(No Model.) 3 Sheets—Sheet 1.

C. H. EMERSON.

BOOK CASE.

No. 455,280. Patented June 30, 1891.

Fig 1

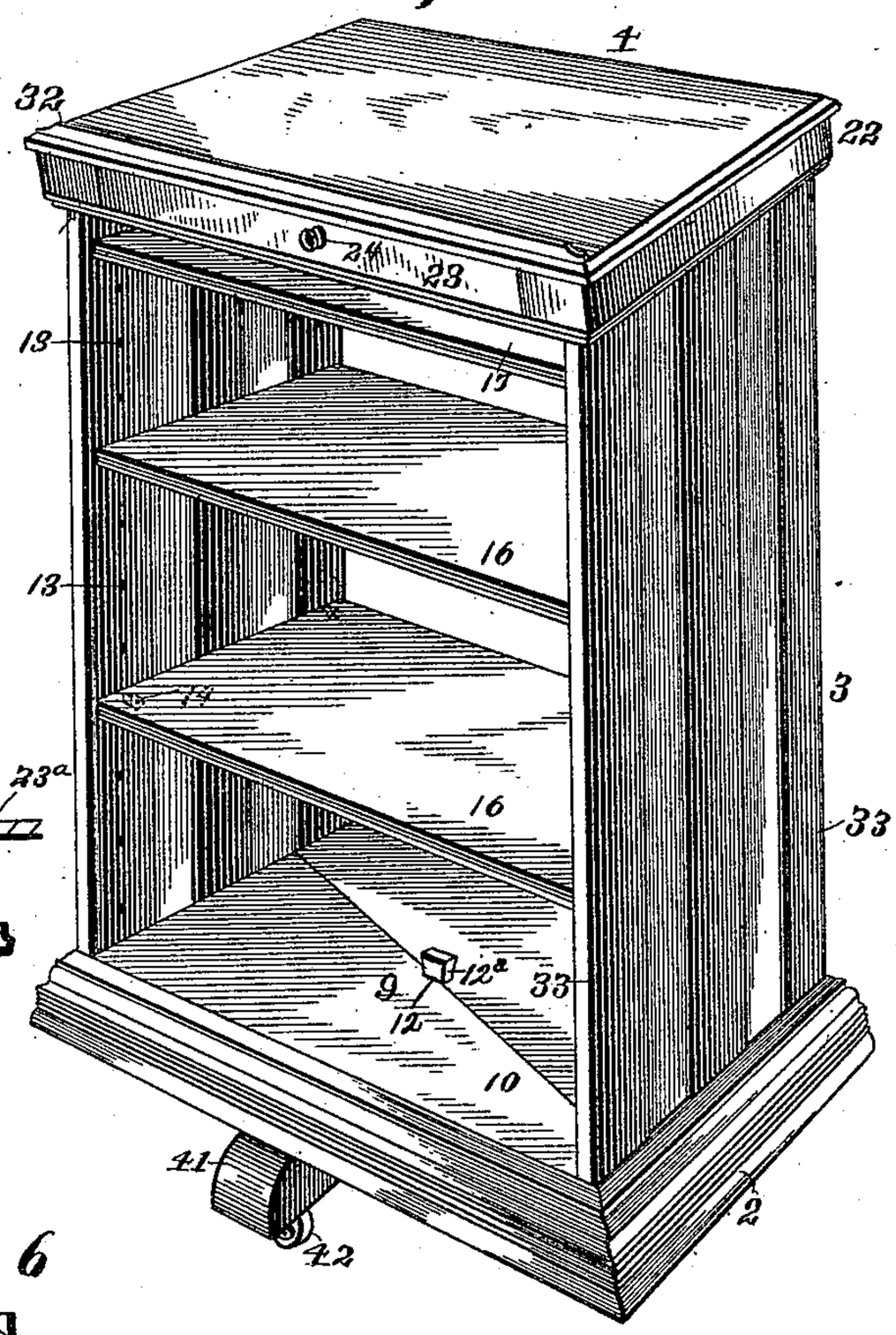


Fig 5.

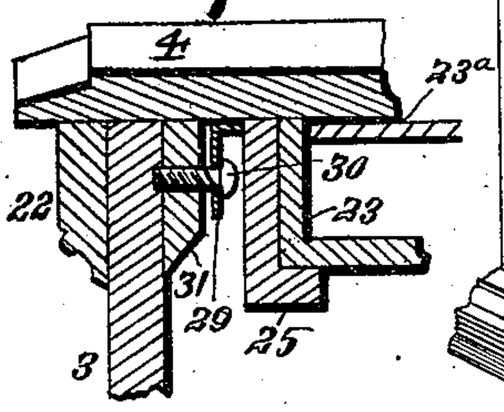


Fig 11

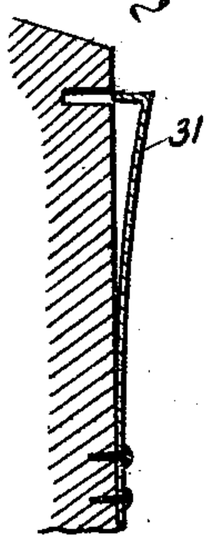


Fig 6

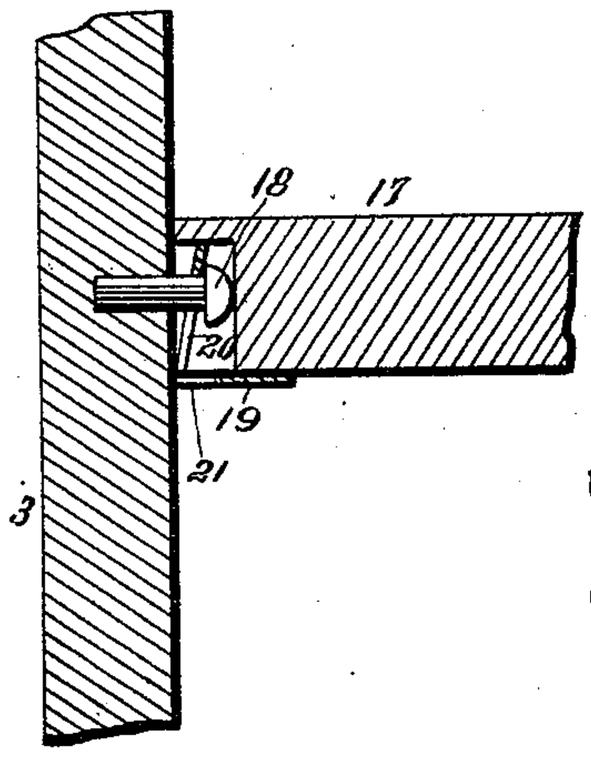
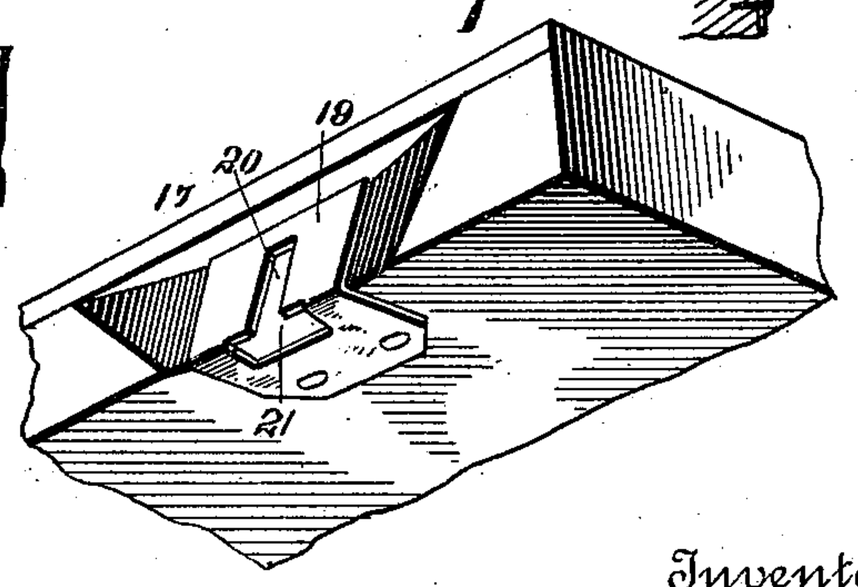


Fig 7



Witnesses
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James T. DuBois

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per A. H. Dumbois
his Attorney.

(No Model.) 3 Sheets—Sheet 2.

C. H. EMERSON.

BOOK CASE.

No. 455,280. Patented June 30, 1891.

Fig 2.

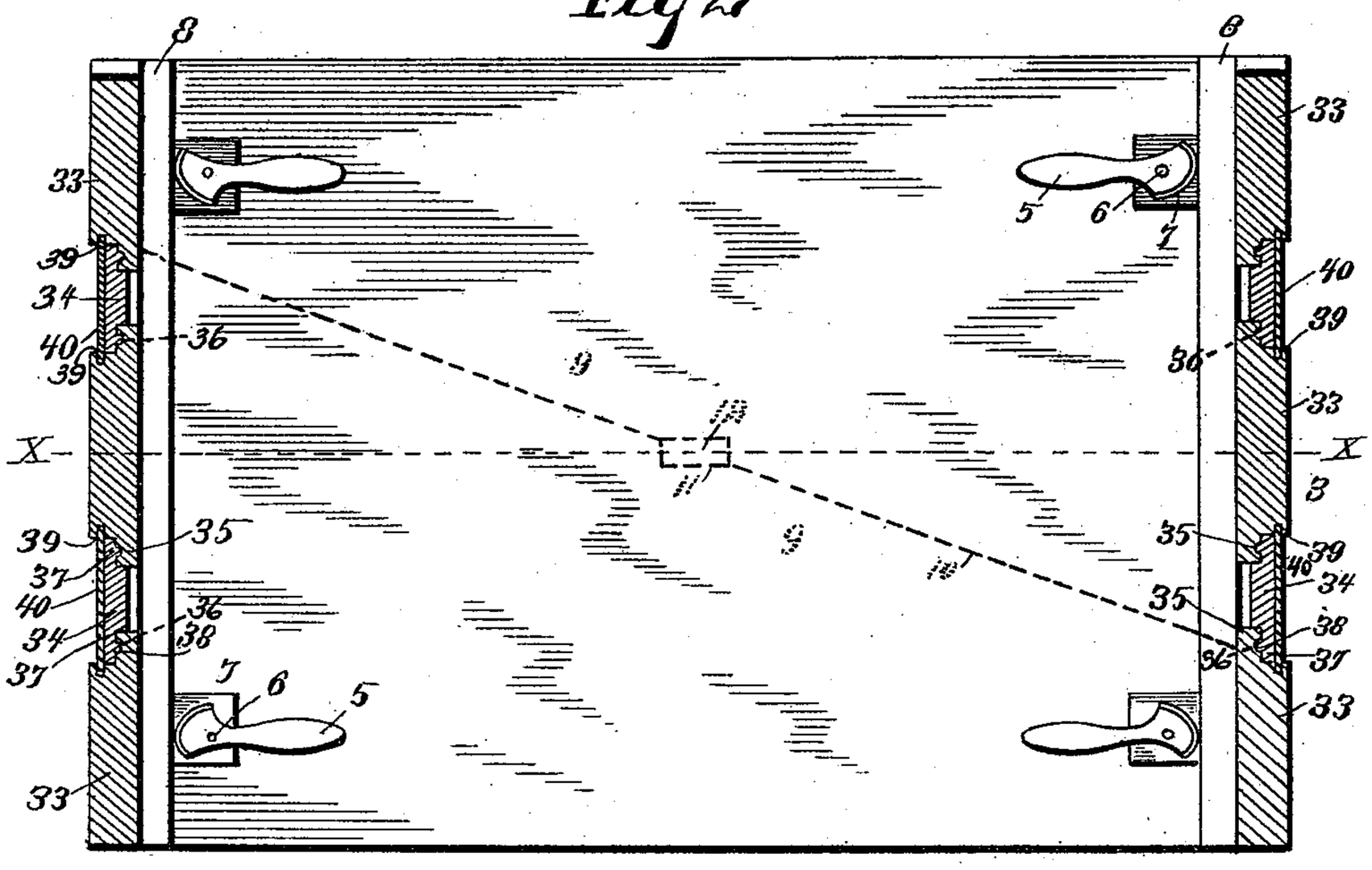


Fig 3

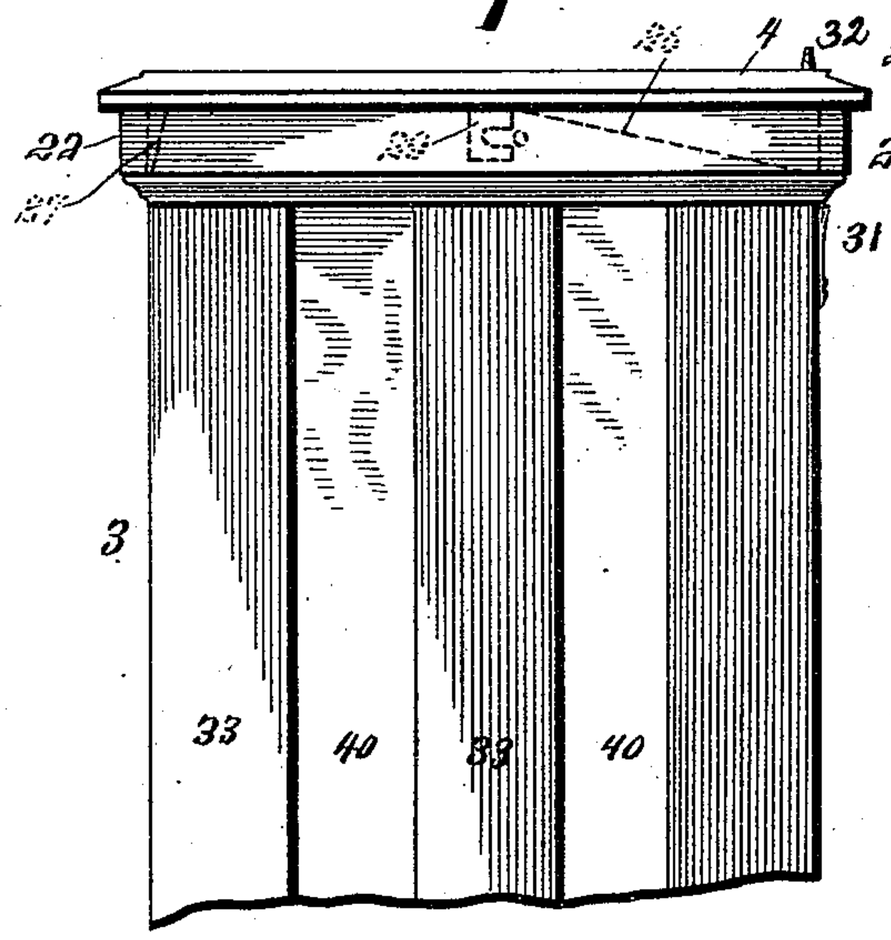
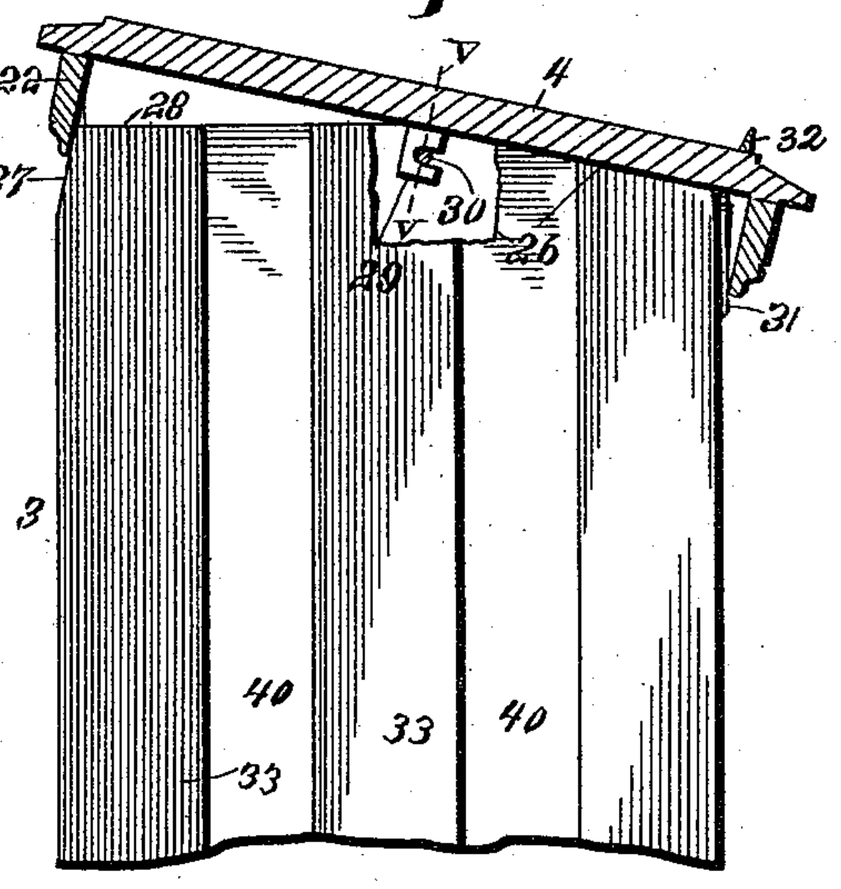


Fig 4



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(No Model.) 3 Sheets—Sheet 3.

C. H. EMERSON.

BOOK CASE.

No. 455,280. Patented June 30, 1891.

Fig 8

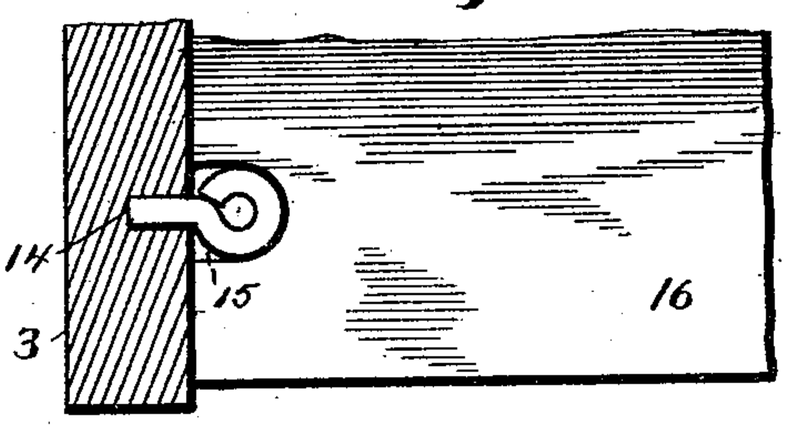


Fig 9

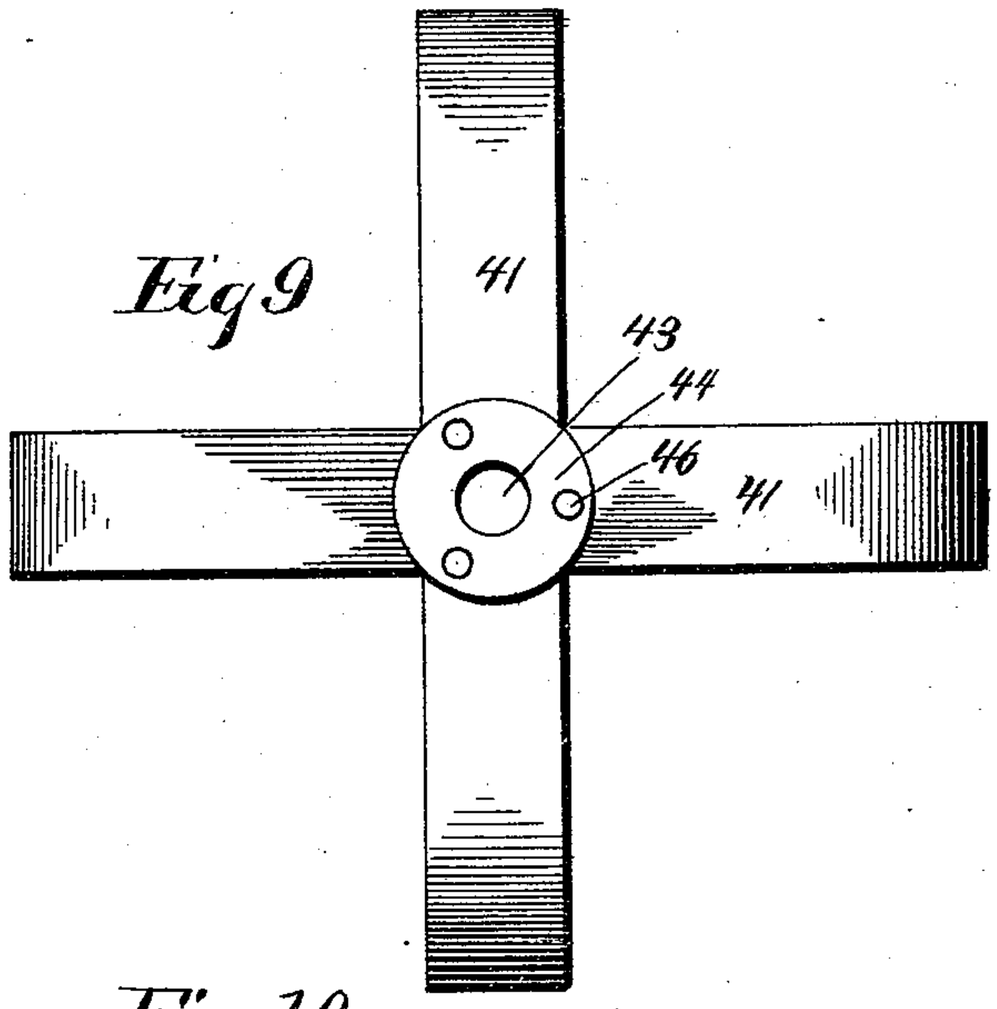
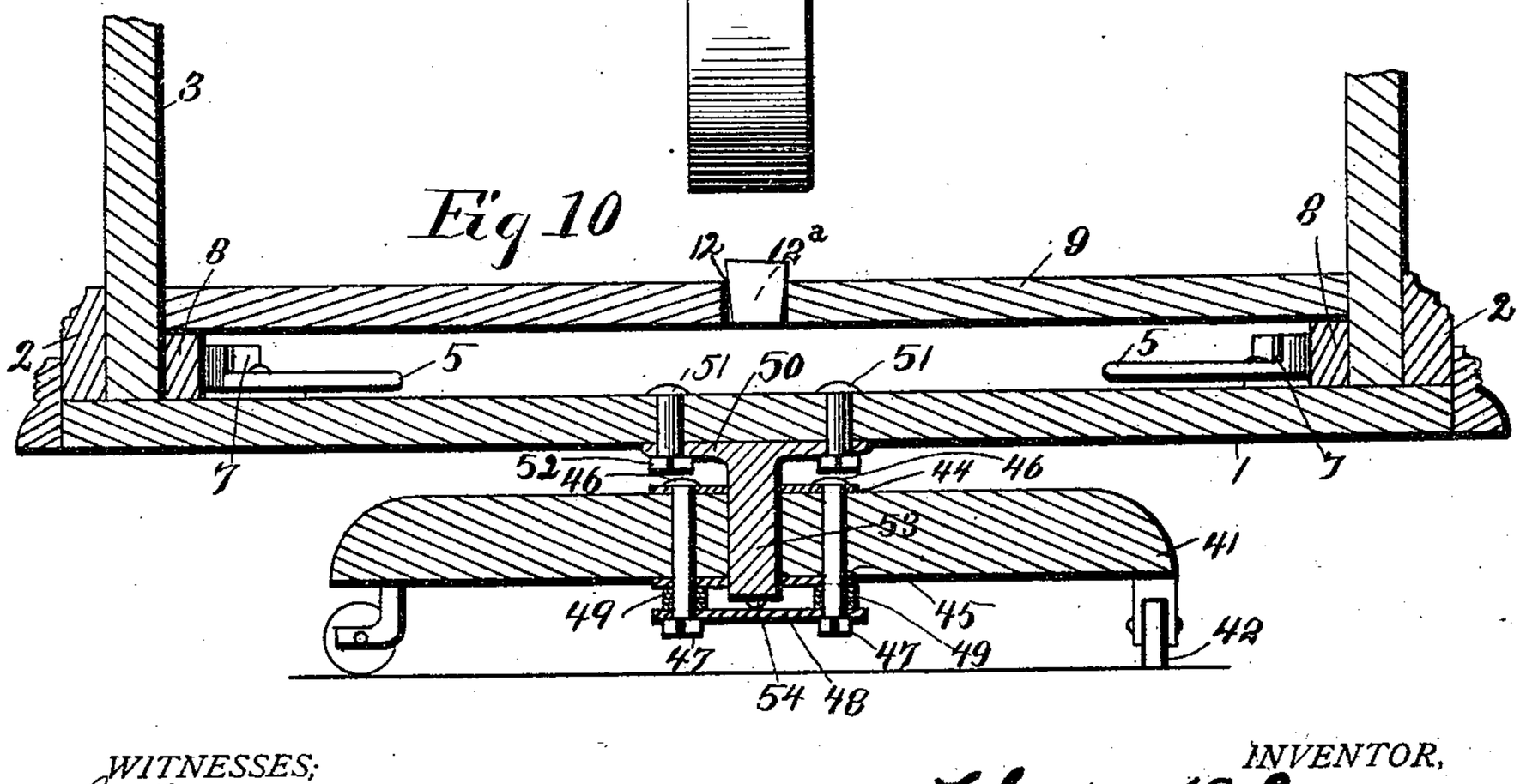


Fig 10



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his ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES HARRIS EMERSON, OF BURLINGTON, VERMONT, ASSIGNOR TO CHAS. H. EMERSON & CO., OF SAME PLACE.

BOOK-CASE.

SPECIFICATION forming part of Letters Patent No. 455,280, dated June 30, 1891.

Application filed November 14, 1890. Serial No. 371,388. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HARRIS EMERSON, a citizen of the United States, residing at Burlington, in the county of Chittenden and State of Vermont, have invented certain new and useful Improvements in Book-Cases; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved book-case, and particularly to that class that are knockdown. Its objects are the provision of a book-case that will be cheap, simple, neat in construction, durable, and which may be freely rotated with a minimum of friction and free from rocking.

A further object is to provide a cheap and effective method of construction of the sides of the case in pieces, to economize stock, as well as to avoid the expense of wide clear boards, and so that the joints between narrow pieces shall not show, but be covered, thus producing the effect of ornamental panel-work.

To these ends my invention consists in certain features of construction, to be hereinafter described, and then particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the book-case. Fig. 2 is an enlarged transverse section looking toward the bottom of the case, showing the means whereby the sides are securely fastened thereto, the false bottom or lower removable shelf being shown in dotted lines. Fig. 3 is a side view of the upper end of the case, parts being shown in dotted lines. Fig. 4 is a similar side view of the upper end of the case, the top being shown in section and tilted and the side being broken away to disclose the hook on top. Fig. 5 is a detail section on line V V, Fig. 4. Fig. 6 is a detail vertical section showing the manner in which the upper or binding shelf is connected to the sides. Fig. 7 is a perspective view of the female member of the connecting-fastening of the latter. Fig. 8 is a detail transverse section taken under the end of one of the shelves, between the upper shelf and the false bottom. Fig. 9 is a top view of the support for the case. Fig. 10 is a section on line X X, Fig. 2. Fig. 11 is a detail view of the friction pieces or catches.

The case is constructed with a bottom 1, surrounded by a molding or flanges 2, sides 3, and top 4.

The sides are secured to the bottom within the molding or flanges 2 by means of levers 5, pivoted at 6 to the bottom, and provided with cams 7 at their outer ends that are adapted to be brought tightly against the cleats 8 at the lower ends of the sides, thus securely clamping the sides to the bottom.

Resting upon the cleats 8 is a false bottom, consisting of two sections 9, having matching diagonal or bias-cut inner edges 10, and provided with matching notches 11 at the center of the false bottom, providing an orifice 12. By inserting a finger in the orifice 12 the sections 9 may be readily removed. The false bottom fits and is held snugly in place by means of a wedge 12^a, driven into the orifice 12, which also forces the sides apart and against the flanges 2 of the bottom, the false bottom thus acting as a brace.

In the inner sides of the sides 3, at both front and back, is a vertical series of perforations 13, in which may be inserted at various heights eye-pins 14, Figs. 1 and 8, that engage in notches 15 in the lower sides of the ends of the shelves 16, thus affording an adjustable support for each shelf 16.

Above the shelves 16 and connecting the tops of the sides 3 is a binding-shelf 17, that securely and firmly holds the parts together by means of fastenings at each end of the same, said fastenings consisting of headed screws 18 let into the inner side of each of the sides 3, each screw constituting a male member, and also consisting of angularly-bent pieces of metal 19, secured to the lower edges of the ends of the shelf and having vertical slots 20 in their vertical portions and horizontal slots 21 in their horizontal portions, said vertical slots at their lower ends meeting the horizontal slots intermediate of their ends, each angular piece constituting a female member. When the shelf 17 is being placed in position, the heads of the screws 18 pass through the horizontal slots 21 and up behind the ver-

tical slots, the bodies of the screws thus affording a support for the shelf at the upper ends of the vertical slots.

The top 4 is constructed with a flange composed of side and end strips 22, that fit over the upper ends of the sides 3. Slidable through an opening in the front strip is a drawer or desk 23 of suitable construction, provided with a knob 24 and guided between cleats 25, one near each end of the under side of the top. The drawer is adapted to contain writing material, and may be provided with a lid 23ª to serve as a desk to write on. The upper front ends of the slides 3 are provided with slight inclines 26, Figs. 3 and 4, and their upper rear ends are provided with steep inclines 27. The tops of the sides at 28 between the inclines are horizontal. On the under side of the top 4, between one of the cleats 25 and one of the end strips 22 is a hook 29, which is adapted to engage a pin 30, projecting from one of the cleats 31 at the upper ends of the sides 3.

The construction just described relates to the upper ends of the sides 3, and the top 4 permits the tipping or tilting of the latter. During the tilting of the top it will move slightly forward, which is permitted by the rear inclines 27, the hook 29 being brought into engagement with the pin 30, thus holding the top in position, preventing its further forward movement and preventing its being knocked or jarred off when in its inclined position. When the top is tilted, it rests on the inclines 26.

Friction-pieces or wires 31, in the shape of umbrella-catches, protect the front edges of the sides 3 from being rubbed by the front strip of the top when it is being tilted and support the top in horizontal position. At the front of the upper side of the top 4 is a bead or strip 32, extending across it and preventing the book that is being examined from slipping off when the top is tilted.

Instead of constructing the sides 3 of single pieces, I construct them of narrow strips of lumber, which are united in the following manner: 33 represents one series of strips, and 34 another series of strips, the latter being interspersed alternately between the strips 33 and being thinner. The edges of each strip 33, excepting the front and rear edges of the front and rear strips, are provided with ribs 35, the inner sides of which are grooved longitudinally at 36. Corresponding ribs 37 on the edges of the alternate strips 34 fit in the recesses in front of the ribs 35, and are provided with tongues 38, that fit into the grooves 36. Immediately in front of the strips 34 the edges of the strips 33 are provided with longitudinal parallel grooves 39. These grooves 39 receive the edges of the panels 40, that are preferably of different wood from that of the strips 33, and which are slipped longitudinally thereinto in front of the strips 34, thus covering the latter. These panels 40 may be of some ornamental wood and be finished and polished separately; but it is obvious that when slid in place in the grooves 39 the interlocking edges of the other pieces or strips having been first placed together in order, the panels serve to lock all the parts together, which may then be handled and finished as one piece.

The supporting-base of the book-case (see Figs. 9 and 10) consists of two cross-pieces 41, which at their outer ends are provided with casters or rollers 42. Through the cross-pieces 41 at their juncture is made a circular orifice 43, and on top of the cross-pieces is placed an annular wear-plate 44, the orifice of which is in line with the orifice 43. On the bottom of the cross-pieces is another annular wear-plate 45, the orifice of which also is in line with the orifice 43. These wear-plates are secured to the cross-pieces by means of bolts 46, passed through them and through the cross-pieces. The lower ends of the bolts 46 are screw-threaded to receive nuts 47, by means of which the circular bearing plate or disks 48 is secured to the bolts, and by which the bolts are held rigidly. Placed on the bolts between the bearing-plate 48 and the wear-plate 45 are any desired number of washers 49 for separating the said plates.

50 is a plate secured to the under side of the bottom of the case by means of bolts 51 and nuts 52 and provided with a cylindrical projection 53, that constitutes the pivot on which the case revolves. The point 54 of the pivot 53 is stepped on the bearing-plate 48 and acts as the primary bearing and carries the weight of the rotating case. The sides of the pivot 53 have bearing in the wear-plates 44 and 45, whereby lateral or rocking motion of the case is prevented.

Slight variances that will readily suggest themselves to any skilled mechanic may be made without departing from the spirit of the invention.

Having thus described my invention, the following is what I claim as new therein, and desire to secure by Letters Patent:

1. In a book-case, the combination, with the sides having horizontal portions at their upper ends, inclines at the front thereof, and steeper or greater inclines at the back thereof, of a removable top provided with downwardly-extending flanges fitted around the upper ends of the sides, said top resting in normal position upon said horizontal portions and being adapted to tilt upon the front inclines and move slightly forward to bring the rear of the flange against the steeper inclines, substantially as set forth.

2. In a book-case, the combination, with the sides having inclines at their upper ends and provided with a pin or stud, of a removable top provided with a hook adapted to engage said pin, said top being adapted to tilt on said inclines, substantially as set forth.

3. In a book-case, the combination, with the sides provided with friction-pieces or

wires let into their front edges, of a tilting top having a front flange adapted to engage the friction-pieces, substantially as and for the purpose set forth.

4. In a book-case, the combination, with the sides and bottom, of an expansible sectional removable false bottom between and adapted to bind tightly against the sides, substantially as and for the purpose set forth.

5. In a book-case, the combination, with the sides and bottom, of an expansible removable false bottom made in sections and provided with an opening formed by notches in the meeting edges of the sections and a wedge inserted in said opening, substantially as and for the purpose set forth.

6. In a book-case, the combination, with the sides and bottom, of a removable false bottom divided diagonally, situated between and adapted to bind tightly against the sides, substantially as set forth.

7. In a knockdown book-case, the combination of the flanged bottom and the sides arranged inside the flanges, and cam-levers pivoted to the bottom and adapted to engage the sides, substantially as and for the purpose set forth.

8. In combination with a revolving book-case provided with a pivot, a supporting-base provided with an opening, wear-plates on the base provided with openings that register with aforesaid opening, through which the pivot passes, a bearing-plate below the openings on which the pivot is stepped, bolts passing through all of said plates and the base, and washers on said bolts interposed between the bearing-plate and the lower wear-plate, substantially as and for the purpose set forth.

9. In a knockdown book-case, the combination of the flanged bottom, the sides, flanged top, said sides being situated within the flanges of both top and bottom, and means for holding said parts together from the inside, substantially as set forth.

10. In a book-case having sides, a segmental false bottom between the sides, a wedge inserted between the segments for forcing them outwardly against the sides, and means for holding the sides in place on the outside, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES HARRIS EMERSON.

Witnesses:

STANLEY C. SCOTT,

F. A. ROUSSEAU.