

(No Model.)

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BOOK CASE.

No. 398,188.

Patented Feb. 19, 1889.

Fig. 3.

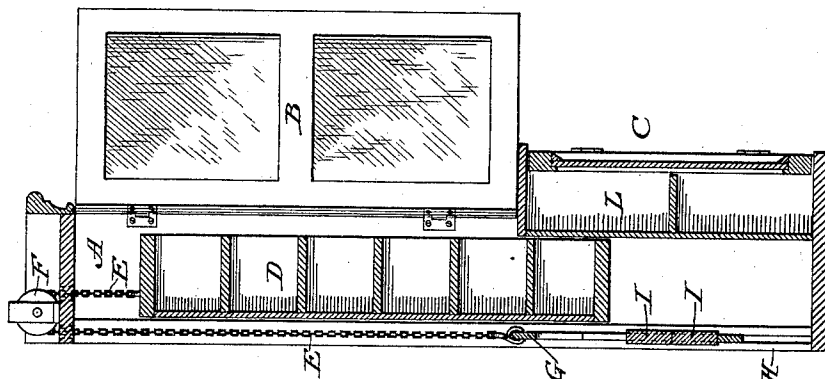


Fig. 2.

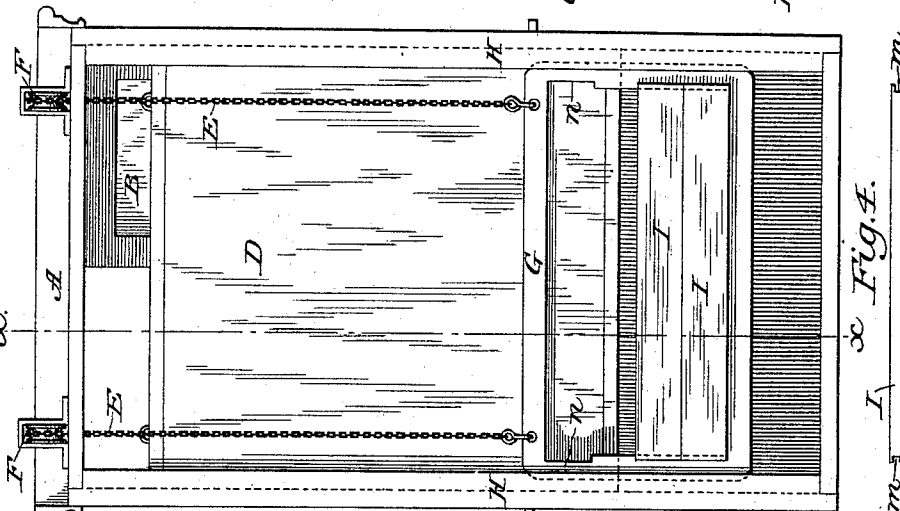
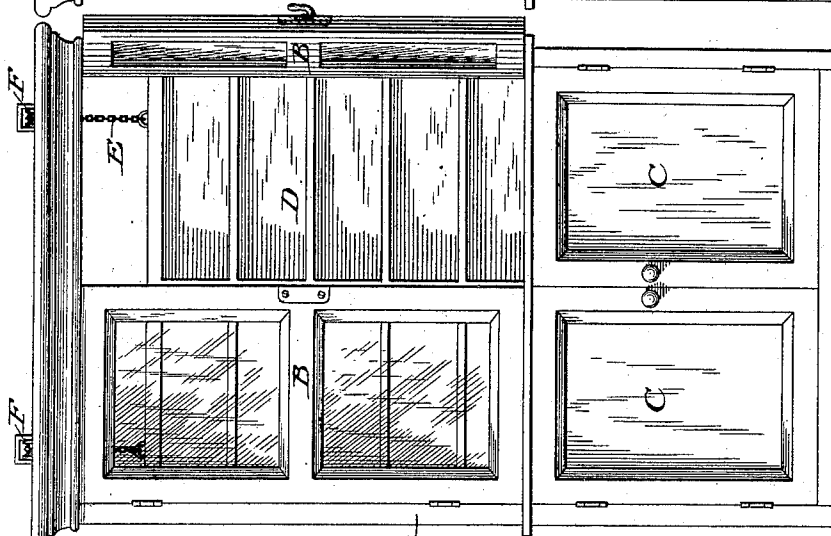


Fig. 1.



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UNITED STATES PATENT OFFICE.

GEORGE H. RITTINGER AND GEORGE J. EISENGART, JR., OF NEW YORK, N. Y.

BOOK-CASE.

SPECIFICATION forming part of Letters Patent No. 398,188, dated February 19, 1889.

Application filed November 5, 1888. Serial No. 289,949. (No model.)

To all whom it may concern:

Be it known that we, GEORGE H. RITTINGER and GEORGE J. EISENGART, Jr., both of the city, county, and State of New York, have invented a new and useful Improvement in Book-Cases; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a front elevation of our improved balanced-shelf book-case with the shelves partly lowered; Fig. 2, a rear elevation thereof; Fig. 3, a cross-section in line *xx* of Fig. 2, and Fig. 4 a top view of one of the weights.

The object of our invention is to facilitate the removal of books and other articles from the upper shelves of a book-case without the necessity of using a step-ladder or mounting a chair or box for the purpose.

It consists in the combination, with a set of shelves suspended within a suitable case by means of cords passing over pulleys fixed in the top of the case, of a counterbalancing-frame attached to the opposite ends of said cords and a series of heavy detachable plates fitting in said frame, whereby the counterbalancing-weight may be adjusted to that of the shelves and their contents.

In the accompanying drawings, A represents a book-case or cabinet of any desired finish, having an upper section fitted with doors B B, and a lower wider section or base, closed in like manner by doors C C. Within the upper section is fitted loosely a set of shelves, D D, connected by side boards and suitably backed. These shelves are made to fill neatly the upper portion of the case, and are adapted to drop-down into the lower section. They are suspended and upheld normally in the upper section by means of cords or chains E E, passing over suitable rollers or pulleys, F F, fitted in the top of the case, and whose opposite ends are attached to the upper edge of a metallic frame, G, preferably of a length nearly equal to the

width of the case, and which is adapted to slide vertically in ways formed by vertical cleats H H, overlapping its two ends, as shown in Figs. 2 and 3.

Metallic plates or slabs I I are provided, having longitudinally grooved or slotted ends, as shown at *m m* in Fig. 4, adapted to embrace the thickness of the frame, and are made slightly longer than the inner length of the frame. (See Fig. 2.)

The inner edges of the end bars of the frame are recessed at their upper ends, as shown at *n n*, Fig. 2, to receive the full length of the slabs, which may thus be inserted in the upper portion of the frame, so as to bring the grooves in their ends into register with the edges of the wider portion of the end bars to embrace the same and slide down thereon, as illustrated in said Fig. 2; hence by lifting each slab until its ends are brought opposite the recesses *n n* it may be readily lifted out, but otherwise it is securely held in the frame.

The frame G and slabs I I are so reduced in thickness as to occupy but little space, and hence do not increase appreciably the depth of the case or require its enlargement beyond the customary dimensions.

The space L in the lower section of the case in front of that required to permit of the lowering of the shelves may be partitioned off and utilized for additional shelf-room, as illustrated in Fig. 3.

In the use of this improved book-case the shelves, when filled or partly filled, are readily counterbalanced, so as to remain normally in their elevated position, by adding or removing the weights or slabs I I to or from the frame G, in manner as described. When it is desired to reach the upper shelf, it is only necessary to draw down the set of shelves until the required shelf is within easy reach, after which it will automatically return to its normal position unless made fast by a catch or other device, which may be provided for the purpose, but which need not herein be described.

We claim as our invention—

The combination, substantially as set forth,
of the book-case, the vertically-sliding set of
shelves, the counterbalancing-frame moving
in vertical ways formed in the case, the cords
5 connecting the shelves and frame, the pul-
leys over which the cords are carried, and the
detachable weights fitting edgewise in said
frame, one above the other.

In testimony whereof we have signed our
names to this specification in the presence of 10
two subscribing witnesses.

GEO. H. RITTINGER.

GEO. J. EISENGART, JR.

Witnesses:

A. N. JESBERA,

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