

No. 671,147.

Patented Apr. 2, 1901.

E. D. ROBBINS, C. McPIKE & J. D. ADAMS.

SECTIONAL BOOK OR OTHER CASE.

(Application filed June 22, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

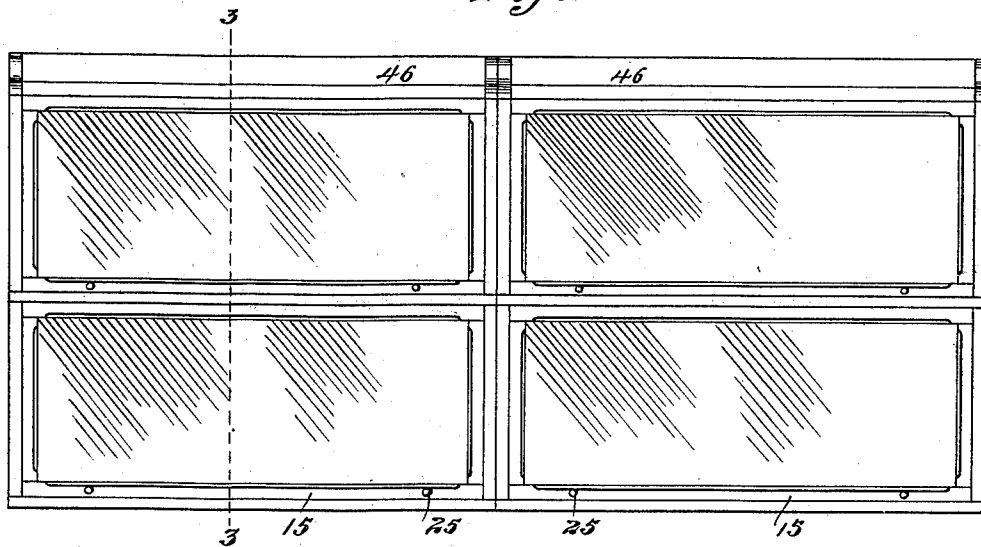


Fig. 2.

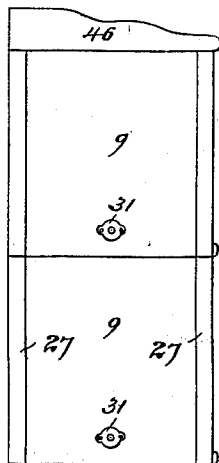
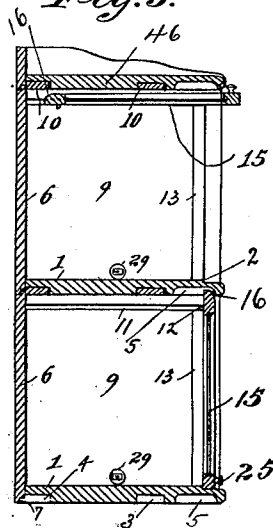


Fig. 3.



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2 Sheets—Sheet 2.

Fig. 1.

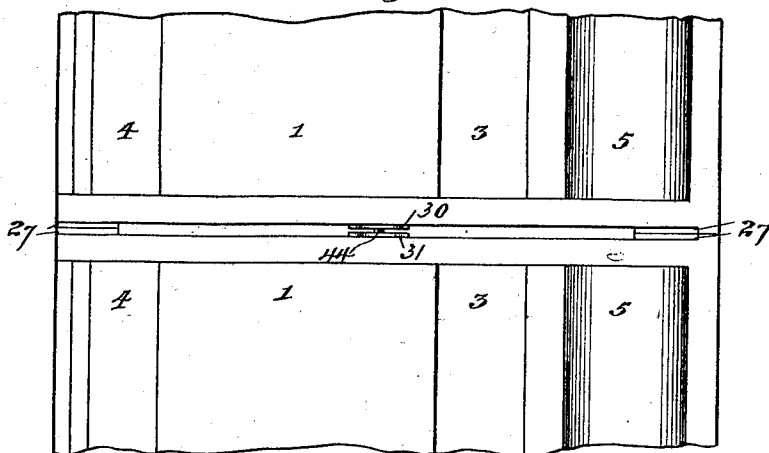


Fig. 5.

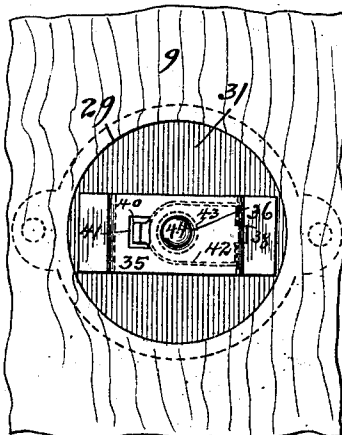


Fig. 6.

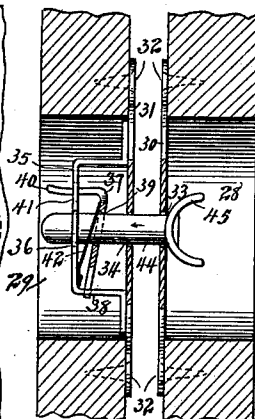


Fig. 7.

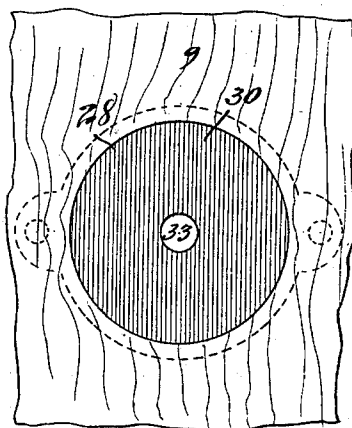
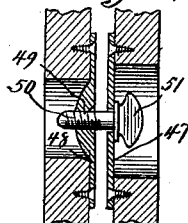


Fig. 8.



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UNITED STATES PATENT OFFICE.

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SECTIONAL BOOK OR OTHER CASE.

SPECIFICATION forming part of Letters Patent No. 671,147, dated April 2, 1901.

Application filed June 22, 1899. Serial No. 721,453. (No model.)

To all whom it may concern:

Be it known that we, ELLIOTT D. ROBBINS and CURTIS MCPIKE, of Chicago, in the county of Cook and State of Illinois, and JAMES D. ADAMS, of Wabash, in the county of Wabash and State of Indiana, have invented certain new and useful Improvements in Sectional Book or other Cases, of which the following is a specification.

10 This invention relates to sectional book and other cases, and has for one object to provide a construction whereby the individual units of which the case is composed may be readily assembled in any desired number, so as to in-
15 crease the dimensions of the book or other case, the construction being such that the several units will be firmly held in place when united, but may be readily separated when desired.

20 A further object of the invention is to so construct and locate the connecting devices between the ends of the units that all projecting parts which might tend to engage with and damage clothing or other articles are dis-
25 pensed with.

To these ends our invention consists in certain novel features, which we will now proceed to describe and will then particularly point out in the claims.

30 In the accompanying drawings, Figure 1 is a front elevation of a bookcase embodying our invention, the same being shown as composed of four units. Fig. 2 is an end elevation of the same. Fig. 3 is a vertical sectional
35 view taken on the line 3 3 of Fig. 1. Fig. 4 is a bottom plan view of the meeting ends of two adjacent sections or units of the same tier. Fig. 5 is an enlarged detail view in elevation from the inside of the section of one
40 portion of the fastening or connecting device for the ends of the sections. Fig. 6 is a similar view of the other portion of the fastening or connecting device. Fig. 7 is a plan section through the parts shown in Figs. 5 and
45 6 when united; and Fig. 8 is a view similar to Fig. 7, illustrating a modified form of fastening or connecting device.

In the drawings, 1 indicates the bottom of an individual section or a unit of a case em-

bodying our invention, the upper front edge 50 of which is cut away or rabbeted to form a shoulder, as indicated at 2, while in its under side are formed two or more longitudinal grooves or recesses, two being shown in the present instance and indicated at 3 and 4. 55 There is also provided in the under face of the bottom 1, near the front edge thereof, a longitudinal groove 5. The back of the section is indicated at 6, and the lower inner wall of said back piece is rabbeted or cut away, 60 as indicated at 7, while its upper inner edge is provided with a longitudinal projection 8, adapted to fit the rabbet 7 of the section above it. The upper edges of the ends 9 are con- 65 nected by longitudinally-extending strips or slats 10, corresponding in number and size with the grooves 3 and 4 of the bottom, so that when one section is superimposed upon another said slats will enter said grooves, as 70 clearly shown in Fig. 3, and will prevent any displacement of the two sections relatively to each other in a forward or rearward direction. The projection or tongue 8, fitting within the rabbet 7, serves to form a more efficient and 75 dust-tight joint at the rear of the case. In the inner face of each end piece 9 there is formed a groove 11, which extends from the rear of the section to a point near the front, where it terminates in a stop-shoulder 12, said grooves 80 being located a short distance below the upper edge of the end pieces, as clearly shown in Fig. 3. There is also provided on the inner face of each end piece 9 a vertical strip 13, which has its front face flush with the vertical face of 85 the shoulder 2, and said strip extends from the level of the upper surface of the bottom 1 to the lower margin of the groove 11, where it terminates a short distance in the rear of the front end of said groove. The inner 90 faces of the end pieces are flush except for the grooves 11 and strips 13. These grooves and strips serve to guide and support the door 15, the upper front edge of which is rounded off, as indicated at 16, to conform to the rounding of the wall of the groove 5. The 95 door is provided at the lower front portion thereof with a pair of knobs or handles 25 for operating the same and has in each side there-

of a suitable pintle (not shown) to engage the corresponding groove 11, and the construction is such that when the pintles are extended into the grooves 11 they will form not only guides and supports for the upper or rear portion of the door, but also hinge-pintles upon which the door may turn when it is drawn forward until said pintles are brought to the front end of the grooves 11.

Each section is provided at the front and rear margins of the outer faces of its end portions 9 with vertical strips 27, which abut against the corresponding strips of the laterally-adjacent sections when assembled in horizontal tiers, as clearly indicated in Fig. 4 of the drawings. This construction gives the several sections a firm, extended, and even bearing against each other, both at the front and rear margins of their ends. Each section is provided at its ends with apertures 28 and 29, formed through its end pieces 9, preferably near the bottom thereof and of sufficient size to permit the insertion of the fingers. These apertures are closed by plates 30 and 31, respectively, said plates being secured to the outer faces of the ends 9 of the section by screws 32 or in any other suitable manner. The plate 30 is provided with a central aperture 33, and the plate 31 is provided with a corresponding central aperture 34. On the inner face of the plate 31 is provided a bridge-piece 35, located within the aperture or recess 29 and having a central aperture 36 in line with the aperture 34. A clamping-lever 37 is pivoted to one arm of the bridge-piece 35, as indicated at 38, and is provided with an aperture 39 slightly larger than the apertures 34 and 36. Said clamping-lever is provided with an operating stem or handle 40, which extends through a slot 41 in the bridge-piece 35, and a spring 42, secured to the bridge-piece, bears with its free end against the free end of the clamping-lever 37, said spring being provided with a large aperture 43 for the unobstructed passage of the connecting pin or bolt, hereinafter described. All these parts lie entirely within the thickness of the end piece 9, so that they do not project into the interior of the section. The connecting pin or bolt is indicated at 44 and is provided with a head 45, by means of which it may be grasped. Said pin or bolt passes somewhat loosely through the aperture 33 in the plate 30 and more snugly through the apertures 34 in the plate 31 and 36 in the bridge-piece 35. The aperture 39 in the clamping-lever 37 is of such dimensions that when said lever is at or near a position at right angles to the pin or bolt 44 said pin or bolt is clear from contact with its walls; but when said clamping-lever is inclined to a sufficient extent—as, for instance, as indicated in Fig. 7 of the drawings—the margins of the aperture 39 will bear upon the pin or bolt in such a manner that, while it permits said pin or bolt to be moved in the direction indicated by the arrow in said fig-

ure, it will prevent its movement in the opposite direction. This is due to the fact that movement in the direction of the arrow tends to move the clamping-lever in such a way as to free the pin or bolt from the binding action of the walls of the aperture therein, while movement in the opposite direction tends to cause the margins of said aperture to bite said pin or bolt, and thereby prevents its withdrawal. The spring 42 serves to always hold said clamping-lever in operative position to prevent withdrawal of the pin or bolt except when said clamping-lever is moved against the action of said spring by pressure of the finger upon the stem or handle 40.

It will be understood that in assembling the sections or units together horizontally they are brought into position so that their end strips 27 abut against each other, and the aperture 33 of the plate 30 of one section is opposite the aperture 34 of the plate 31 of the adjacent section. All that is necessary to firmly unite the sections is to insert the pin or bolt 44 through the apertures 33 and 34 in the plates and through the apertures 39 in the clamping-lever 37, which will freely permit the passage of said bolt in the manner just described. When the head 45 of the pin or bolt bears against the inner side of the plate 30, the two sections are firmly locked together, since any attempt to separate them will cause the clamping-lever 37 to bite upon the pin or bolt 44 and prevent such separation. The sections may, however, be readily separated by inserting the finger into the recess 29 and pressing upon the stem or handle 40, whereupon the pin or bolt is released and may be withdrawn by means of its head 45. It will be observed that the pin or bolt is of such length that when inserted in position to unite the parts neither it nor any of its associated mechanism projects beyond the inner faces of the end pieces, so that the interior of the sections is entirely unobstructed. At the same time all external projections on the ends of the cases are done away with, and all danger of injury to garments of the person by becoming entangled with or striking against said projections is done away with.

The units constructed in the manner described may be assembled together either in vertical or horizontal rows, or in both, so as to constitute a book or other case of any desired capacity, which may be increased or diminished at will by the removal or addition of other sections or units. With regard to the sections in the same horizontal row they may be united by simply bringing their ends together until the strips 27 abut, whereupon the locking pin or bolt 44 may be inserted in the manner hereinbefore described and will lock the sections together so that they will be held firmly in place. The sections may be separated horizontally by inserting the hands within the adjacent sections, releasing

the clamping-lever 37 with one hand and withdrawing the locking pin or bolt 44 with the other. It will be observed that the devices for connecting the sections at their ends do not project into the interior of the sections when in position, and when the sections are separated they do not project externally in such a manner as to cause damage.

It will be understood, of course, that in order to complete the case a top 46 is employed, grooved and recessed on its under side to fit the upper portion of the section below it and finished above in any suitable manner, as indicated in Figs. 1, 2, and 3.

We do not wish to be understood as limiting our invention in its application to book-cases only, as it is obvious that a similar construction may be applied to cases and cabinets of various kinds—as, for instance, either cabinets or individual units, such as commercial filing cabinets or units, consisting of letter, catalogue, card-index, or check files, pigeon-hole cases, document-files, and various other devices of office equipment. Furthermore, we do not wish to be understood as limiting ourselves to the precise details of construction hereinbefore set forth, as said details may be varied without departing from the principle of our invention. For instance, the particular form of connecting device between the ends of the sections may be varied, and in Fig. 8 of the drawings we have shown a modification, in which plates 47 and 48 are employed, corresponding to the plates 30 and 31, the plate 48 being, however, centrally enlarged and threaded, as shown at 49, while a bolt or pin 50, corresponding with the bolt or pin 44 and having a head 51, corresponding to the head 45, is employed, said bolt or pin being threaded to screw into the threaded aperture of the plate 48. It will be observed, however, that in this case, as in the case of the construction shown in Figs. 5, 6, and 7, the fastening devices are entirely protected and concealed within recesses in the ends of the sections, so as to not project into the interior of the same and so that when the sections are separated there are no external projections.

We claim—

1. In a sectional book or other case, the combination, with the meeting ends of two sections or units, having apertures extending from the interior to the exterior and plates for closing the outer ends of said apertures to form recesses opening into the interior of the sections, said plates being provided with

apertures smaller than those which form the recesses, of a connecting bolt or pin adapted to fit and engage said apertured plates and having its ends located and terminating within the recesses inward of the inner faces of the end walls of the sections, substantially as described.

2. In a sectional book or other case, the combination, with the meeting ends of two sections or units having opposite apertures extending from the interior to the exterior, and apertured plates closing the exterior of said apertures to form internal recesses, one of said plates being provided with a bridge-piece and with a clamping-lever pivotally connected therewith, of a locking pin or bolt adapted to extend through said apertures and be engaged by said clamping-lever, substantially as described.

3. In a sectional book or other case, the combination, with the meeting ends of two sections or units, apertured as described and provided with apertured closing-plates, of a bridge-piece mounted on one of said plates within the aperture, an apertured clamping-lever pivotally connected to said bridge-piece, and provided with an operating stem or handle, and a spring for holding said clamping-lever in an oblique position, and a connecting bolt or pin having a body adapted to extend through said apertures and engage the clamping-lever, and a head to bear against the inner face of the other plate, substantially as described.

4. In a sectional book or other case, the combination, with the meeting ends of two sections or units having apertures closed by apertured plates, to form inwardly-opening recesses; of a removable connecting bolt or pin provided with a head to engage the inner face of one of said plates, the other of said plates being provided with means for engaging the body of said bolt or pin, when inserted, and said bolt or pin terminating in said recesses inward of the inner faces of the inner end walls of the sections, substantially as described.

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