F. P. SHEPARD.

COPY HOLDER.

APPLICATION FILED MAY 31, 1907.

898,692.

Patented Sept. 15, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

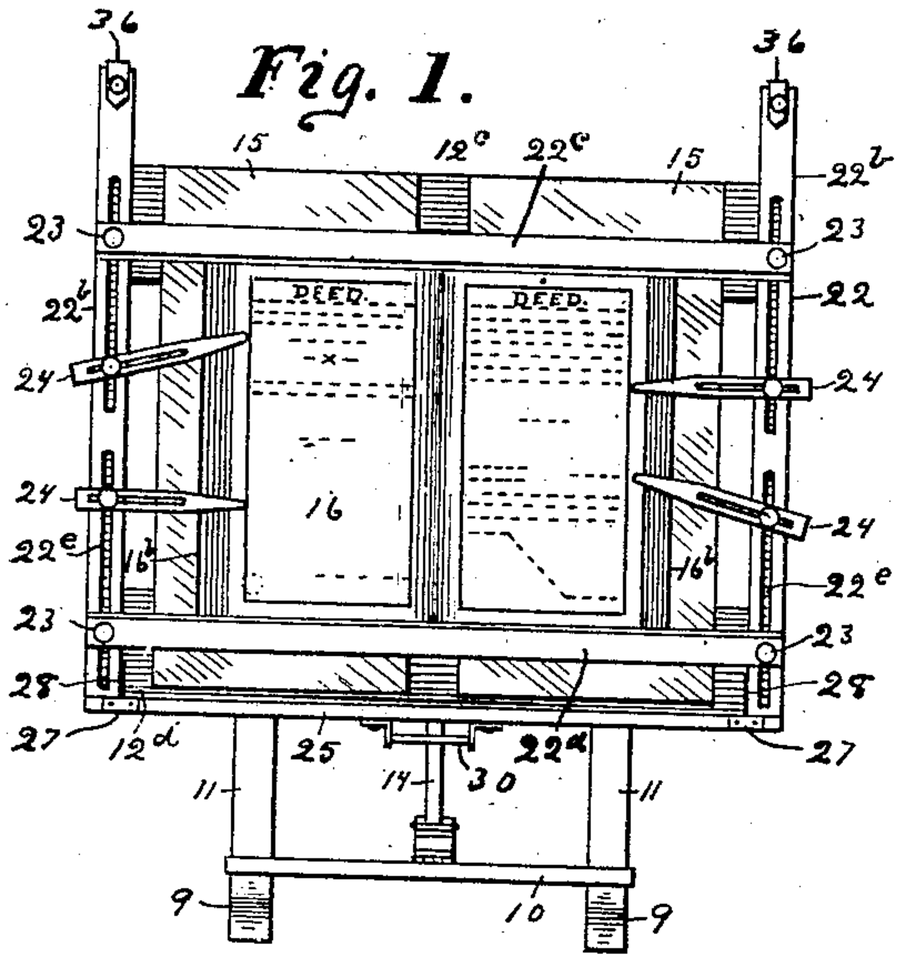


Fig. 2.

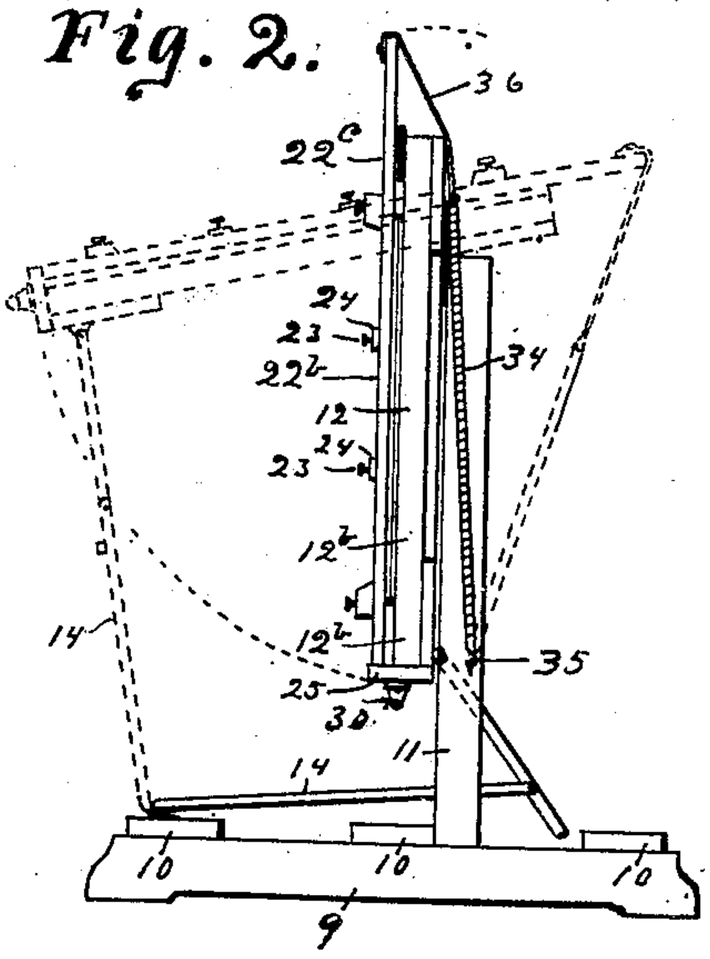


Fig. 3.

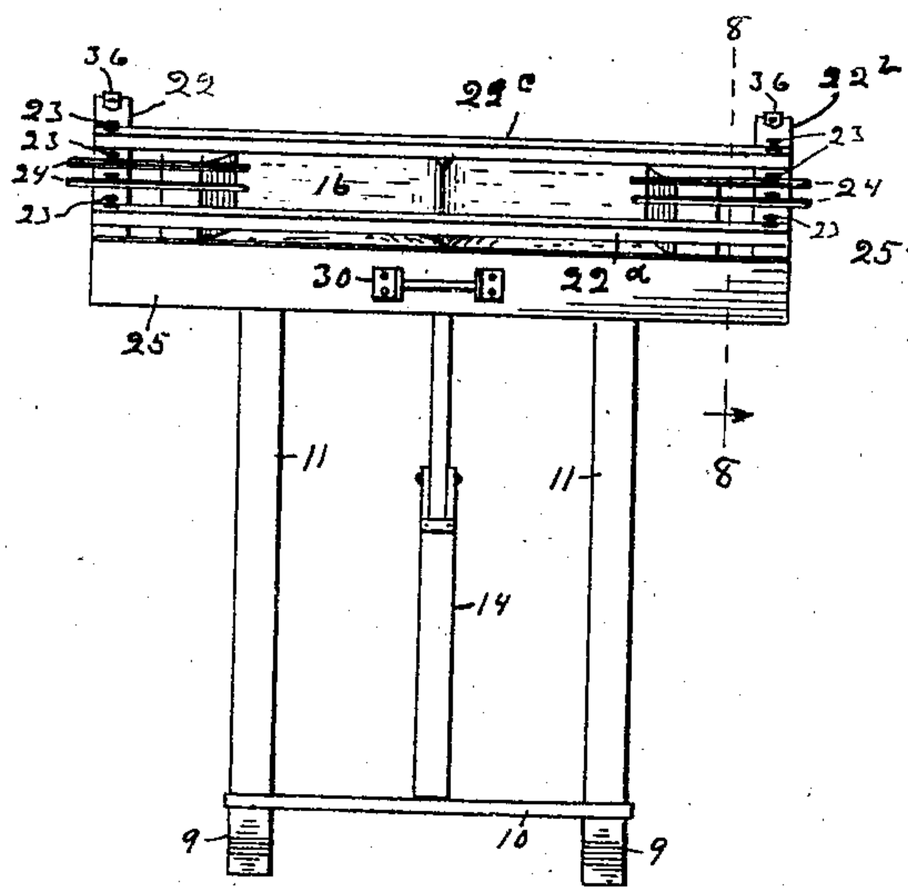
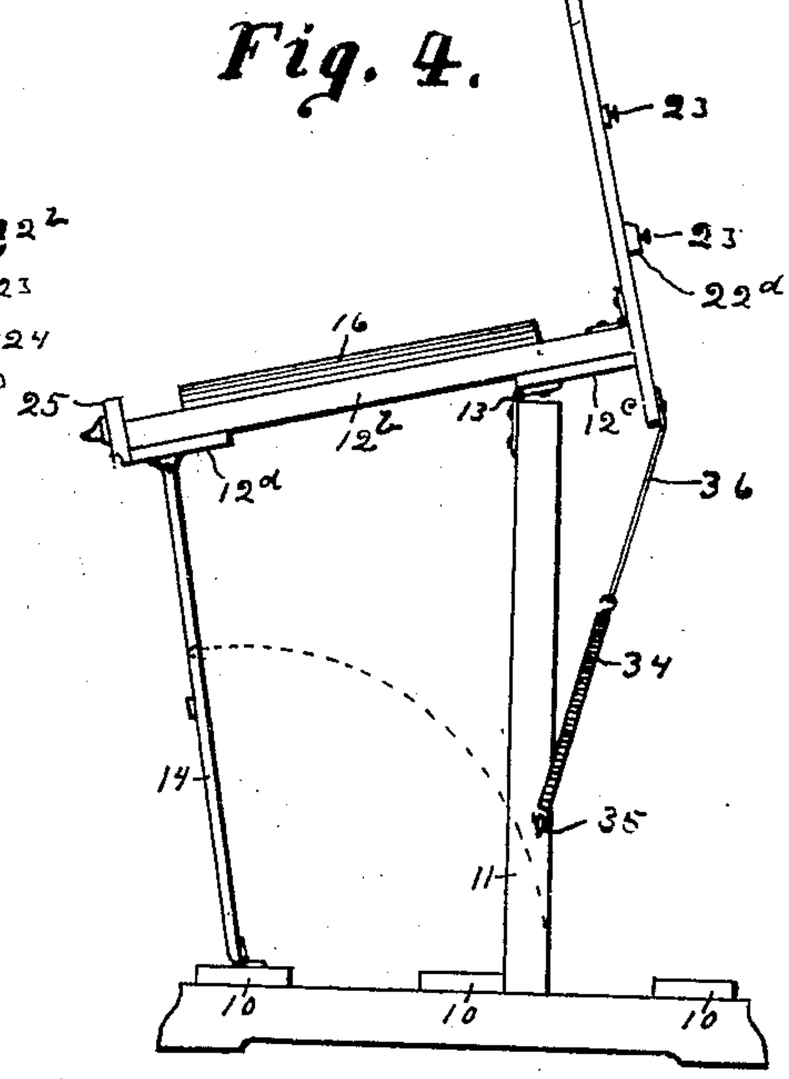


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

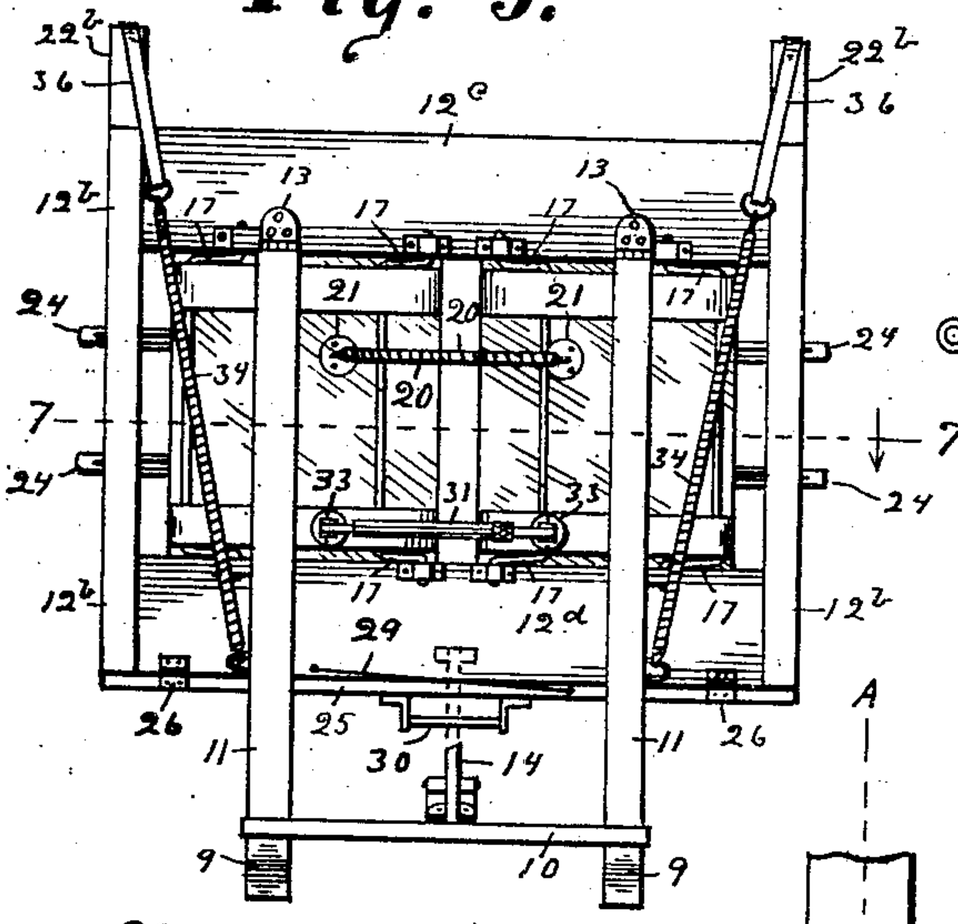


Fig. 6.

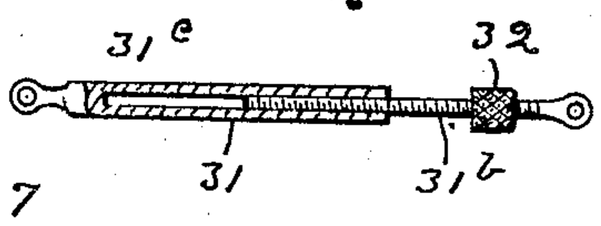


Fig. 7.

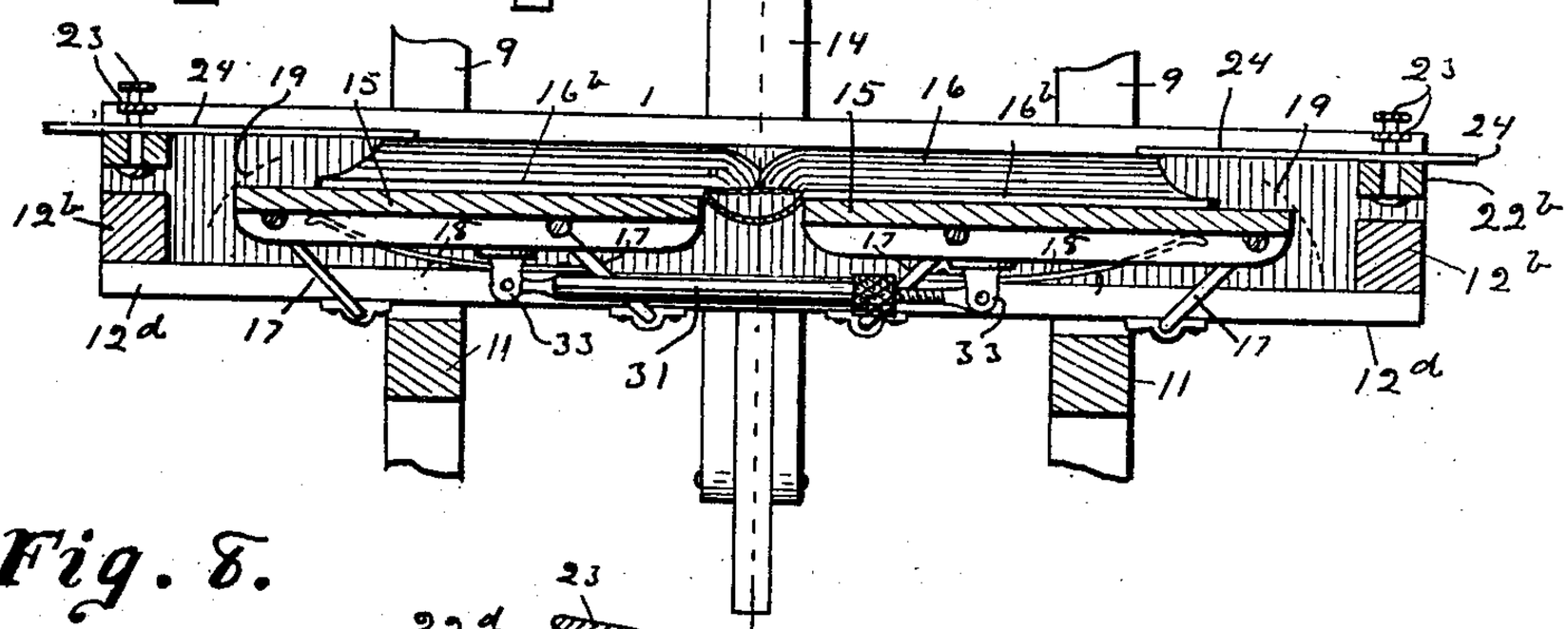
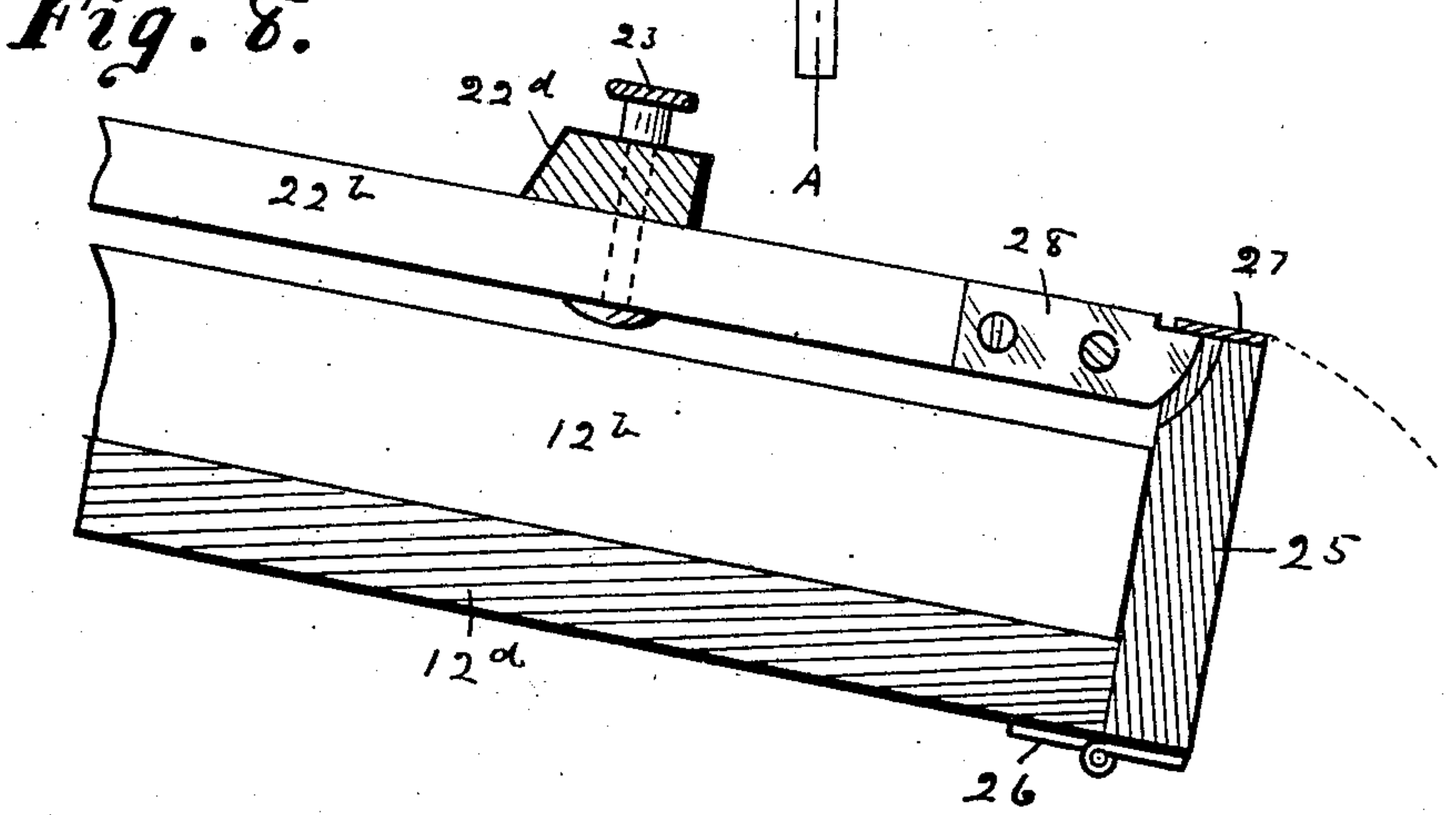


Fig. 8.



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UNITED STATES PATENT OFFICE.

FRANK P. SHEPARD, OF EDMOND, OKLAHOMA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO COPYOGRAPH MANUFACTURING COMPANY.

COPY-HOLDER.

No. 898,692. Specification of Letters Patent. Patented Sept. 15, 1908.

Application filed May 31, 1907. Serial No. 376,612.

To all whom it may concern:

Be it known that I, FRANK P. SHEPARD, a citizen of the United States, residing at Edmond, in the county of Oklahoma, Oklahoma, have invented certain new and useful Improvements in Copy-Holders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention pertains to copy-holders, and more particularly to the class of holders used for holding books, maps, documents, and the like in position to be copied by photographic process.

The object of the invention is to provide a holder: First, which, while it holds the book in a vertical position with its two pages on the same vertical plane, may be swung into position to allow the book to be inspected as on a desk or table. Second, which shall automatically keep the center or dividing line between the exposed pages approximately in the same lateral position as the book is opened from place to place. Third, which shall have a better and more convenient mechanism for clamping the book or copy into place than other holders.

Other objects and advantages of the invention will be set forth in the ensuing description.

Referring to the drawings: Figure 1 is a front elevation of the holder. Fig. 2 is a side elevation of the parts shown in Fig. 1, the dotted representations showing the position into which the parts are shifted for inspecting the book. Fig. 3 is a front elevation of the holder in inspection position. Fig. 4 is a side elevation of the holder in inspection position, the clamps for holding the book or copy being thrown upward out of operative position. Fig. 5 is a rear elevation of the holder, with the parts in position shown in Fig. 1. Fig. 6 is an enlarged plan view of an adjustable brace employed between certain book-holding members. Fig. 7 is a sectional view taken on the line 7—7, of Fig. 5. Fig. 8 is a still larger sectional view taken on the line 8—8, of Fig. 3.

Referring to the several figures, in all of which like characters of reference designate like parts, the improved holder is provided with a supporting base comprising two horizontal side members 9 and the three cross-members 10 which are secured to said members 9 by screws. This base portion is provided with two standards 11, one of said standards being mortised into and supported by each of the side members 9.

In arranging the upper structure or book support proper of the holder, a rectangular frame 12 composed of the side members 12^b and the upper and lower cross-members 12^c and 12^d, is provided, said frame being secured pivotally to the supporting frame-work by having its upper cross-member 12^c pivoted to the upper ends of the standards 11 by the hinges 13. This pivotal connection, when so positioned, allows the frame 12 and its attached parts to swing to a higher position for inspection as on an inclined desk, as shown by the dotted representations in Fig. 2; and when in this inclined position the front edge of said frame is supported by a jointed brace 14 adapted to be thrown out of supporting line or position by the foot of the operator and fold backward and downward to allow the frame to swing down again into copying position, as shown in Fig. 2. This frame 12 is provided with two flat book-supporting plates 15, said plates being positioned in front of the cross-members 12^c and 12^d between the side members 12^b of the frame, and adapted to support the two backs 16^b of the book 16. These plates 15 are secured pivotally to the cross-members 12^c and 12^d by pairs of arms 17, made of ordinary rod iron, the arms at the upper ends of the plates being connected integrally with those at the lower ends to insure a concerted movement of said upper and lower ends. The arms 17 are of equal length, and their points of pivotal connection equidistant from each other on the plates 15 and cross members 12^c and 12^d, so that during all their movements said plates remain parallel with a predetermined plane. Leaf springs 18 are secured to the cross members 12^c and 12^d, the free ends of said springs acting against the plates 15 to press said plates yieldably forward. This arrangement allows both pages of the book 16 to be pressed into the same plane, regardless of the thickness of its two portions.

Since, in turning the leaves or pages of a book from one side to the other the dividing line of the book does not remain in the same place but moves in a direction opposite that toward which the leaves are turned, each of the book-supporting plates 15 is arranged to

move toward the center of the holder as it moves forward. In producing this movement the stationary pivotal ends of the arms 17 are positioned inwardly and rearwardly of the movable pivotal ends of said arms, so that as said plates 15 move forward they travel in a circular path indicated by the dotted lines 19 in Fig. 7, thus moving inward toward the center of the structure. When thus arranged the removing of the leaves or pages from one portion of the book allows the plates 15 supporting that portion to move forward and inward in obedience to the springs 18 and other springs hereinafter described, thus keeping the center of the book on or near the center line A—A, as shown in Fig. 7. As an additional means of forcing the supporting plates 15 forward, said plates are connected with, and drawn toward, each other by a tension helical spring 20, said spring being attached to lugs 21 on the backs of said plates.

In arranging to clamp the book 16 into copying position on the plates 15, a rectangular frame-work 22 is provided, said frame-work consisting of the side bars 22^b, the upper cross bar 22^c, and the lower cross bar 22^d. The side bars 22^b are slotted, as at 22^e, to receive thumb-screws 23 for holding the bars 22^b, 22^c, and 22^d together. The side bars 22^b are secured pivotally at their upper ends to the like ends of the side bars 12^b of the frame 12, so that the frame 22 may be opened upward as shown in Fig. 4, and when closed downward the cross bars 22^c and 22^d of said frame 22 engage and clamp the upper and lower ends of the book 16, pressing the exposed pages of said book back into a plane determined by the inner or clamping surfaces of said bars 22^c and 22^d. The side bars 22^b of the clamping-frame 22 are provided with extra clamping-fingers 24 to clamp the edges of the book pages, said clamps being secured to said bars by thumb-screws 23 passing through the slots 22^e of said bars 22, and these fingers 24 are slotted to allow their adjustment with the edge of the book 16. It will be noted that the clamping bars 22^c and 22^d and the fingers 24 may be adjusted in a vertical direction, and that said fingers may be set at any angle necessary to avoid obstruction of a proper view of the page. To lock the clamping frame 22 into clamping engagement with the book 16, a locking-bar 25 is secured pivotally to the lower member 12^d of the frame 12 by metal hinges 26. This bar 25 is provided on its upper edge with locking-plates 27 which are adapted to engage a beveled locking tongue 28 secured to the lower or front ends of the side bars 22^b. The locking-bar 25 is held in locking engagement with the clamping-frame 22 by a torsion spring 29, shown in Fig. 5, and is provided with a hand-hold 30 so that its engagement may be easily effected.

To prevent excessive movement of the book 16 and its supporting plates 15 upward at each time that the clamping engagement of the clamping-frame 22 is released, and the consequent necessity of pressing said book back onto proper plane at each clamping, the movement of said plates 15 forward in obedience to the springs 18 and 20 is limited by a brace 31, shown separately in Fig. 6, which when properly adjusted keeps said plates from approaching each other and thus prevents their forward movement beyond a degree determined by said brace. As is shown, this brace 31 is made telescopic, the inner member 31^b thereof being screw-threaded and provided with a thumb-nut 32 so that its shortening movements may be limited to the proper degree. The ends of this brace are secured pivotally to lugs 33 secured to the backs of the plates 15. In adjusting this brace 31, the book 16 is first laid in place upon the plates 15, and the clamping frame 22 brought down and locked into proper clamping engagement with said book, as shown in Fig. 2. The thumb-nut 32 of the brace 31 is then screwed up against the member 31^c of the brace 31, so that it will prevent further shortening of the brace and thus prevent movement of the plates 15 forward when the clamping mechanism 22 is released.

For convenience in the manipulation of the clamping frame 22, spring actuated means are employed to hold said frame up into inoperative position while the book 16 is being inspected, as shown in Fig. 4. In the arrangement of this feature the upper ends of the side bars 22^b are extended upward past their points of pivotal connection with the frame 12 and are engaged by tension springs 34 whose lower ends are hooked into screw-eyes 35 on the lower portion of the standards 11. The connection between the springs 34 and the bars 22^b is made by a flexible leather strap 36.

The foregoing being a full, clear, and exact description of the invention, what I claim and desire to secure by Letters Patent is:—

1. In a copy holder, a copy support comprising two separate parts adapted to support the two portions of an open book, said supporting parts being adapted to advance toward and retreat from a predetermined plane, means whereby each of said parts moves toward the center line of the copy support in its advancing movement, means whereby the advancing movement of one part limits the advancing movement of the other.

2. In a copy holder, a copy support comprising two parts adapted to support the two portions of an open book, said parts being adapted to advance forwardly and inwardly of the support, a brace connection between said parts, said brace having freedom of

lengthening movements and having adjustable means for limiting its shortening movements.

3. In a copy holder, a support for an open book, a clamp on said support adapted to press the exposed pages of the book into a predetermined plane, the support carrying two separate plates adapted to support the book and press it into engagement with the clamp, means whereby said plates move toward the center of the book support as they move toward the clamp, a brace connection between said plates, said brace having freedom of lengthening movement, and having adjustable means for limiting its shortening movement.

4. In a copy holder, a support for an open book, a clamp on the support adapted to engage the exposed pages of the book, the support carrying two separate plates adapted to support the book and press it into engagement with the clamp, the plates being each secured pivotally to the support by parallel arms, the pivotal connection of said arms with the support being so positioned with respect to their pivotal connections with the plates that said plates move toward the center of the support in moving toward the clamp, springs interposed between said plates and the support, a tension spring connecting said plates.

5. In a copy holder, a copy support comprising two parts adapted to support the two portions of an open book, said parts being adapted to advance forwardly and inwardly of the support, a tension spring connection between said parts.

6. In a copy holder, a support for an open book, a clamp on the support adapted to engage the exposed pages of the book, the support carrying two separate plates adapted to support the book and press it into engagement with the clamp, the plates being each secured pivotally to the support by parallel arms, the pivotal connection of said arms with the support being so positioned with respect to their pivotal connection with the plates that said plates move toward the center of the support in moving toward the clamp, springs interposed between said plates and the support, a tension spring connecting said plates, a brace connection between said plates, said brace having freedom of lengthening movement and having adjustable means for limiting its shortening movement.

7. In a copy holder, a base, standards on the base, a copy support having its upper edge pivoted to the standards, a copy clamp having its upper edge pivoted to the upper edge of the copy support, the upper portion of said copy clamp extending past or above its point of pivotal connection and being secured to the lower portion of the standards by tension springs, plates on the copy support for supporting the book, yieldable means for pressing said plates and the book toward the clamp, a yieldable operative connection between said plates whereby the movement of one plate backward tends to move the other plate forward, and an adjustable operative connection between said plates whereby the movement of one plate forward beyond a certain degree moves the other plate backward.

Witness my hand this 15 day of May, 1907.

FRANK P. SHEPARD.

Witnesses:
GUY SMITH,
F. W. BRIGHAM.