Feb. 12, 1924. 1,483,396

O. C. TERRELL

BOOK AND LOOSE LEAF HOLDER

Filed May 1, 1922

Fig. 1

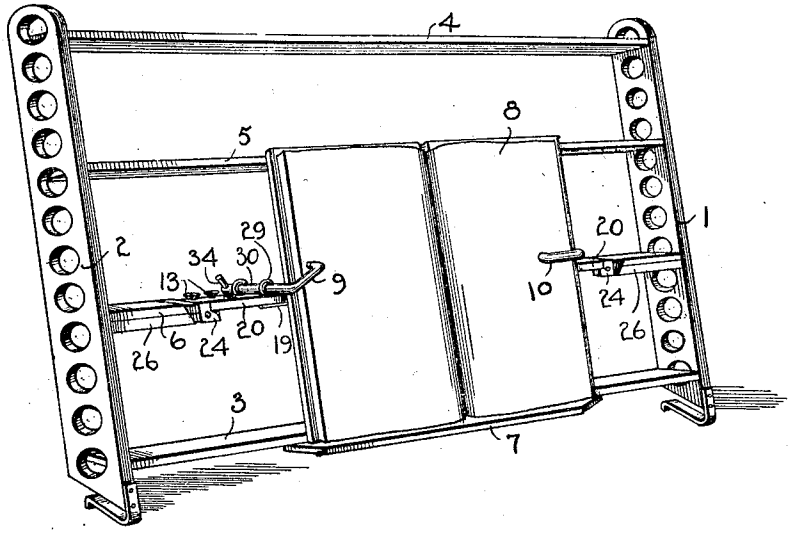


Fig. 2

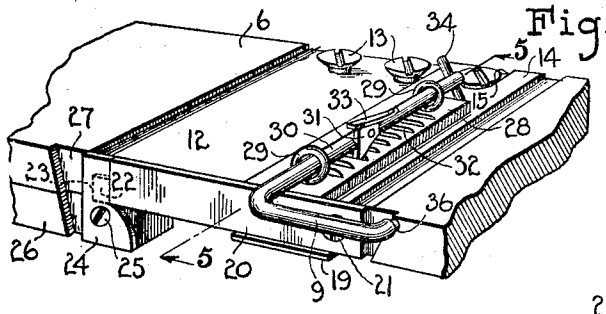


Fig. 3

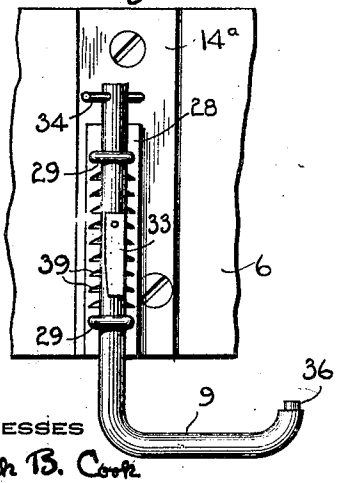


Fig. 4

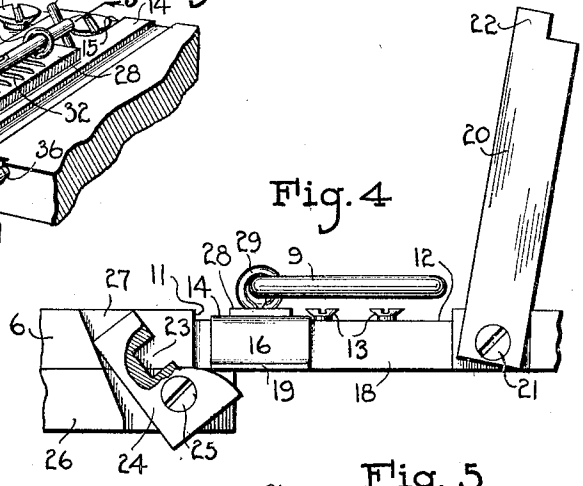
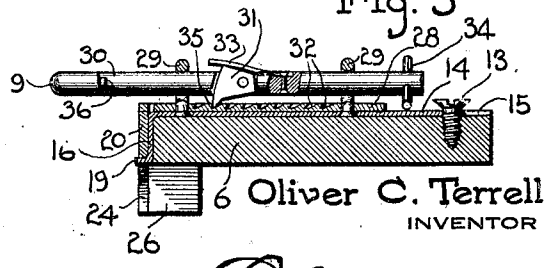


Fig. 5



WITNESSES

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UNITED STATES PATENT OFFICE.

OLIVER CLARK TERRELL, OF PORTLAND, OREGON.

BOOK AND LOOSE-LEAF HOLDER.

Application filed May 1, 1922. Serial No. 557,540.

To all whom it may concern:

Be it known that I, OLIVER C. TERRELL, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Book and Loose-Leaf Holder, of which the following is a specification.

This invention relates to book and loose sheet holders, adapted to be detachably connected to an organ or piano.

An object of the invention is the provision of a means for maintaining a book or sheets of music in position, with provision for clamping books or sheets in open position.

A further object of the invention is the provision of a lateral adjustment of the clamping means to meet the conditions when books of various widths are used.

A more specific object of the invention is to provide a rack or frame adapted to support a book in open position and having fingers mounted on axes perpendicular to the plane of the open book and adapted to be swung on their axes to overhang the edges of the open book to clamp the leaves, said fingers being adjustable laterally to accommodate books of various widths, as well as axially to accommodate books of different thickness, the axial adjustment being effected by means of a pawl and ratchet.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing in the drawing, but may be changed and modified so long as such changes and modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:—

Fig. 1 is a view in perspective of the book holder with a book clamped in open position on the same.

Fig. 2 is an enlarged detail view of one of the clamping members and the means for adjusting the clamping member not only transversely of the holder but longitudinally of the same.

Fig. 3 shows a modified form of the clamping member disclosed in Fig. 2, and in which no adjustment is employed for longitudinally moving the clamping member along the frame.

Fig. 4 is an end view of the construction shown in Fig. 2, with the clamping member moved to another of its positions along the book holder, with the means for locking the clamping members in open position.

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

Referring to the drawing, 1 and 2 represent side members of the frame of the book holder and which, as shown in Fig. 1, may be of any form of scroll or bracket design in order to lessen the weight of the book holder and add to its appearance. Top and bottom cross bars 3 and 4 connect the opposite upper and lower ends of the side members 1 and 2. Intermediate transverse bars 5 and 6 have their ends connected to the side members 1 and 2. The base transverse bar 3 is provided with a forward extension or rest 7, on which the lower edge of the book 8 rests.

On the intermediate transverse bar 6, which is wider than the transverse bar 5, is located the means for mounting the rockable clamping members 9 and 10.

The upper surface of the intermediate bar 6 is cut away to form spaced recesses 12 intermediate the ends of said bar. Screws 13 are screwed into the bar 6, and have their heads projecting upwardly above the surface of the bar 6 for a purpose which will be presently explained.

Base plates 14, having a notched rear end 15, are adapted to engage any one of the screws 13 when seated within a recess 12 of the bar 6. The forward end of the base plate 14 has a depending lip 16 at a right angle to said plate adapted to engage the front edge 18 of the transverse bar 6, and is provided with an outwardly-projecting flange 19, forming a stop or seat for a latch 20, which is pivoted at 21 to the front edge 18 of said transverse bar. (Figs. 4 and 5). The free end of the latch 20 is provided with a nose 22 adapted to be engaged in a socket 23, formed in a vertical side edge of a keeper 24, which is pivotally mounted at 25 on the front edge of a bracing bar 26, arranged along the under side of and adjacent the ends of the transverse member 6. (Fig.1). A pocket 27, in which the keeper 24 is located, is formed by cutting away portions of the front edges of the transverse bar 6 and the brace bar 26.

As shown in Fig. 4, keeper 24 is released from latch 20 and base plate 14 is removed, by sliding said base plate forwardly whereby the head of the screw engaged by notch 15 is released from the notch. The base plate may be shifted to another position so that the notch will engage a head of another screw, when the latch 20 and keeper 24 are replaced. The resilience of the flange 19 tends to force the latch upwardly and thus maintain the nose in engagement with the socket 23 of the keeper 24. This adjustment of the plate provides for the reception in the holder of books and sheets of varying width.

It is not necessary that both base plates 14 should be adjustable longitudinally of the book holder, or more specifically along the bar 6, and therefore one of the adjustable base plates 14 may be employed in cooperation with a rigidly mounted base plate 14ª (Fig. 3), so that only one of the base plates is movable to an adjusted position in order to compensate for the various widths of different kinds of books and sheets. Nevertheless, two of the adjustable base plates may be employed in cooperative relation, if necessary.

Upon each of the base plates 14 are rigidly mounted a grooved rack 28, the grooves of which have a distinctive construction, as shown in Figs. 3 and 4. Upon the rack 28, adjacent its opposite ends, are formed bearings 29 for a rock shaft 30, upon the forward end of which is mounted either clamping arm 9 or 10, as the case may be. A pawl 31 is pivotally connected to one side of the rock shaft 30 and intermediate its ends, and has its free end maintained within one of the grooves 32 of the rack 28 by means of a spring 33 engaging the top of the pawl. Since the center of gravity of the pawl is beyond the pivotal point of said pawl, (Fig. 5), the same will normally be maintained in engagement with one of the grooves of the rack when the pawl is in or approaching a vertical plane. A pin 34 is diametrically mounted in a perforation in the rear end of the rock shaft 30, so that either one of its opposite ends will engage the base plate 14 at certain times when the shaft 30 is rocked, and thereby limit the movement of the rock shaft, and likewise the rocking movement of the clamping members 9 and 10 to an arc of a circle of about 90°, the arc being described by the clamping members 9 and 10 between their horizontal or operative position to their vertical or inoperative position.

As has been stated, the grooves 32 are of special construction, the bases of the grooves conforming to the arc of a circle which is described by the free end 35 of the pawl when rocked by the shaft 30. Furthermore, as shown in Fig. 5, the grooves are undercut and the free end of the pawl 35 conforms to the curvature of the side walls of the said grooves. The opposite ends of the grooves are spaced from the longitudinal side edges of the rack 28 so that marginal spaces are formed between the ends of the grooves and the side edges of said rack. The bases of the grooves being cut on an arc of a circle described by the ends of the rocking pawls, the grooves gradually increase in depth from the ends to their greatest depth at the longitudinal center of the rack.

The pawls 31 provide an adjustment longitudinally of the base plates 14 or 14ª, for the shafts 30 and likewise the clamping arms 9 and 10, to compensate for the various thicknesses of books.

When it is desired to support a book or a series of loose music sheets upon the book rack, the clamping arms 9 and 10 are rocked to a vertical position, and the book is applied to the holder in open position, with the lower end of the book resting on the rest 7. While the arms 9 and 10 are in a vertical position, the pawls 31 are in a horizontal position, with the ends 35 out of engagement with the grooves 32 of the racks 28, so that the rock shafts 30 may be moved longitudinally of the racks 28 in either direction until the rubber knobs 36 on the free ends of the clamping members 9 and 10 will be pressed firmly into engagement with the opposite pages of the book 8. The arms 9 and 10 are then rocked toward each other when the free ends 35 of the pawls will each engage one of the grooves 32 of the rack 28. A continued rocking of the arms 9 and 10 will finally locate them in a substantially horizontal position, when the pin 34 will engage the base plate 14 or 14ª and prevent further rocking movement of the clamping members 9 and 10 and the clamping members and rock shafts 30 will be firmly locked against axial movement by the pawl 31.

It should be noted that the clamping members 9 and 10 are held in substantially horizontal position by gravity alone, with the pins 34 acting as stops to limit the downward movement thereof so that in swinging the clamps to release the leaves and permit turning thereof, it is not necessary to overcome the resistance of any springs, and the operation is accomplished with the greatest facility. The entire holder is springless except for the springs 33, and these may be dispensed with if desired, since the gravity of the pawls 31 will be sufficient to cause them to drop into the grooves 32 whenever the clamps are swung into clamping position.

When necessary, the base plate 14 may be released from the screw head 13 and the latch 20 from the keeper 24, so that the base plate may be moved to another position with notch 15 engaging the head of some other screw. The latch 20 and keeper 24 are then replaced.

It is within my invention to construct the holding device of a single rock shaft having the clamping arm at one end, and the other characteristics which have been pointed out, and I therefore do not wish to be limited to a pair of such devices.

What is claimed is:—

1. A book and leaf holder comprising a frame with a plane upper surface for supporting the article to be held, spaced clamping members mounted on the frame and rockable about an axis perpendicular to the plane of the frame, pawls on the clamping members and rockable therewith, said clamping members being adjustable longitudinally of their axes, and means on the frame and engageable by the pawls for locking the clamping members in their longitudinally adjusted position.

2. A holding device comprising a frame, spaced clamping members mounted on the frame and rockable about an axis perpendicular to the plane of the frame, spring held pawls on the clamping members and rockable therewith, said clamping members being adjustable longitudinally of their axes, and rack members on the frame and normally engaged by the pawls for locking the clamping members in their longitudinally adjusted position.

3. A holding device comprising a frame, spaced clamping members mounted on the frame to rock about their longitudinal axes, pawls projecting from the clamping members and normally fixed relative thereto, and rack bars on the frame having grooves adapted to be engaged by the pawls for adjustably positioning and locking the clamping members, said grooves gradually increasing in depth from their ends to their centers, on an arc of a circle described by the free ends of the pawls when the clamping members are rocked.

4. A device for holding open books comprising a frame, spaced clamping members mounted to rock on the frame about axes perpendicular to the open book, pawls yieldably held in fixed relation to the clamping members and rockable therewith, and rack bars on the frame having curved grooves adapted to be engaged by the pawls when the clamping members are in one position for adjustably positioning and locking the clamping members longitudinally of their axes.

5. A holding device comprising a frame, spaced plates mounted on the frame and provided with grooves, a shaft rotatably mounted on each plate, a clamping arm on each shaft projecting at an angle thereto, a spring pressed pawl mounted on each shaft and normally held by the spring in fixed relation to the shaft, the free end of the pawl engaging in one of the grooves of the spaced plates, the bottom of each groove being formed on the arc of a circle described by the free end of the pawl when the shaft is rocked.

6. A holding device comprising a frame with its upper face disposed in a plane, spaced clamping members rockably mounted on the frame with their axes perpendicular to said plane, spaced plates on the frame and perpendicular to said plane, means on the clamping members cooperating with means on the plates for adjustably positioning and locking the clamping members longitudinally of their axes, and means for adjusting one of said plates lengthwise of the frame.

7. A holding device comprising a frame with its upper face disposed in a plane for supporting the article to be held, spaced plates on the frame, spaced clamping members rockably mounted on the plates and adapted to engage the article held, said plates and clamping members being disposed in planes perpendicular to the plane of the upper face of the frame, said clamping members being adjustable longitudinally of their axes, and means on the clamping members cooperating with means on the spaced plates for locking said clamping members in their longitudinally adjusted position.

8. A holding device comprising a frame, spaced plates on the frame, spaced clamping members rockably mounted on said plates, means whereby one of said plates may be adjusted lengthwise of the frame, means for locking the plate in any one of its adjusted positions, said locking means comprising a latch pivotally mounted on the frame and engageable with said plate, and a keeper pivotally mounted on the frame for engaging and locking the latch in position.

9. A holding device comprising a frame, spaced plates on the frame, spaced clamping members rockably mounted on said plates, said plates and the axes of the clamping members being perpendicular to the upper surface of the frame, said clamping members having laterally projecting arms for engaging the surface of a book held therebetween, means whereby one of said plates may be adjusted lengthwise of the frame, and means for locking the plate in any one of its adjusted positions.

10. A holding device comprising a frame, a rock shaft mounted on the frame and having a clamping arm at one end projecting at an angle thereto, the axis of said shaft being perpendicular to the upper surface of the frame and cooperating means provided on the frame and on the shaft to adjust the shaft lengthwise of its axis.

11. A holding device, comprising a frame, a rock shaft mounted on the frame, the axis of said shaft being perpendicular to the upper surface of the frame, a clamping arm

at one end projecting at an angle to the shaft, and cooperating means provided on the shaft and on the frame for adjusting the shaft lengthwise thereof, and means for limiting the rocking movement of said shaft.

12. A holding device comprising a frame, a shaft rockably mounted on the frame, a clamping arm projecting at an angle to the shaft, a pawl mounted on the shaft and adapted to be rocked by said shaft, means on the frame engaged by the pawl for adjustably positioning the clamping arms, said shaft being slidable lengthwise and said pawl adapted to lock the shaft in any of its adjusted positions when moved longitudinally.

13. A holding device comprising a frame, a rack bar mounted on the frame, a shaft rockably mounted on and adjustable lengthwise of said bar, a clamping arm projecting at an angle to the shaft, a spring-pressed pawl mounted on the shaft and adapted to be rocked thereby, the pawl engaging the rack bar to adjustably position the clamping arm, said pawl adapted to lock the shaft in any of its adjusted positions when moved longitudinally of the bar, and a pin mounted on the shaft for limiting the rocking movement thereof.

14. A holding device comprising a frame, a bar provided with grooves mounted on the frame, a shaft rockably and slidably mounted on said bar, a clamping arm projecting at an angle to the shaft, a spring-pressed pawl mounted on the shaft and adapted to be rocked thereby, the free end of the pawl engaging any one of the grooves, said pawl cooperating with the weight of the clamping arm to maintain said arm in engagement with the article to be held, and a pin mounted on the shaft and engageable with the frame for limiting the clamping arm to a horizontal position when said shaft is rocked in one direction.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

OLIVER CLARK TERRELL.