June 9, 1931. T. J. SMYTH 1,808,796

BOOK SUPPORT

Filed May 5, 1927 2 Sheets-Sheet 1

Fig. 1,

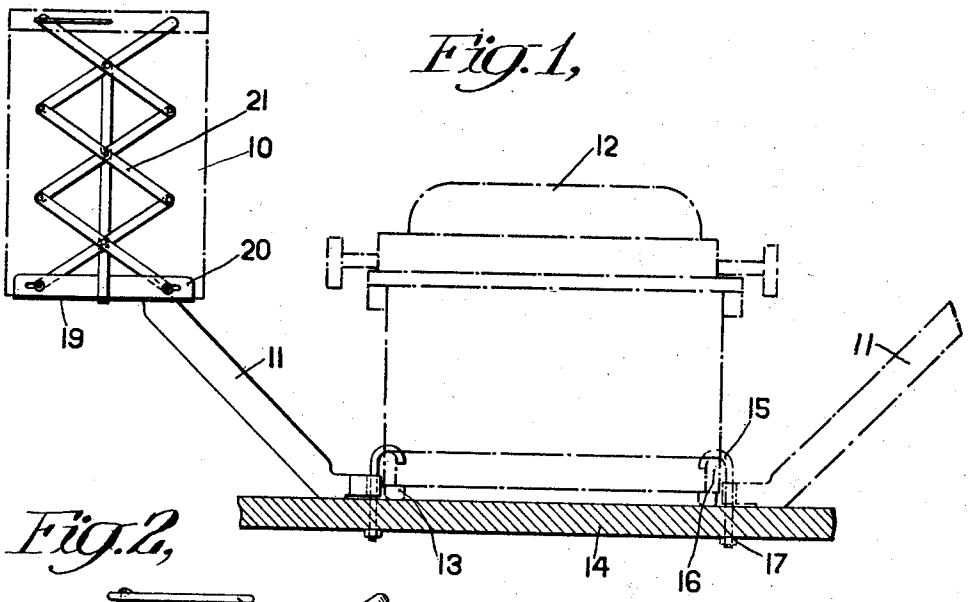



Fig. 2,

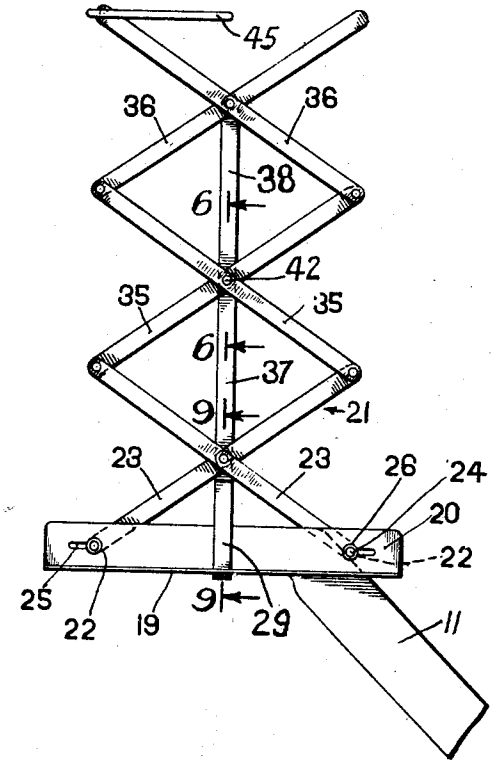
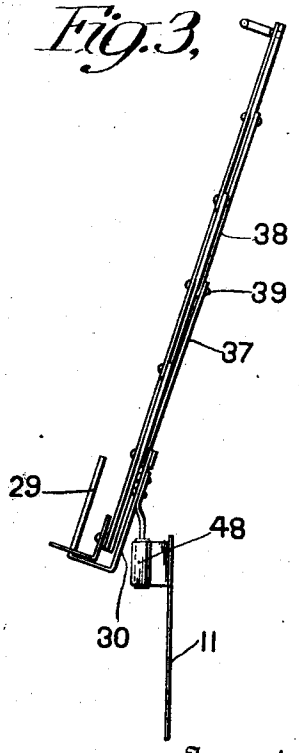



Fig. 3,




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Fig. 4,

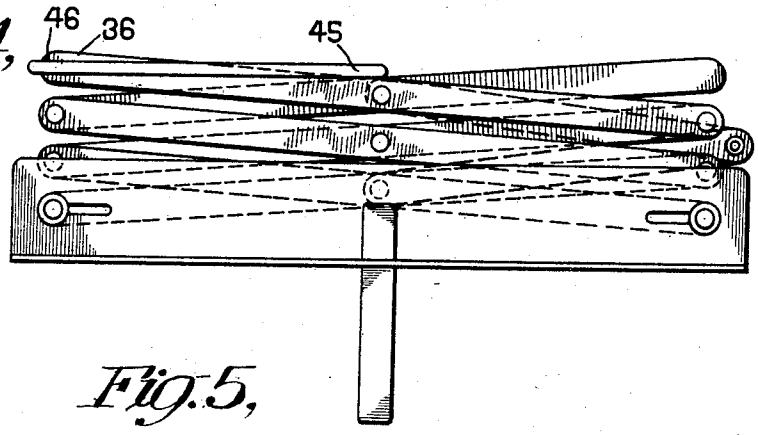



Fig. 5,

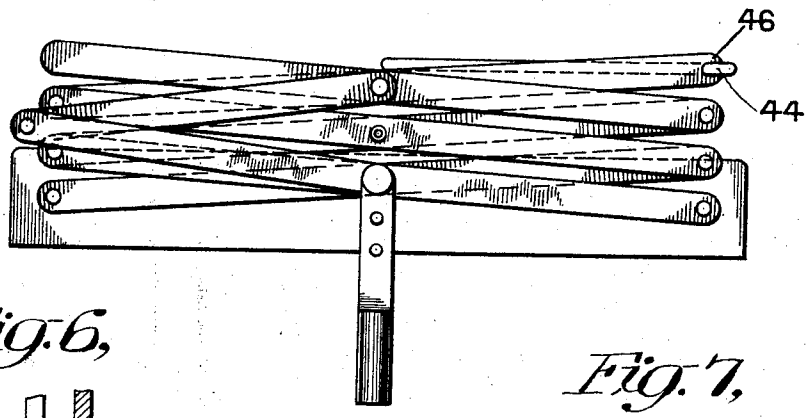



Fig. 6,

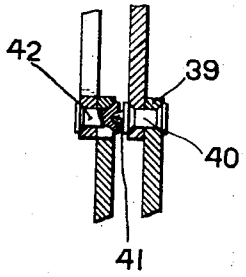



Fig. 7,

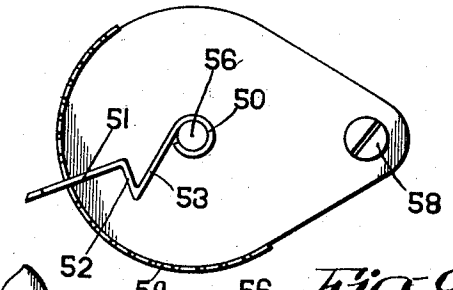



Fig. 9,

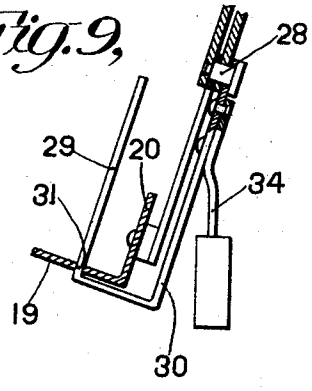
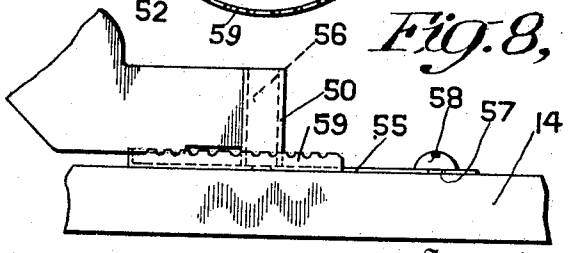



Fig. 8,




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# UNITED STATES PATENT OFFICE

THOMAS J. SMYTH, OF EAST ELMHURST, LONG ISLAND, NEW YORK

## BOOK SUPPORT

Application filed May 5, 1927. Serial No. 188,896.

This invention relates to a rack for supporting a stenographer's notebook adjacent the typewriting machine in convenient position for reading the notes and turning the pages.

One object of the invention is the provision of a rack of the character described which is universally applicable in all situations, that is, it is adjustable to various positions and interchangeable from one side of the machine to the other to take advantage, for instance, of different light conditions or for the convenience of either right handed or left handed persons. Accordingly, the rack is carried upon an arm with provision for adjustment with respect thereto and said arm is so mounted upon or adjacent to the machine, as to permit adjustment of it with respect to the machine.

The invention also seeks provision of a book rack which will occupy a minimum of space when not in use. To this end the rack is extensible or collapsible and the arm upon which it is mounted is so carried with or adjacent the machine that the arm and rack may be folded to lie against the machine to permit the machine and the base or support upon which it is mounted to be caused to disappear beneath the top of the typewriting desk.

These and other objects of the invention and the means for their attainment will be more apparent from the following detailed description taken in connection with the accompanying drawings, illustrating preferred embodiments of the invention, in which:

Figure 1 is a view in front elevation showing the book rack in operative position, and showing also one manner of mounting the arm upon which the rack is carried.

Figure 2 is an enlarged front elevational view of the rack in operative position.

Figure 3 is a view in side elevation looking at the rack from the right in Figure 2.

Figure 4 is a front view of the rack in folded or inoperative position.

Figure 5 is a view similar to Figure 4 but looking from the rear.

Figure 6 is a view taken on the line 6—6 of Figure 2, showing the toggle positioning means whereby the book rack is maintained in expanded position.

Figures 7 and 8 are plan and front elevational views, respectively, of a bracket upon which the arm for the rack may be mounted to permit an adjustment thereof.

Figure 9 is a detail view, partly in section, on the line 9—9 of Figure 2.

In transcribing shorthand notes with the aid of a typewriting machine considerable inconvenience is experienced in reading the notes from a notebook lying flat on the desk which supports the typewriter. The present invention seeks to overcome these inconveniences by the provision of a book rack of a size and shape to conveniently hold the usual size stenographer's notebook, at a desirable level with respect to the eyes. Accordingly, the stenographer's notebook indicated diagrammatically in Figure 1 at 10 is carried upon a book rack, which is mounted in a manner hereinafter to be described upon an arm 11 mounted or secured adjacent a typewriting machine, indicated in outline in Figure 1 at 12.

The machine 12 is illustrated as resting, by means of rubber feet 13 upon a desk or other support 14 to which it is secured by hooks 15 engaging the side bars 16 of the machine 12 and passing through the desk top 14 and drawn down and retained in rigid clamping engagement with the side bars 16 by means of the nuts 17. This fastening is availed of in many situations as where the typewriter support 14 is adapted to fold within or disappear beneath the top of the typewriting desk, as will be understood, and the construction of the rack and supporting arm is so designed as to permit the folding of the book rack down close to the machine so as not to interfere with the movement of the typewriter 12 to concealed position.

The book rack proper comprises a base plate 19—20 formed up from a unitary sheet of metal in the form of an angle, and the vertical rear side 20 thereof carries an expansible support or back rest indicated as a whole at 21. This extensible back 21 is formed of a plurality of levers 23, 35 and 36, of equal length fastened together in pairs

in the form of a pantograph, the ends 22 of the lowermost levers 23 being provided with pins 24 which are slidable in slots 25 formed in the back member 20 of the base 19 and retained therein by the heads 26 thereon.

Carried in a pivot 28 at the center of the first or lowermost pair of crossed levers 23 is a U-shaped positioning member or guide 29—30 the free arm 29 whereof passes upwardly through the slot 31 formed in the bottom 19 of the base 19—20. This U-shaped member 29—30 also carries rigidly secured to the arm 30 a pivot 34 by which the book rack is mounted upon the arm 11 and thus serves not only as a support for this pivot 34, but also as a guide for the expansible back 21 since the front arm 29 can only reciprocate in a direction normal to the base 19 because the movement of the U-shaped member 29—30 is determined by the levers 23 and the slot 31.

The rack is illustrated as comprising three pairs of crossed levers 23, 35 and 36 but it will be obvious that any convenient number of levers may be adopted.

To retain the rack 21 in extended position a toggle is provided at the back thereof comprising the two levers 37, 38 which are pivoted at their respective ends to the crossing points of the lowermost and uppermost pairs of levers. This toggle is of such length as to be in alignment, when the levers are fully extended, and the toggle joint 39 as shown in Figure 6 is provided with a stud or lock pin 40 adapted to slip into a cooperating recess 41 formed in the pivot 42 of the central pair of levers 35 and thus retain the toggle in its central position, except when purposely displaced to permit the closing of the book rest.

The stenographer's notebook is adapted to rest upon the horizontal plate or base member 19 and the unturned leaves retained by the vertical arm 29 of the U-shaped guide 29—30. At the top, the book may be prevented from falling forward by a pivoted U-shaped arm, 44, 45 which is pivoted by its shorter arm 44 to the upper end 46 of one of the top pair of levers 36, and is provided with one long arm 45 which extends inwardly across the front of the book to hold the same.

The pivot 34 is adapted to be received in a bearing 48 on the arm 11, and thus permit adjustment of the book to any desired angle with respect to the eyes of the transcriber.

The arm 11 is preferably reversible. It is formed with a pivot bearing at each end so that it may be used on either side of the machine 12, the book rack 10 being supported in the bearing 48 on the upper end, and the arm 11 itself being pivoted for swinging movement by means of the bearing 50 on the lower end. The main portion 11 of the arm is adapted to extend upwardly and outwardly at an angle say of about 45 degrees to horizontal, and at each end of this main portion there is formed a horizontally extending positioning part 51 which includes a portion 52 bent transversely at an angle and then reversely bent as at 53, which reversely bent part 53 terminates in the pivot bearing 50 (or 48) whereof the axis lies in the plane including the horizontal positioning part 51.

When the arm 11 is in operative position the book rack 10 is, of course, carried by the uppermost bearing and the lowermost bearing, cooperating with a pivot on the typewriter support, serves to permit the angular movement of the arm and hence affords an additional adjustment of the book rack.

The arm 11 may be supported as shown in Figure 1 upon the hook 15 which clamps the typewriting machine 12 to the support 14 or by the means of any screw or bolt serving the same general purpose. If such a support is not available a bracket 55 carrying a pivot 56 for the arm may be provided and such is illustrated in Figures 7 and 8. This bracket comprises generally a flat plate 55 having a pivot 56 extending upwardly in a substantially vertical direction to receive the lower bearing 50 on the arm 11 and may be perforated at 57 to receive a screw 58 or the equivalent to position the same on a support 14. Concentric with the pivot there may be formed a curved rack 59 or series of teeth affording a plurality of notches in one of which the arm, that is, the positioning part 51 of which may be positively positioned to extend in the desired direction. This bracket may obviously be disposed on either side of the typewriter machine 12 or similar brackets 55 may be disposed on each side.

When the book rack is not in use the extensible back 23, 35, 36 may be collapsed as shown in Figures 4 and 5 and the arm 11 swing about its pivot 56 to a position close to the side of the machine 12 to occupy little space and permit the machine 12 to be caused to disappear beneath the top of the desk as will be understood.

It will thus be seen that a book rack has been provided which when not in use will occupy a minimum of space but which when in operative position is capable of being positioned at any angle to the eyes of the operator of the machine most convenient for reading the notes.

Various modifications may be made in the type of extensible back, in the means whereby the back may be locked in extended position, and in the book holding device associated with the back, as well as in the device upon which the arm may be pivoted and no limitation is intended by the phraseology in the foregoing description or illustrations in the accompanying drawings except as indicated in the appended claims.

What I claim is:

1. A book rack comprising a base, an extensible back carried thereby and including a

plurality of pairs of crossed levers, the levers of each pair being pivoted to each other at their mid-point and at their ends to the ends of the levers of adjacent pairs, a toggle extending between the mid-points of pairs of levers to maintain the back in extended position, and a pivot carried by the base for reception in a bearing on an arm.

2. A book rack comprising a base, an extensible back carried thereby and including a plurality of pairs of crossed levers, the levers of each pair being pivoted to each other at their mid-point and at their ends to the ends of the levers of adjacent pairs, a toggle extending between the mid-points of the extreme pairs of levers to maintain the back in extended position, and a pivot carried by the base for reception in a bearing on an arm.

3. A book rack comprising a base, an extensible back including three pairs of crossed levers, the levers of each pair being pivoted to each other at their mid-points and at their ends to the ends of adjacent pairs, one pair of said levers being carried by the base, a toggle lever secured at its ends to the mid-points of the extreme pairs of levers, locking means between the toggle joint and the mid-point of the central pair of levers to maintain the back extended and means to support said back from an arm.

4. A book rack comprising a base, an extensible back including a plurality of pairs of crossed levers, the levers of each pair being pivoted to each other at their mid-points and at their ends to the ends of adjacent pairs, one pair of said levers being carried by the base, a toggle lever secured at its ends to the mid-points of the extreme pairs of levers, cooperating devices on the toggle lever and the extensible back levers to maintain the back extended and means to support said back from an arm.

5. A book rack comprising an angle shaped base, an extensible back carried by the base comprising a plurality of pairs of crossed levers, one side of the base being slotted midway between its ends, pivots at the lowermost ends of one pair of the levers secured to the other side of the base by a connection permitting lost motion, a U-shaped guide carried by one arm of the U with the extensible back, the free arm of said guide passing through the slot, and a pivot carried by the guide for reception in a bearing on an arm.

6. A book rack comprising an angle shaped base, an extensible back carried by the base comprising a plurality of pairs of crossed levers, one side of the base being slotted midway between its ends, pivots at the lowermost ends of one pair of the levers secured to the other side of the base by a connection permitting lost motion, a U-shaped guide pivotally carried by one arm of the U with the extensible back, the free arm of the guide passing through the slot and passing out of the slot when the extensible back is closed, and a pivot carried by the rack for reception in a bearing on the arm.

In testimony whereof I affix my signature.

THOMAS J. SMYTH.