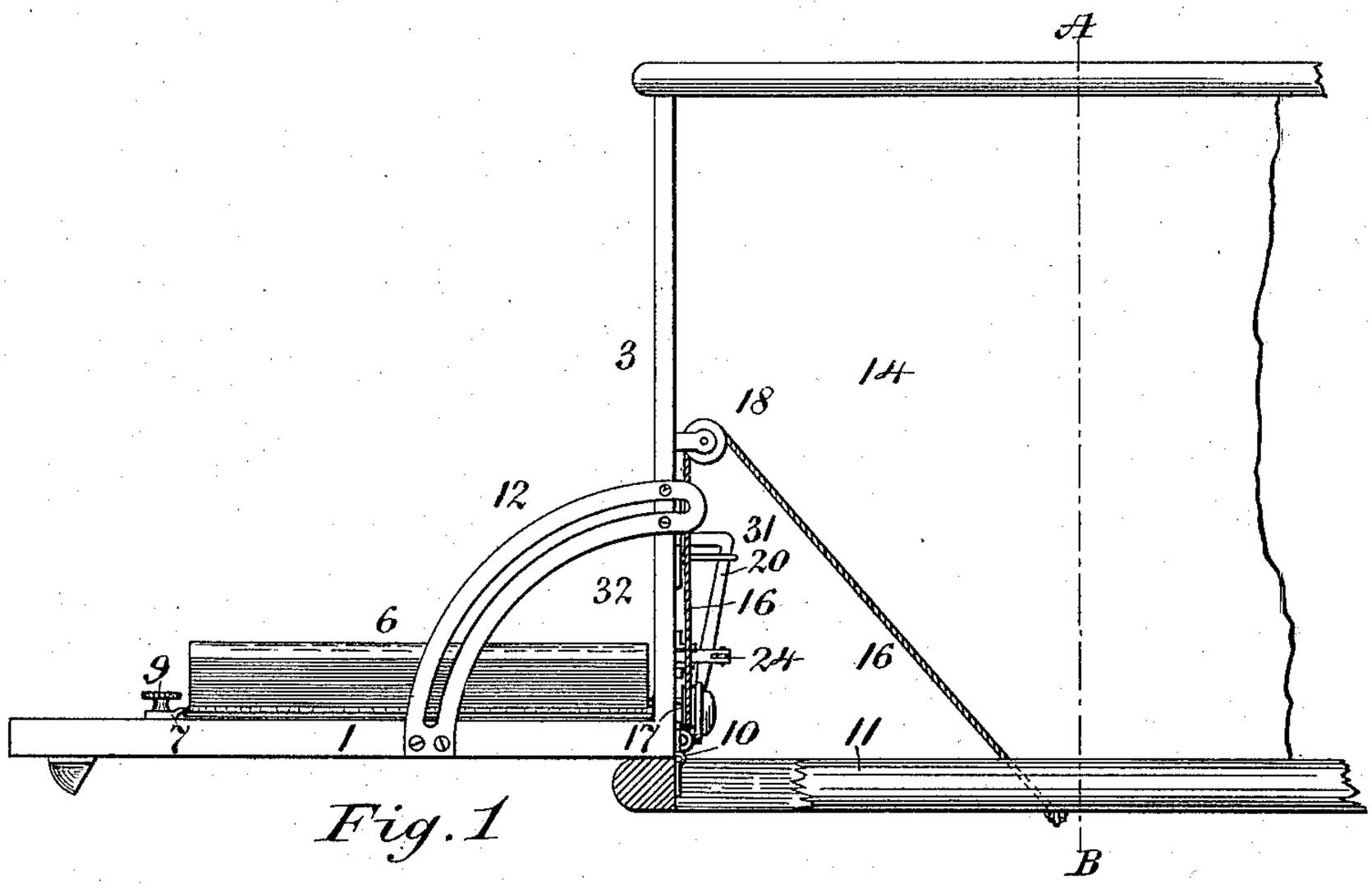

Fig. 1

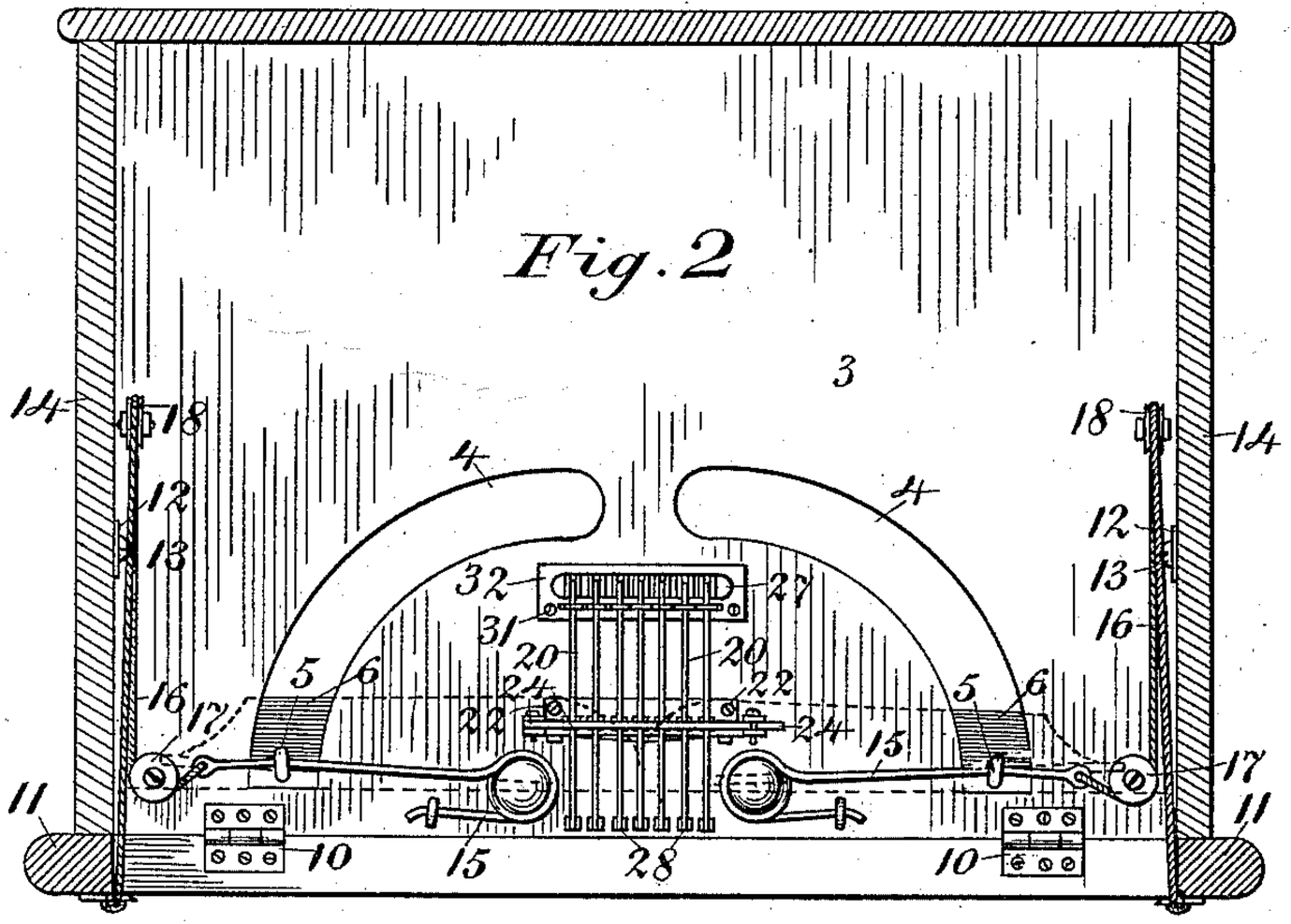

Fig. 2

Witnesses

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Jacob Large

Inventor

William A. Phillips

per W. J. Graham

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(No Model.) 2 Sheets—Sheet 2.

W. A. PHILLIPS.

REFERENCE BOOK HOLDER.

No. 533,232. Patented Jan. 29, 1895.

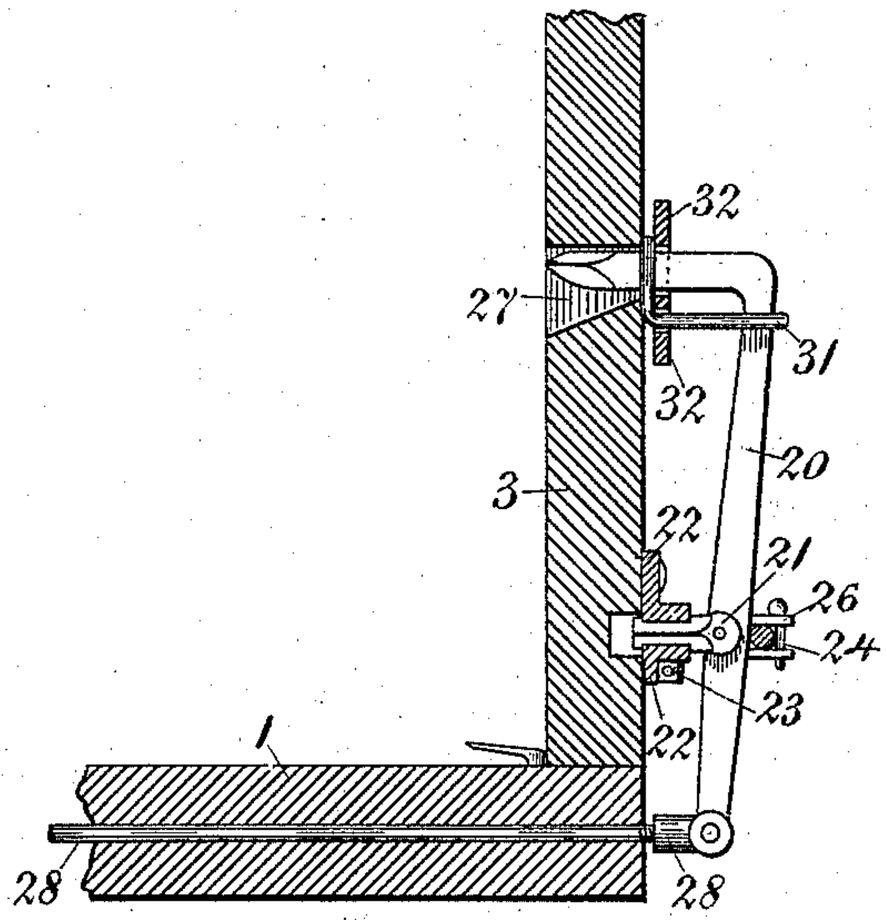

Fig. 3

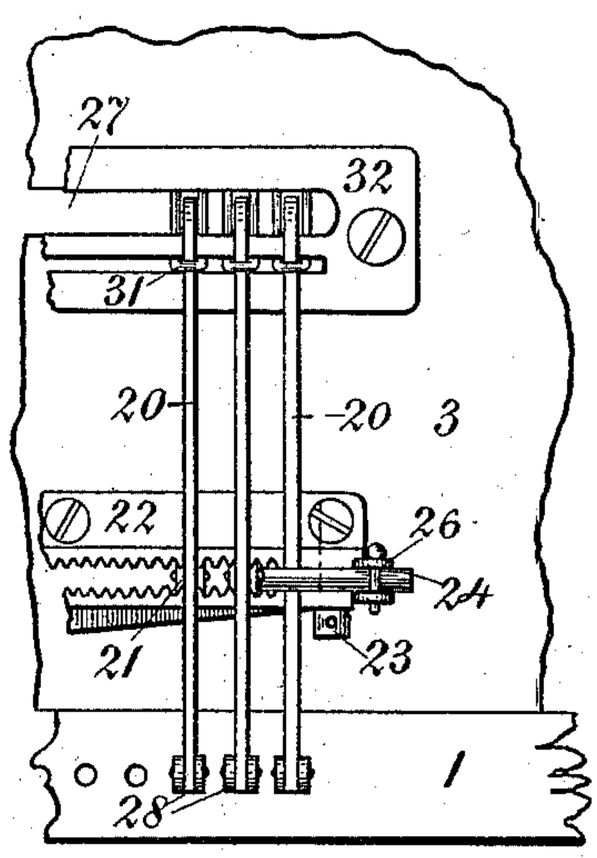

Fig. 4

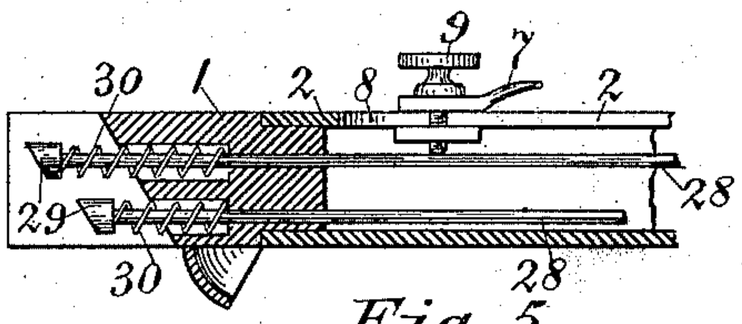

Fig. 5

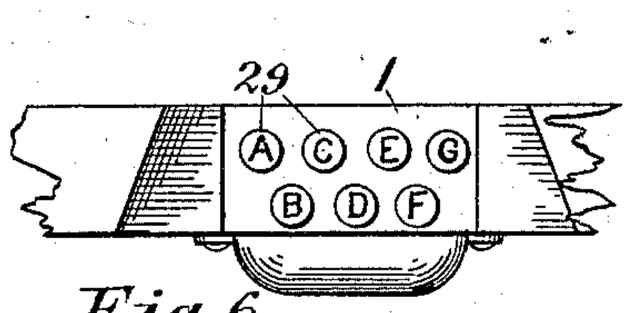

Fig. 6

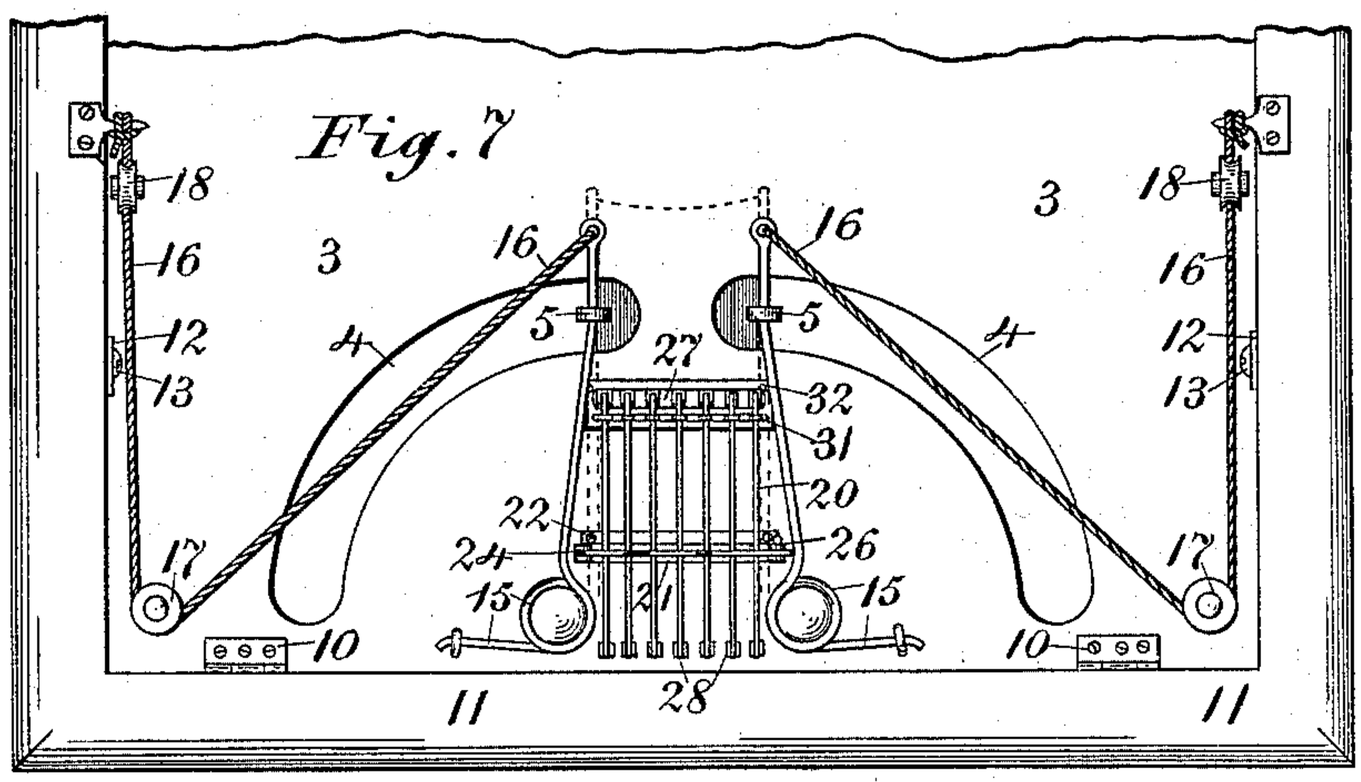

Fig. 7

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM A. PHILLIPS, OF LISTOWELL, CANADA.

REFERENCE-BOOK HOLDER.

SPECIFICATION forming part of Letters Patent No. 533,232, dated January 29, 1895.

Application filed May 25, 1893. Serial No. 475,529. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ALEXANDER PHILLIPS, of the town of Listowell, in the county of Perth and Province of Ontario, Canada, have invented an Automatically-Opening Reference-Book Holder, of which the following is a specification.

My invention relates to a device for holding a book of reference and for opening the same automatically as the book is being brought to view from its casing. Such books of frequent reference as directories, dictionaries, ledgers, and certain other books requiring frequent reference thereto, can be placed in my device and reference expedited by pressing one of the indexed keys, which divides the book at the corresponding place, letter, or page, and as the book moves to the horizontal position it is automatically opened at, or conveniently near the desired place.

I accomplish the above by means of the device shown in the accompanying drawings, in which similar numbers of reference refer to similar parts throughout.

Figure 1, represents a side elevation of the device when open, one side being removed to show the mechanism. Fig. 2, represents a section on the line A—B of Fig. 1 to more fully show the mechanism. Fig. 3, represents a sectional view of a portion of the device, to show the mechanism of the index levers. Fig. 4, represents a rear view of the detail of the foregoing figure. Fig. 5, represents a section of the front portion of the table. Fig. 6, represents a front view of the center portion of the table, and Fig. 7, represents a plan of the device inverted and when closed, thereby showing the springs released to their normal positions.

The table, 1, is suitably rectangular in form and constructed preferably of wood and having its center portion removed and covered or replaced on top by a slotted plate, 2, of metal or other suitable material.

Secured to the table, 1, and extending at a right angle thereto, is the back board, 3, having two curved or sector shaped slots, 4, therein as shown, for the shanks, 5, which are secured to the lids of the book, 6, on said table, 1, to pass through and move freely.

In the table, 1, there is secured a plate, 2, having a slot, 8, therein through which a clamp screw 9 is passed. The clamp screw, 9, is also passed through a clamp, 7, on top of the plate, 2. The clamp, 7, has a tongue on it to slip between the cover and leaves of the book, 6, at its back to hold it in position and by the facilities afforded by the slot, 8, various sizes of books can be secured to the table, 1.

By means of hinges, 10, at its rear edge the table, 1, is jointed to the frame, 11, as shown, and can be vibrated a quarter of a circle on said frame, 11, thereby carrying the back board, 3, from the horizontal position when the device is closed to the vertical position shown in Fig. 1.

To support the table, 1, and the board, 3, I employ the slotted quadrants, 12, secured to each, and by means of a stud or screw, 13, in the sides, 14, of the device, the movement is limited and said table, 1, and board, 3, supported when open. On the back of the board, 3, are secured the two springs, 15, one on each side of the center and constructed preferably of strong steel wire and having a couple of turns so as to provide sufficient elasticity to vibrate a quadrant of a circle. Each spring, 15, has at the end of its vibrating or free arm, a loop to which a cord, 16, is fastened. The cords, 16, pass under rollers, 17, on the board, 3, thence over rollers, 18, placed to turn in a plane at right angles to the board, 3, on which they are supported. From the rollers, 18, the cords, 16, pass rearward and are secured to the frame, 11, about the same distance out from the board, 3, as the rollers, 18, are above the frame, 11, when the device is open, as shown by Fig. 1.

The springs, 15, are made right and left, and the upper and longer arm of each passes through an eye on one end of each shank, 5, which, as hereinbefore specified, is clamped or secured to the lids or covers of the book, 6, and extends through slots, 4, in the back board, 3. By the connections described, when the upper arms of the springs, 15, are drawn apart from one another, the covers of the book, 6, are correspondingly opened.

Between the springs, 15, is arranged a series of similarly formed levers, 20, having a fulcrum block, 21, jointed thereon below the center of each lever, 20. The fulcrum blocks, 21, have square shanks which are engaged by the bars, 22, provided with serrated edges

to provide means for adjustment of the spacing of said levers, 20. The upper one of the said bars, 22, is secured to the board, 3, and the lower one to said upper one by screws, 23, so that they can be firmly clamped on the square shanks of said blocks, 21. In rear of the blocks, 21, is supported a rod, 24, hinged at one end in a post, 25, on the board, 3, and secured at the other end by a pivot through another post, 26, so that the rod, 24, is held close to the levers, 20, and prevents any or all of them getting out of position should the blocks, 21, get loose. The upper end of each lever, 20, is turned at a right angle, and all in the same direction so as to extend through an opening, 27, in the board, 3, and when pushed backward from the board 3, at their lower ends by the rods, 28, jointed thereon, the upper ends move forward through said opening, 27, and pierce the end of the book, 6, separating the leaves thereof.

The rods, 28, extend to the front of the table, 1, and beneath the plate, 2, thereon. On the front end of each rod, 28, is a head, 29, having a letter, number, or other distinguishing character thereon, and beneath the head, 29, is a spiral spring, 30 to retain each lever, 20, normally drawn forward. There are as many levers, 20, rods, 28, and springs, 30, as are required to divide the book, 6, alphabetically, numerically or in any other classification into parts for reference. To guide the upper ends of the levers, 20, each one is provided with a guide, 31, secured between the board, 3, and a plate, 32, having slots therein as shown, for these guides, 31, which have right-angled inner ends extending up each side of each individual lever 20, thereby forming a guide laterally for the spacing of said levers, 20, and limiting the distance backward and forming a rest against which said levers, 20, recline.

The heads, 29, of the rods, 28, may be arranged either in a row or in two or more rows and alternating in consecutive order from left to right, but at the rear of the table, 1, the rods, 28, are connected to the levers, 20, in one row and on the same level. The upper ends of the levers, 20, may also be arranged in two rows, alternately upper and lower.

The springs, 15, are made of comparatively strong steel wire, as they should actuate the table, 1, into the vertical position to occupy the place when closed that the back board, 3, does when the device is open, and when given a start by lifting the front of said table, 1, upward the springs, 15, close and maintain the table, 1, closed into the casing, which may be a suitable box inclosing it, or the invention may be constructed in an office desk and the casing thereof be part of the desk.

Having described my invention fully, what I claim, and desire to secure by Letters Patent, is—

In a book holder, the combination of the table, hinged at its rear edge to a frame into which it closes as specified, said table having means thereon to secure a book, the clamps secured to the lids of said book, the springs connected to said clamps, the cords connected to the outer ends of said springs at one end and to the casing frame at the opposite end, the slotted quadrants secured to said table and engaged by a pin in the casing, and the back board secured at a right angle to the table and having curved slots therein through which said clamps extend to connect said springs to operate the lids of a book, substantially as shown and described.

W. A. PHILLIPS.

Witnesses:
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JACOB LARGE.