(No Model.) 2 Sheets—Sheet 1.

J. W. COULTAS.

BOOK SUPPORT.

No. 401,011. Patented Apr. 9, 1889.

Fig. 1.

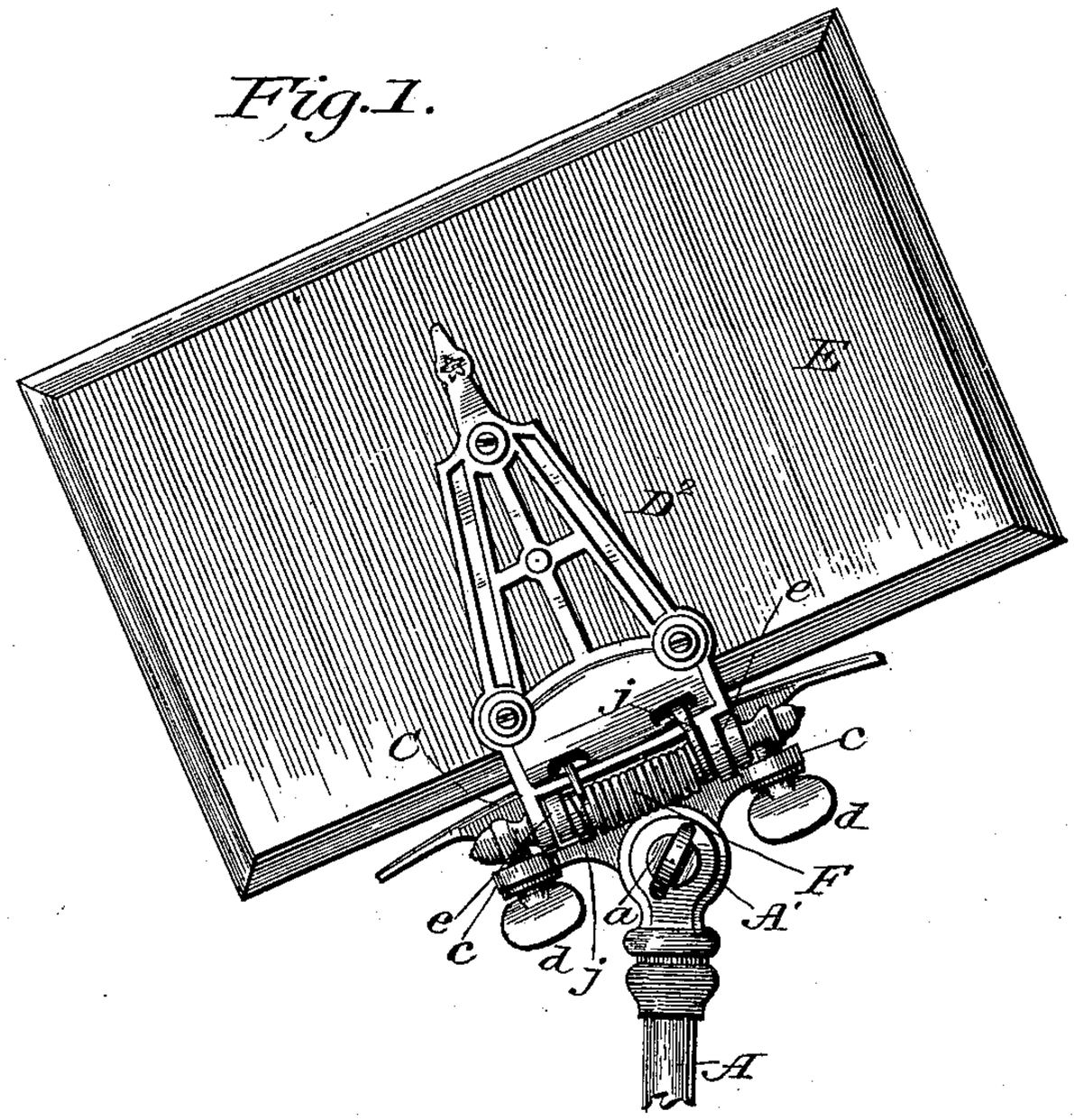
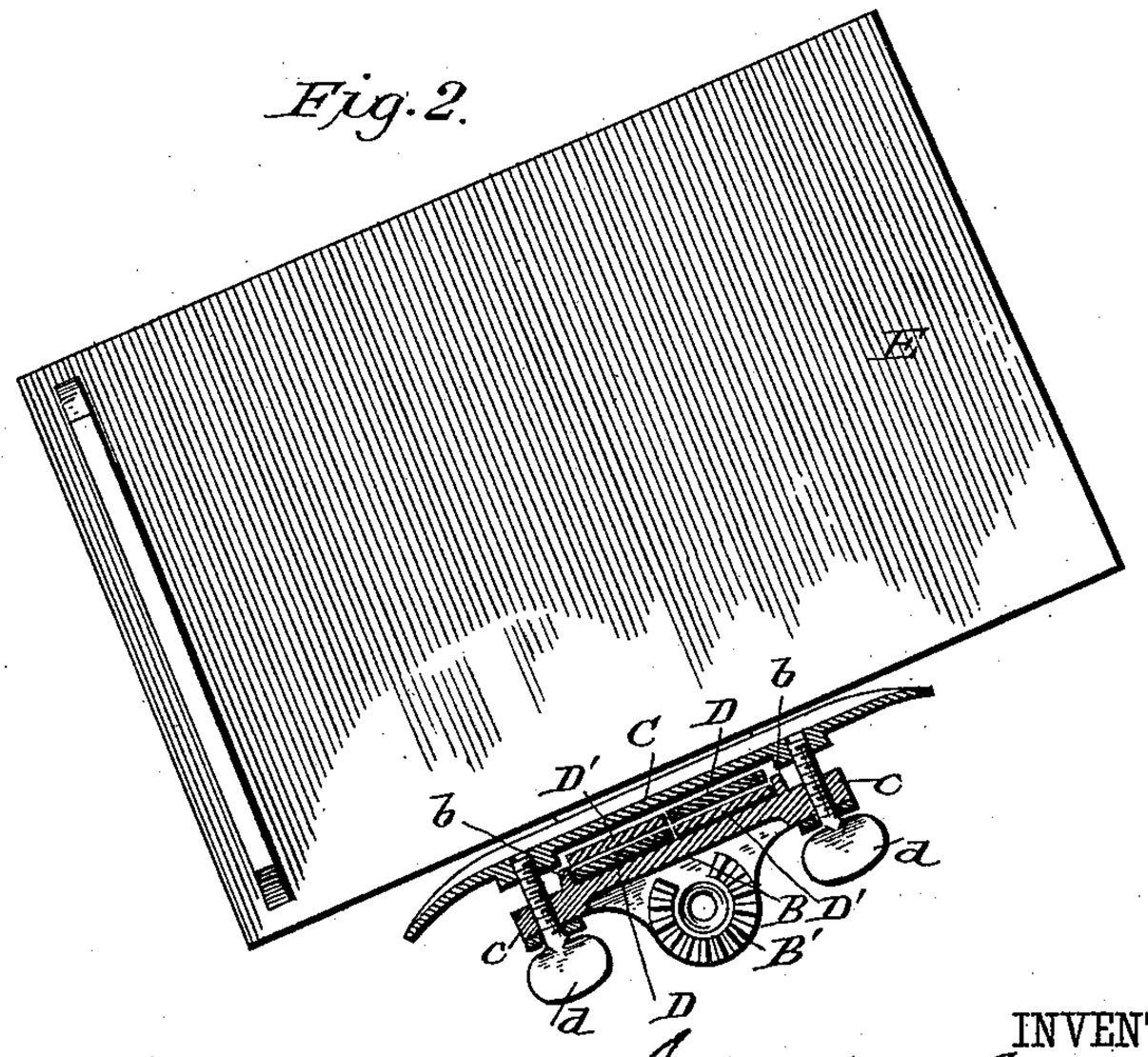


Fig. 2.



WITNESSES:

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Edw. C. Byrne

INVENTOR:

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ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

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BOOK SUPPORT.

No. 401,011. Patented Apr. 9, 1889.

Fig. 3.

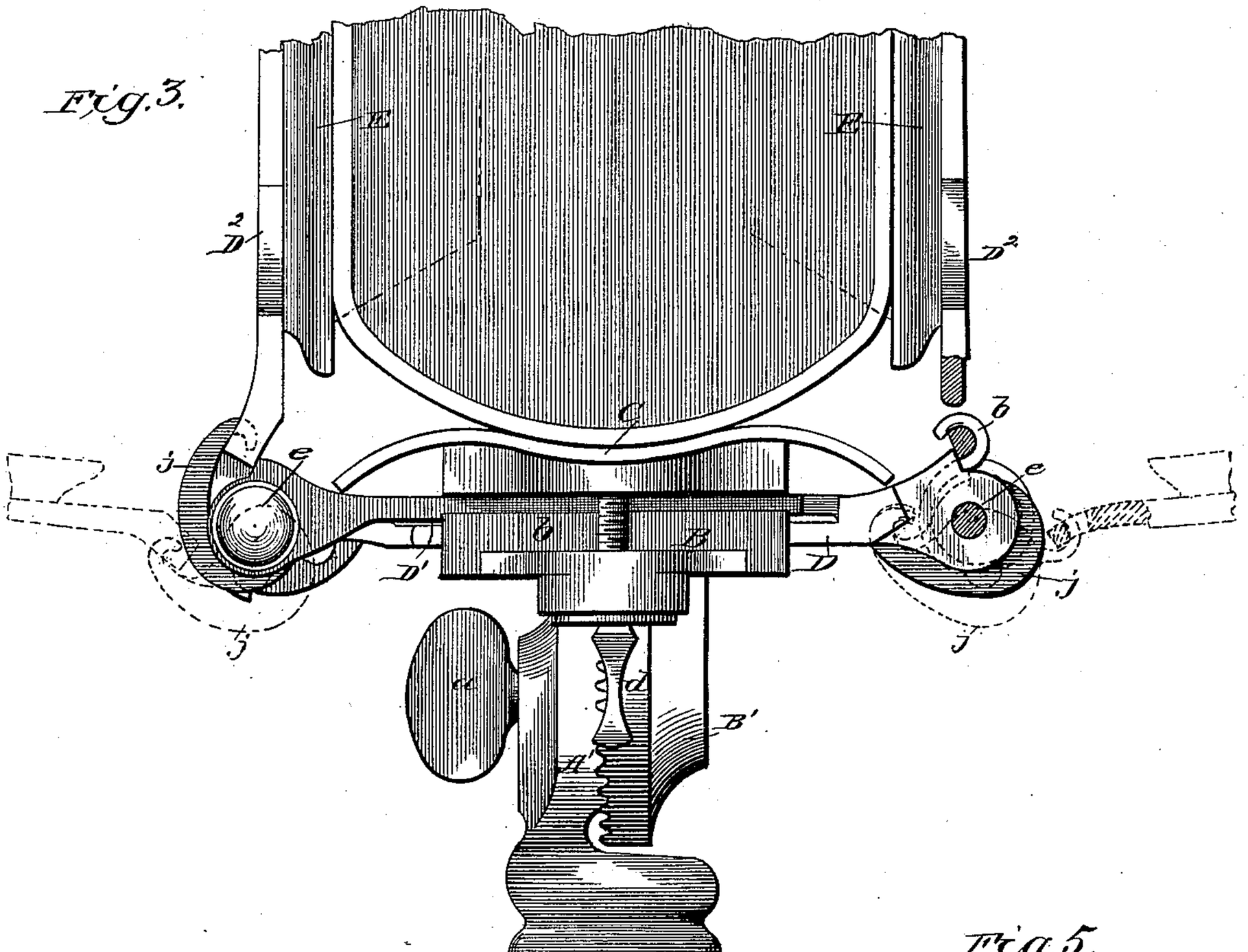


Fig. 4.

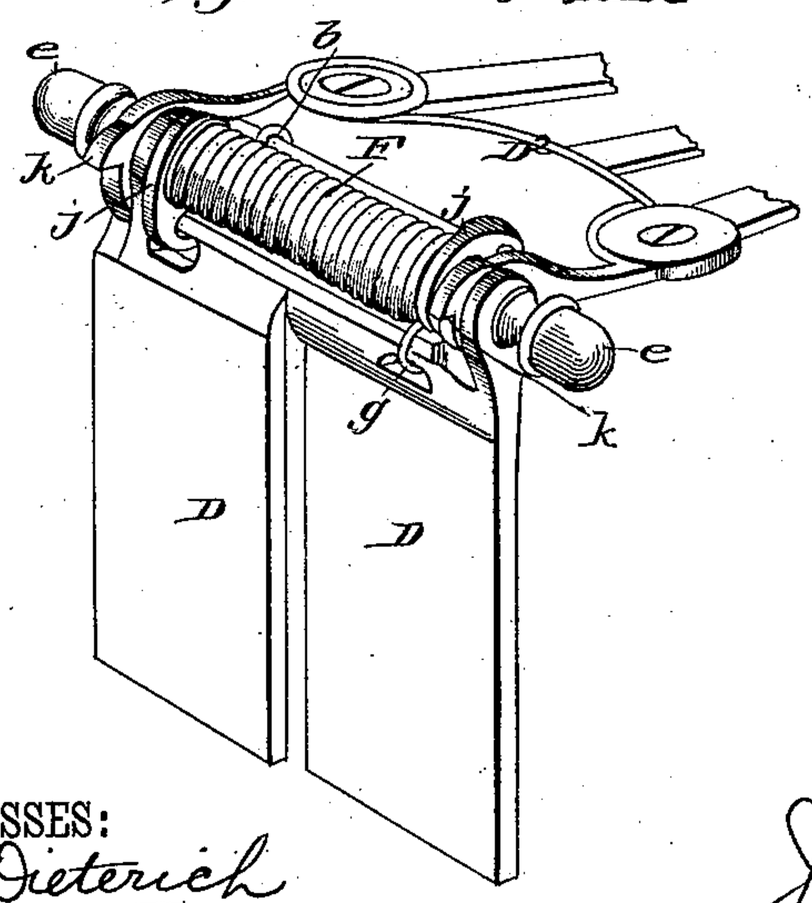
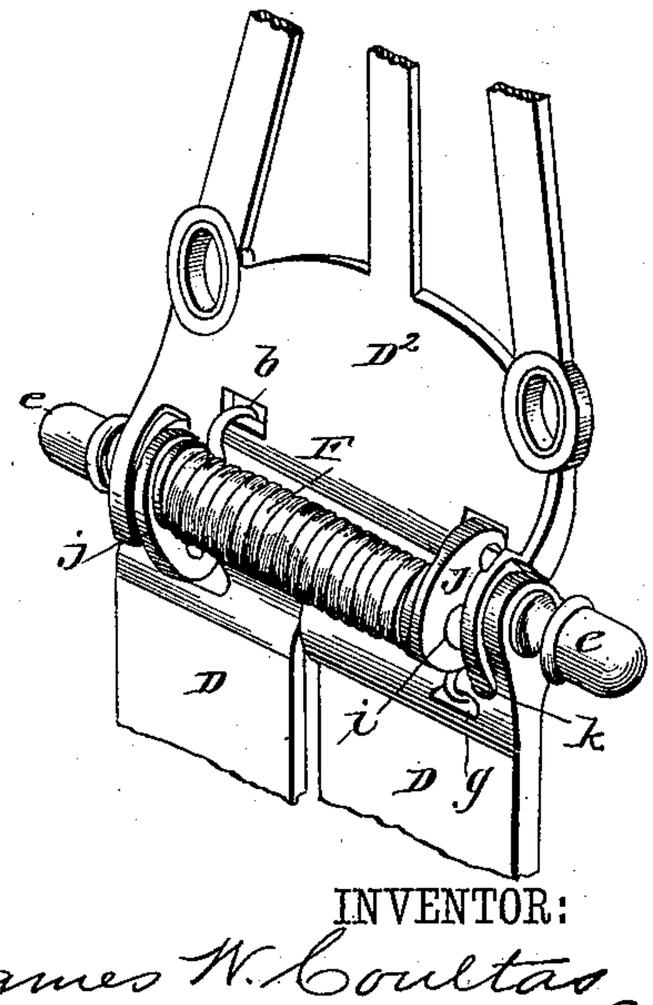


Fig. 5.



WITNESSES:
Fred G. Dieterich
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INVENTOR:
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UNITED STATES PATENT OFFICE.

JAMES W. COULTAS, OF CLINTON, ILLINOIS.

BOOK-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 401,011, dated April 9, 1889.

Application filed November 21, 1888. Serial No. 291,482. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. COULTAS, of Clinton, in the county of De Witt and State of Illinois, have invented a new and useful Improvement in Book-Supports, of which the following is a specification.

My invention relates to that class of book-supports which are employed in the form of a stand for supporting large works of reference, like dictionaries, &c., and which serves to hold them in either a closed or an open position.

It consists in the peculiar construction and arrangement of hinged plates, springs, and clamping devices for holding the two leaves of the book-support with an elastic pressure when closed and in a locked open position, as will be hereinafter fully described.

Figure 1 is a side elevation of the book-support with a part of the standard. Fig. 2 is a vertical longitudinal section through the center of the clamp-plates. Fig. 3 is a partial end elevation enlarged. Figs. 4 and 5 are perspective views of the hinge.

A is a vertically-adjustable standard mounted upon suitable legs at its lower end (not shown) and provided at its upper end with a serrated disk, A′, fitting against another serrated disk, B′, and clamped thereto by a clamp-screw, *a*. The disk B′ is attached to or formed in one piece with a frame-plate, B, that carries the book-support. By means of these serrated disks and the clamp-screw the inclination of the book-support may be changed to suit the convenience of the user. At the upper and lower edges of the frame-plate B there are flanges *b b*, and outside of the flanges are ears or lugs *c*, through which pass clamp-screws *d d*. These screws enter screw-threaded holes in the under side of a back plate, C, which receives the back of the book.

Between the back plate, C, and the frame-plate B are clamped by the screws *d d* the shank-plates D D′ of the hinges which carry the sides or leaves E of the book-support. These hinges are each composed of a plate, D^2, screwed to the wooden leaf and jointed to the double shank-plates D D at *e e* in the same axial line. These shank-plates of each hinge are two plates cast together but separated at their shank ends, (see Figs. 4 and 5,) and lying in different planes, so that when they are fitted together between the clamp-plates B and C, Fig. 2, one of the shank-plates, D, of one of the hinges lies in the same plane with one of the shank-plates, D′, of the other hinge. In this way a firm frictional contact is secured between the shank-plates of the two hinges, and the latter may be adjusted in or out to adapt the book-support to receive different thicknesses of books.

I will now proceed to describe the locking-spring hinges which hold the leaves of the book-support and close them with an elastic pressure, and as both the hinges are alike it will be sufficient to describe one of them.

Referring to Figs. 4 and 5, the shank-plate D and screw-plate D^2 are jointed together at *e e*, forming an axis about which the hinged leaf of the book-support opens and closes. F is a spiral spring arranged parallel to the axis of the hinges *e e* and lying between the points of articulation of the same. This spring has one end, *f*, hooked into the screw-plate D^2 and the other end, *g*, hooked into the shank-plate D, the tension being so arranged as to tend to shut up the screw-plate carrying the leaf of the book-support. Now when the two sections of the hinge are opened out in the same plane the spiral spring is adjusted to a new position, as in Fig. 5 and dotted lines in Fig. 3, where its tension does not tend to close the leaf, and allows the opened book in the book-support to remain open for inspection without being closed by the spring. To accomplish this, the spiral spring is provided with pintle-pins *i*, Fig. 5, at its ends, and these are embraced by links or hooks *j j*, one of which is loosely connected to the shank-plates D and the other to the screw-plate D^2. Now when the screw-plate D^2 and the leaf of the book-support are folded back to the opened position these links or hooks *j j* throw the spiral spring laterally away from the axial line *e e* of the hinge, as shown by dotted lines, Fig. 3, and full lines in Fig. 5. When in this position, the tension of the spiral spring is exerted outside of the axial line *e e* of the hinge and does not tend to close it, as it does when the spiral spring is concentric with the hinge.

To stop the hinged leaf in its opened position without allowing it to go back too far,

lugs *k k* are formed on the screw-plate D^2, which lugs strike against the shank-plates when the hinge is open and limit the outward or opening movement.

Having thus described my invention, what I claim as new is—

1. The combination, in a book-support, of two hinged plates jointed together about a fixed axial line, a spiral spring arranged parallel and adjacent to that line and having one end attached to one hinged plate and the other end to the other hinged plate, and link-bars connected loosely to the opposite ends of the spring and opposite hinged plates, whereby the axis of the spring is thrown away from the axis of the hinge when the latter is opened and the hinge locked in open position, substantially as shown and described.

2. The combination, in a book-support, of two pairs of hinges, each having one leaf formed in two different planes and arranged to lap together reciprocally, and a clamp for fastening the same together, consisting of an upper plate, which forms a rest for the back of the book, a subjacent frame-plate, and set-screws holding the two together, substantially as shown and described.

JAMES W. COULTAS.

Witnesses:
SAMEL HENRON,
FRED ROBINSON.