No. 646,129. Patented Mar. 27, 1900.

I. E. ROCKWELL & J. D. ADAMS.

BOOKCASE, &c.

(Application filed Oct. 12, 1899.)

(No Model.) 2 Sheets—Sheet 1.

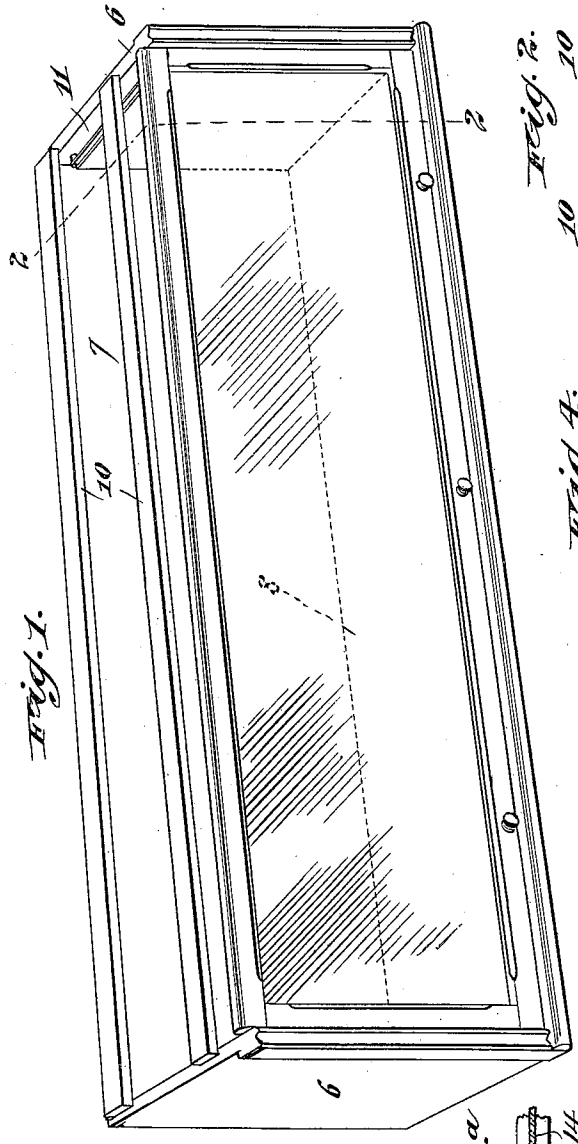


Fig. 1.

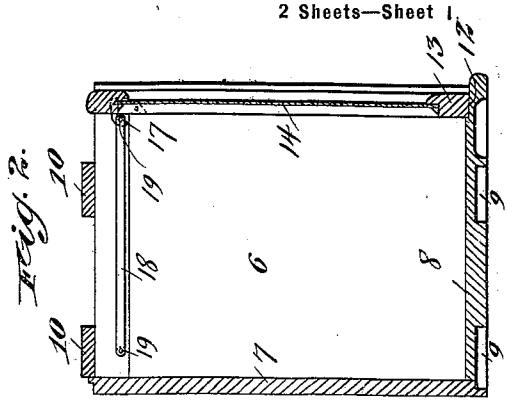


Fig. 2.

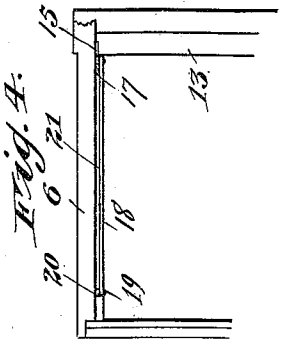


Fig. 4.

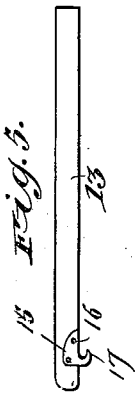


Fig. 5.

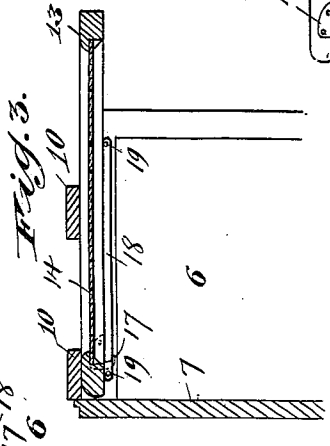


Fig. 3.

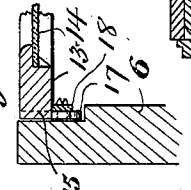


Fig. 3a.

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No. 646,129. Patented Mar. 27, 1900.

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Fig. 5b.

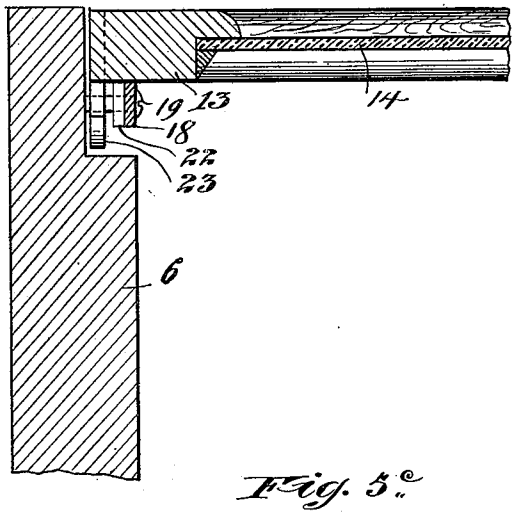
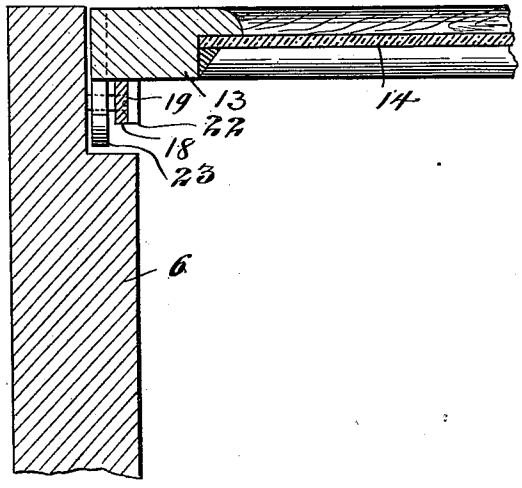


Fig. 5c.



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UNITED STATES PATENT OFFICE.

IRVIN E. ROCKWELL, OF CHICAGO, ILLINOIS, AND JAMES D. ADAMS, OF WABASH, INDIANA.

BOOKCASE, &c.

SPECIFICATION forming part of Letters Patent No. 646,129, dated March 27, 1900.

Application filed October 12, 1899. Serial No. 733,360. (No model.)

To all whom it may concern:

Be it known that we, IRVIN E. ROCKWELL, of Chicago, Illinois, and JAMES D. ADAMS, of Wabash, Indiana, citizens of the United States, have invented certain new and useful Improvements in Book or other Cases, of which the following is a specification.

Our invention relates to that class of book and other cases having one or more compartments with an open front and provided with ways at the upper portion of their end walls, doors or covers for their open sides adapted to be moved along said ways, and hinge or pivot connections at the outer ends of said ways whereon the doors are supported and on which they are swung in opening and closing them.

Our invention relates more particularly to improved means for supporting and operating the doors and may be applied generally to bookcases, chests, or cupboards of fixed dimensions, to sectional bookcases, or to a single-compartment cupboard or case.

In the accompanying drawings we have shown our invention as applied to one section of a sectional or expansion bookcase.

In said drawings, Figure 1 is a perspective view of one section of a bookcase, showing the door swung down to close its front. Fig. 2 is a sectional view on the line 2 2 of Fig. 1, showing the door in the closed position. Fig. 3 is a partial sectional view on the line 3 3 of Fig. 1, showing the door open and supported on its ways. Fig. 4 is a partial plan view with the top strips of the section removed and the door down. Fig. 5 is an edge view of the end of the door with a hinge-hook applied thereto. Fig. 5^a is a sectional detail. Fig. 5^b is a similar view of a modification, and Fig. 5^c is a similar view of another modification.

In the drawings, 6 represents the end walls, 7 the back wall, and 8 the bottom wall, all of which are or may be entirely closed. For the purpose of adapting the case or section (shown complete in Fig. 1) to have matching relation with other similarly-formed sections the bottom wall is longitudinally grooved, as at 9, to receive correspondingly-positioned strips 10 of a similar section to form an expansion-bookcase. The inner surfaces of the end walls 6 and of the bottom wall 8 are also rabbeted, the end walls at their upper portions, as shown at 11, and the bottom wall along its front edge, as shown at 12. This affords stops or abutments for the door-frame 13, such doors being usually of sash form and provided with the glass 14. The door or door-frame is provided at each end with the hook-shaped hinge member 15, which has its body portion perforated for the passage of fastenings 16, and the body portion is preferably set in a mortise or recess in the edge of the door, its hook 17 projecting beyond the plane of the inner surface of the door. To the end walls 6 are attached slideways, said ways being preferably composed of metal bars or rods 18, but preferably thin metal bars, set edgewise and secured to the end walls by means of screws or other fastenings 19, passing through washers 20 and into the end walls. The particular manner of constructing and supporting these slideways is not so important; but they are so constructed and positioned as to furnish tracks or ways for the door to slide upon, and for this purpose they are shown placed parallel to the end walls at a distance below the top wall of the compartment about equal to the thickness of the door-frame and separated or set out from the end walls to provide runways 21 for the hooks 17. Each end wall of the casing being provided with a similar slideway and each end of the door with a like hook, the door is easily placed in position or removed from the case by entering the hinge-hooks in the runways 21. These hooks taking over the washers or other stops closing the outer ends of the runways afford hinges whereon the door is swung and whereby it is supported when closed.

The hooks are so positioned with reference to the slideways as to contact therewith to prevent the door from binding or sticking and to cause it to move in substantial parallelism with the end walls of the case. The door is of such length as to afford a slight clearance at its ends, and there is also, preferably, a slight clearance between the outer sides of the hooks and the end walls of the case, as shown in Fig. 5^a. The hooks are shown in contact with the sides of the slideways, and

this is the preferred construction, although said hooks may perform the function of guides if they be not normally in contact with the slideways, provided that they are so disposed as to engage the slideways to prevent the door being pushed or drawn so far out of parallelism as to cause it to stick or bind.

The form and arrangement of the hinge-hooks or guides and of the slideways may be varied, and instead of rabbeting the end and bottom walls strips might be secured thereon to form stops or abutments for the door to close upon. Such and similar structural changes may be made without departing from the spirit and scope of our invention.

We have found that doors supported in the manner above described can be manipulated with little friction and noise and moved in and out without sticking, even if grasped at one side only. The metal parts are inexpensive, easily attached, and may be applied to any form of case or cupboard without interfering with the storage-space thereof.

We prefer to rabbet the upper portions of the end walls of the case to provide longitudinal grooves or channels to receive the slideways and afford the runways for the hooks, and these grooves or channels are preferably of such depth as to accommodate the slideways and hooks without projecting beyond the plane of the inner surface of said end wall. The hooks themselves are preferably located outside of the slideways and are thereby prevented from coming in contact with the books or other articles during their movement, although for the purpose of serving as guides these hooks might be located to bear upon the inner sides of the slideways. In the construction described these hooks serve both as guides and as hinge members; but it is within the scope of our invention to separate these functions. Thus, for example, the guides may be constituted by downward projections not shaped into hooks and so located as to bear against the lateral surfaces of the metal bars to guide the door in its movements, while the hinge members may be formed of separate hook-shaped projections which do not contact with the metal guide-bars at any point. In Fig. 5^b of the drawings we have shown such a separate guide at 22, the hook being indicated at 23. In this construction the guide lies on the same side of the bar 18 as does the hook; but it may be located on the other side, as shown in Fig. 5^c. While we prefer the simple construction wherein both the hinged member and the guide are formed in a single piece, we do not wish to be understood as limiting our invention to that particular embodiment, but wish to include therein the forms just described in which these separate functions are accomplished by physically-separate parts.

We claim—

1. The combination, with a case or cupboard and a door or closure for the front thereof, of a door-support comprising fixed bars or rods adjacent to the upper corners of the compartment and affording slideways for the door, guides carried by the door and having lateral bearings against the fixed bars or rods; hinge members carried by the door, and stops at the outer ends of the slideways in position to engage said hinge members when the door is turned out and affording pivots on which the door may be swung, substantially as described.

2. The combination with a book or other case of a door-support comprising bars or rods secured adjacent to the end walls of the case, but separated therefrom to provide runways and affording on their upper surfaces slideways for the door, hooks attached to the door and adapted to move in said runways, to contact with the sides of said bars and to afford a hinge on which the door may be swung, substantially as described.

3. The combination with a book or other case and its door, of a door-support comprising metal rods or bars secured to the end walls of the case, but separated therefrom and providing therewith runways closed at their forward ends, and hooks attached to the ends of the door and adapted to travel within said runways whereby to guide the door and to form hinges on which the door may be swung, substantially as described.

4. The combination with a case or compartment, having slideways secured adjacent to its end walls, but separated therefrom to provide runways, of a door or closure having hinge members secured to its ends and projecting below its inner surface to permit the doors to contact with the slideways, said hooks being adapted to enter and be moved along the runways and being so positioned as to contact with the slideways to guide the door in its movements and also to provide hinges on which the door may be swung, substantially as described.

5. The combination with a casing or compartment having its end walls rabbeted or recessed at their upper ends to provide horizontal channels, slideways secured to the end walls within said channels but separated therefrom to provide runways, and a door having hooks secured to its ends and adapted to travel in said runways but without contact with the bottom wall of the groove or channel, substantially as described.

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