

(No Model.)

2 Sheets—Sheet 1.

W. T. WOOD.
FILE CASE OR CABINET.

No. 402,377.

Patented Apr. 30, 1889.

Fig. 1.

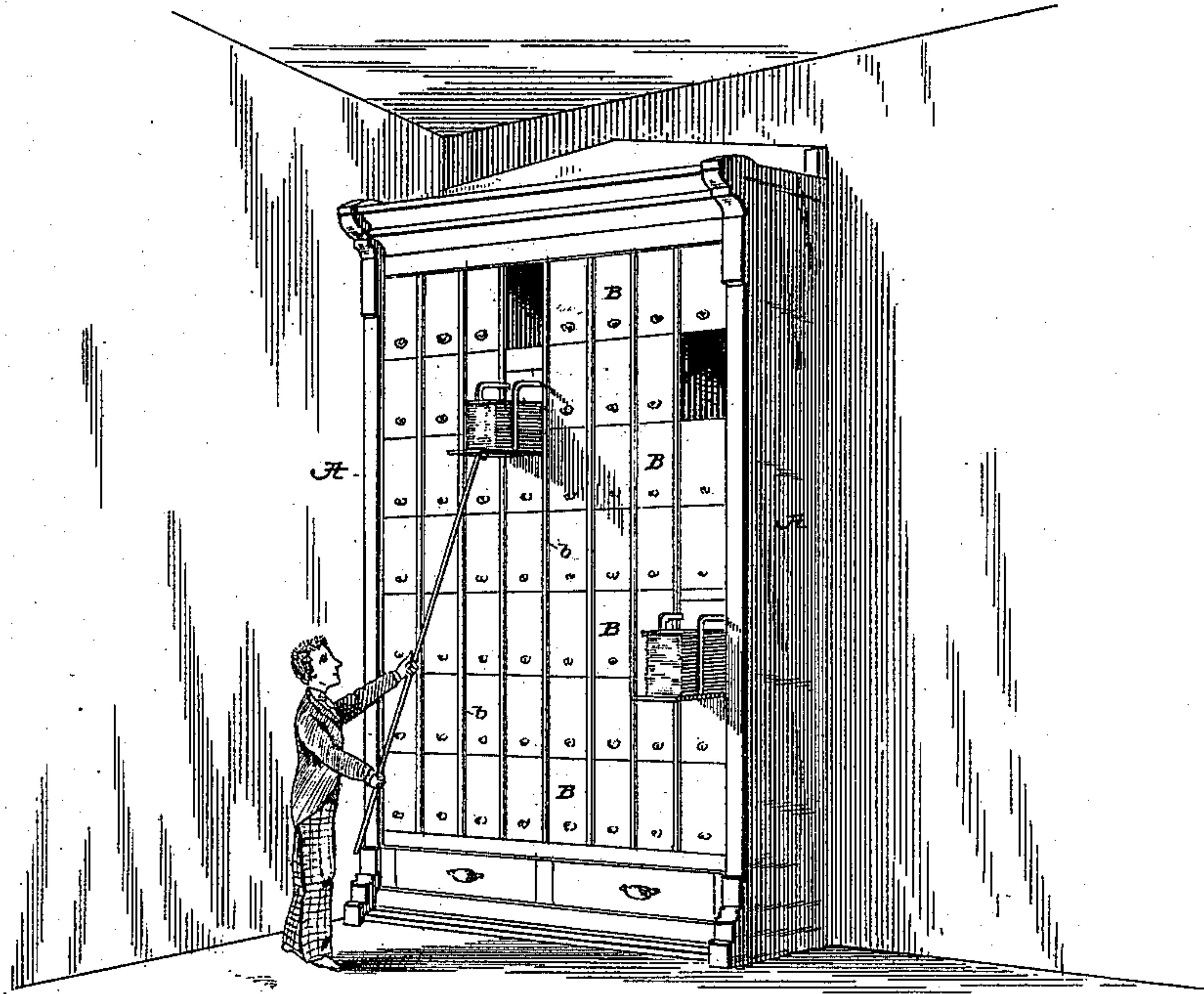


Fig. 5

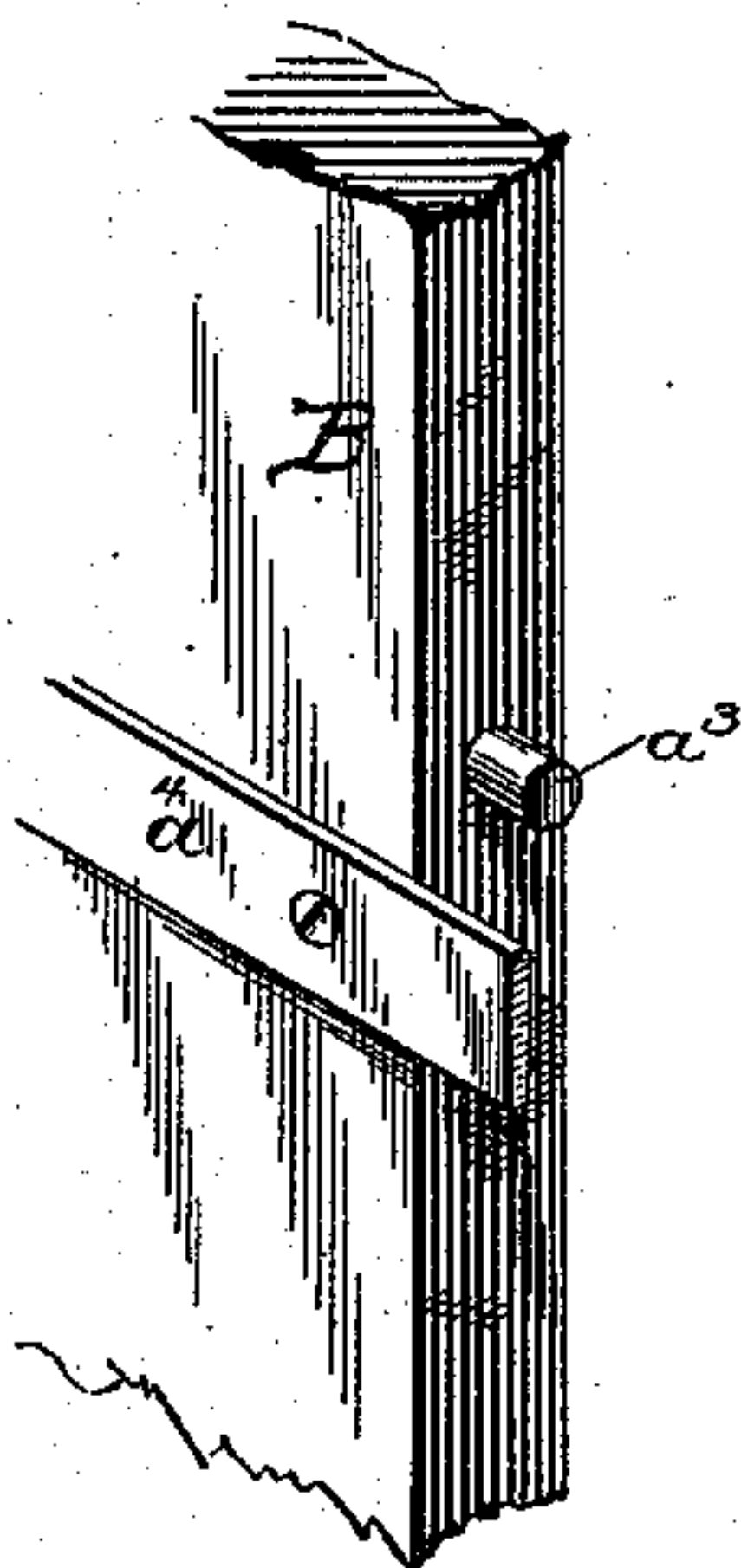
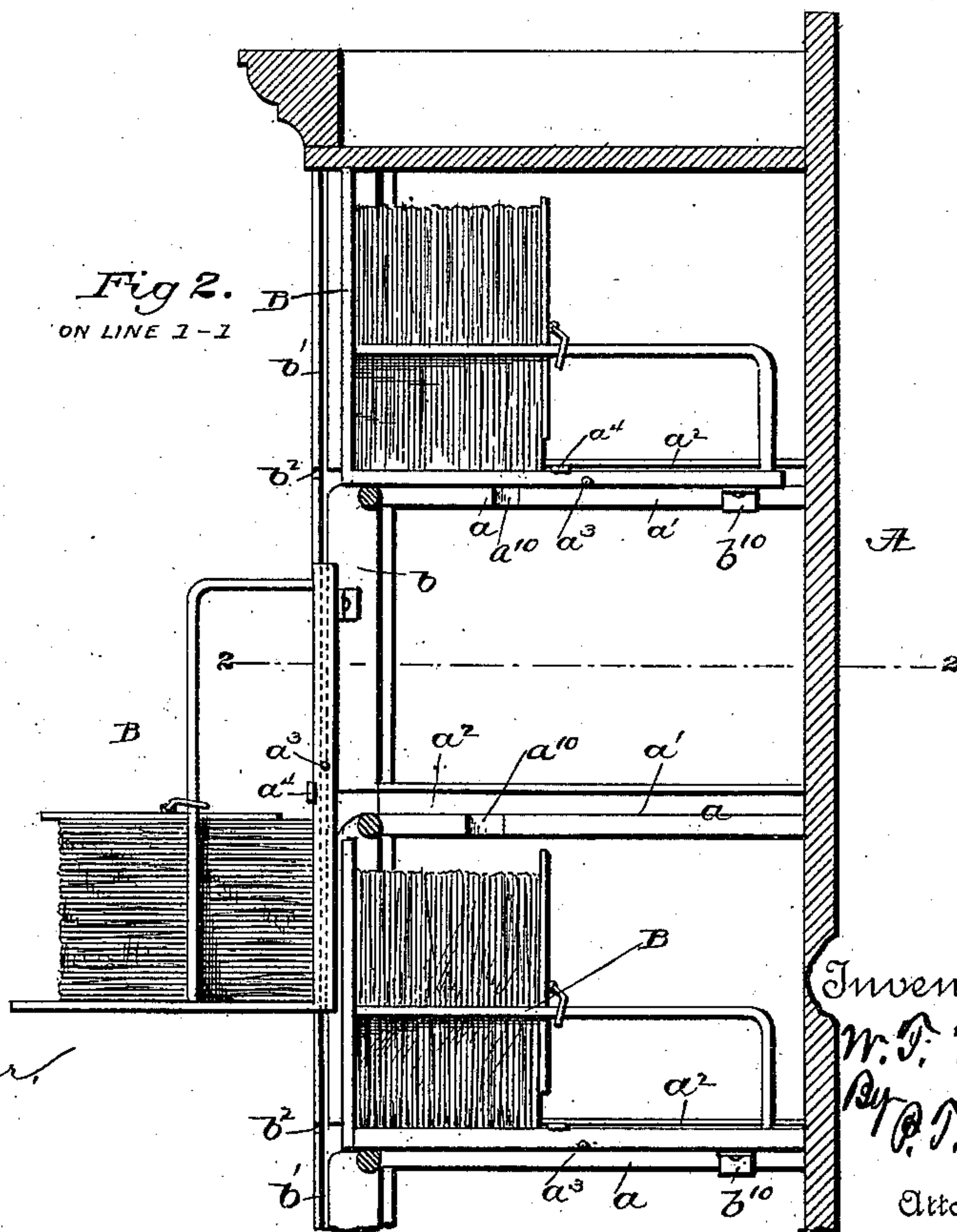


Fig 2.
ON LINE 1-1



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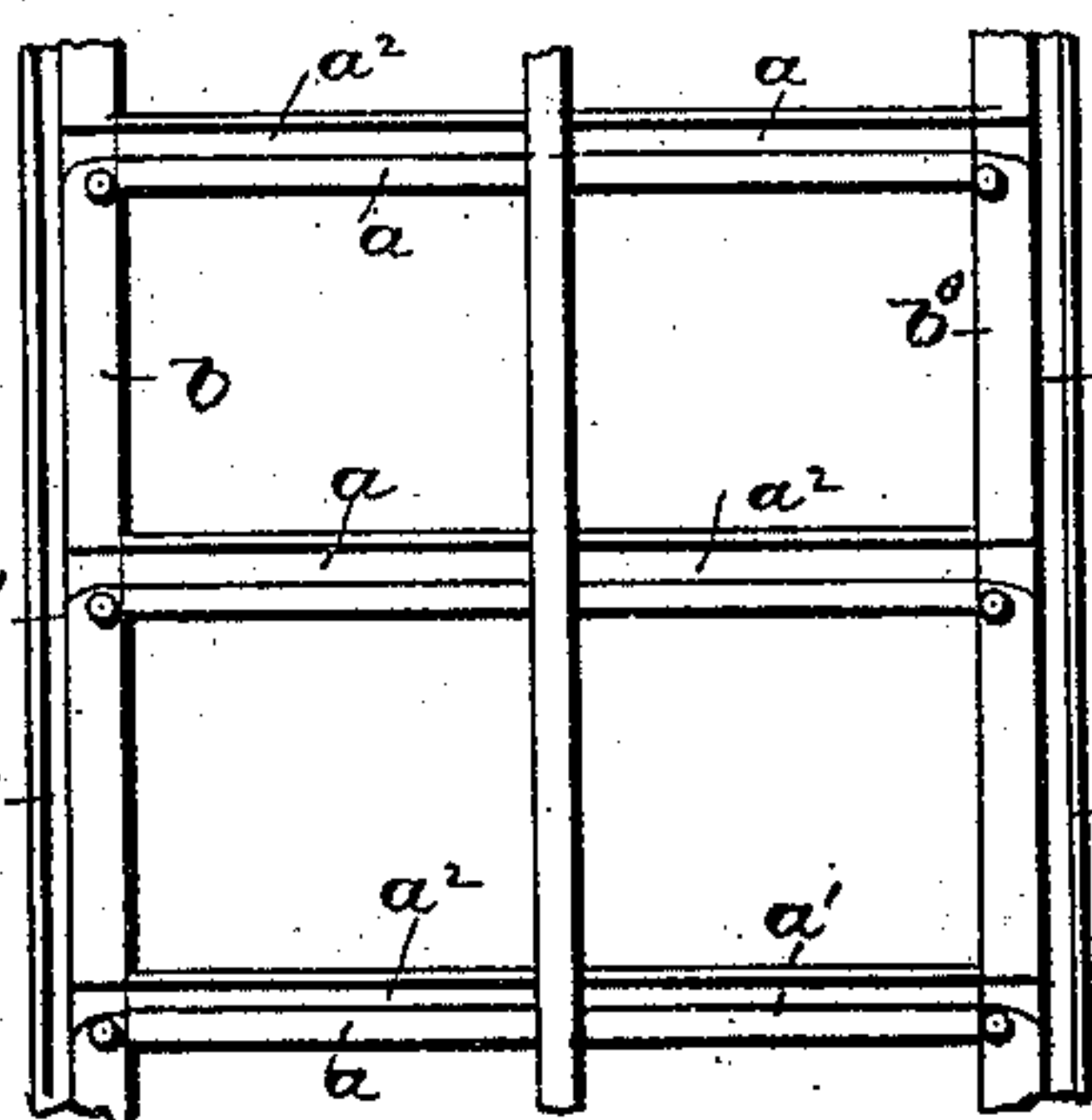
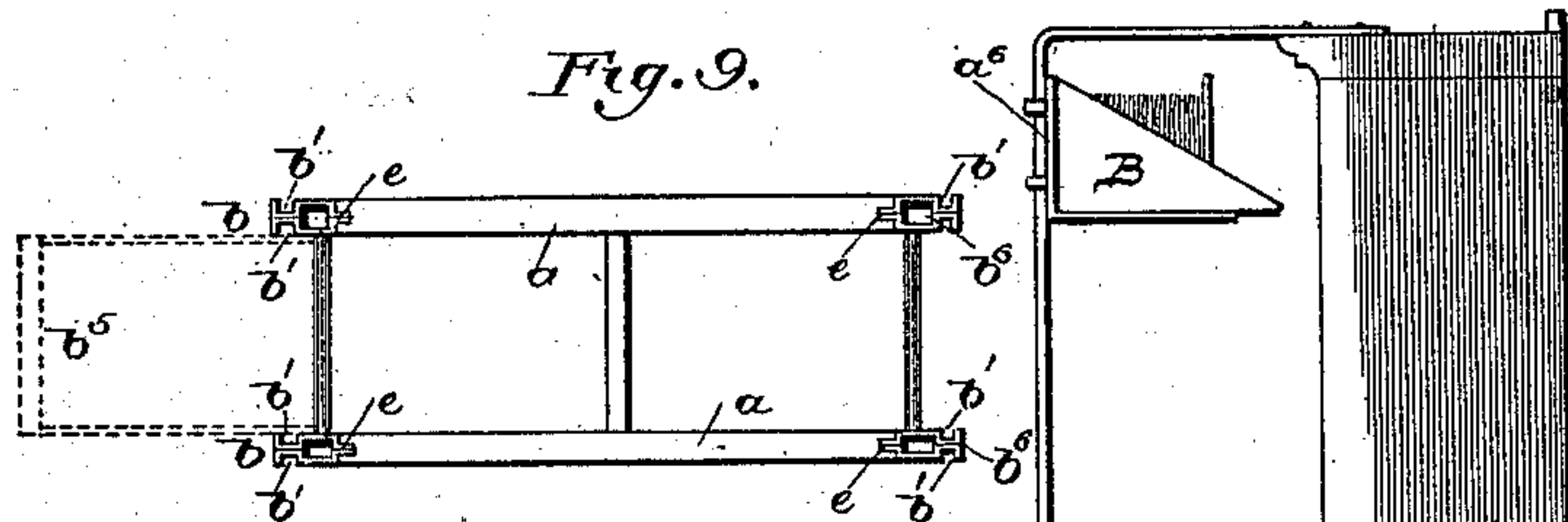
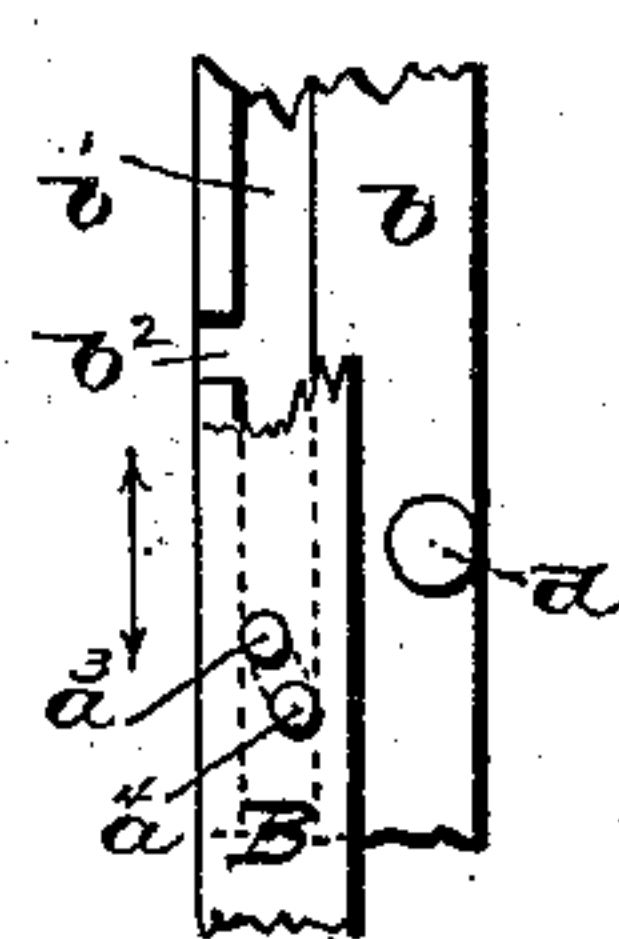
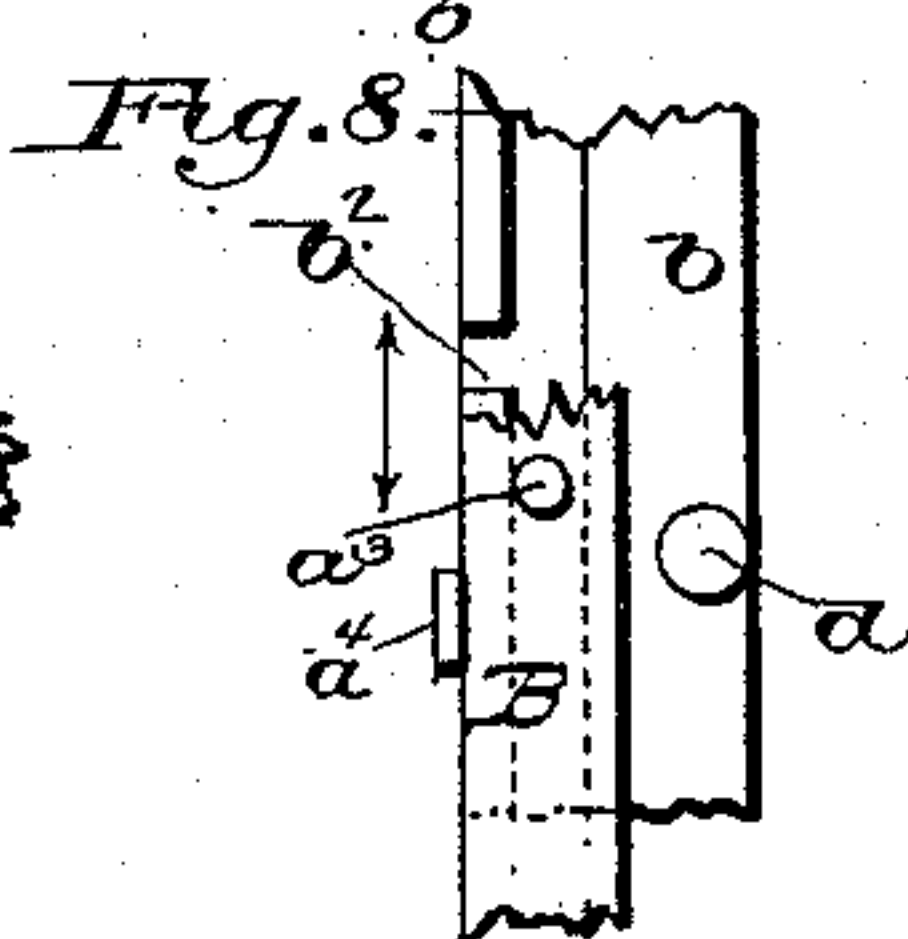
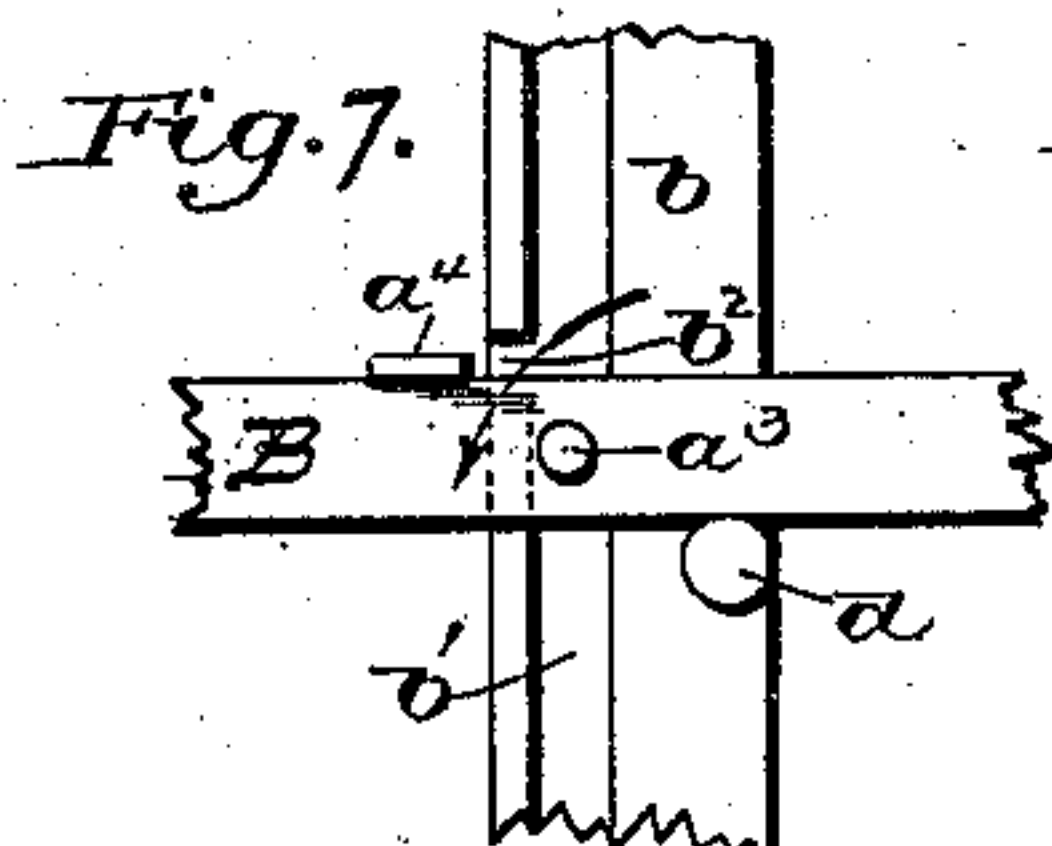
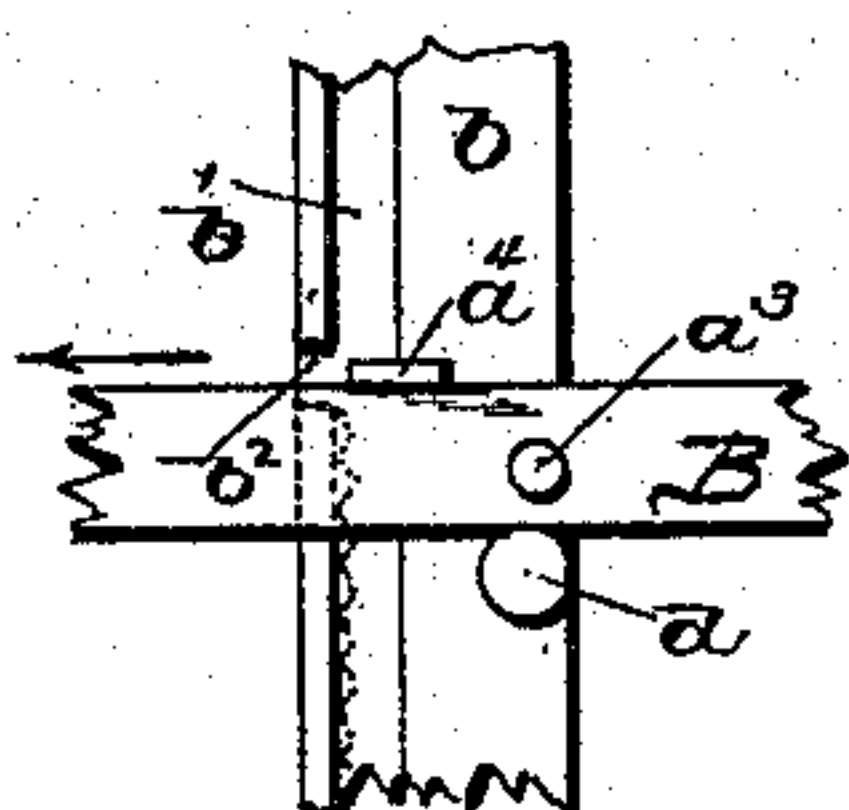
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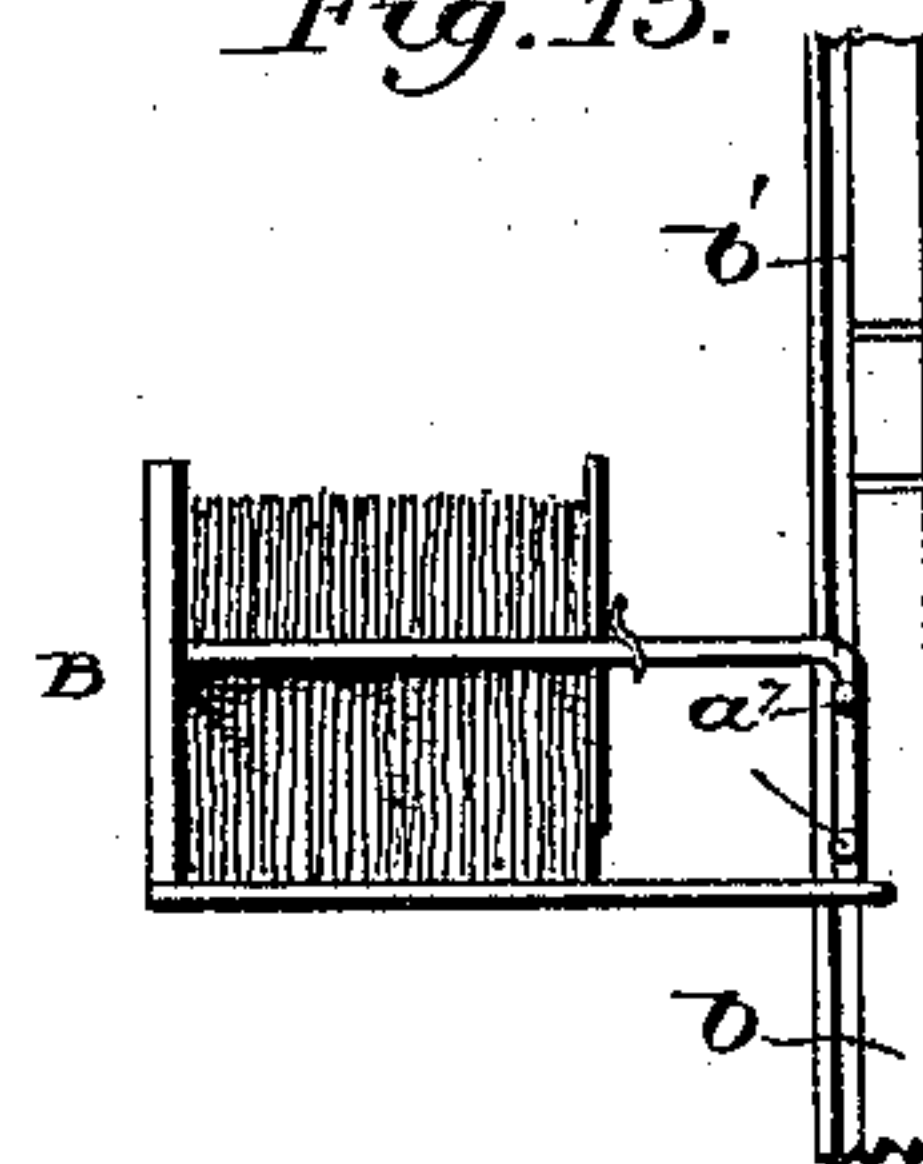
2 Sheets—Sheet 2.

No. 402,377.

Patented Apr. 30, 1889.



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UNITED STATES PATENT OFFICE.

WILLIAM T. WOOD, OF WASHINGTON, DISTRICT OF COLUMBIA.

FILE CASE OR CABINET.

SPECIFICATION forming part of Letters Patent No. 402,377, dated April 30, 1889.

Application filed December 14, 1888. Serial No. 293,546. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. WOOD, of Washington, in the District of Columbia, have invented certain Improvements in File Cases or Cabinets, of which the following is a specification.

My invention relates to those filing cases or cabinets in which a series of files or file-boxes are so mounted in a case or cabinet proper that they may be separately withdrawn at the front to permit access to their contents. These cabinets are usually so limited in height as to admit of the boxes being conveniently reached by an attendant standing on the floor.

The principle aim of my invention is to provide a construction which will admit of the cabinet being carried to a greater height than usual, and at the same time admit of the box being quickly and easily brought within reach of the attendant standing before the cabinet.

To this end my invention consists in providing the cabinet with means for receiving the boxes as they are withdrawn and guiding the same as they are moved vertically to or from their places, in combining with the vertical guides and boxes means for suspending the boxes at any required height, and in various details of construction pertaining to the cabinet, the boxes, and the guides.

I have represented in the accompanying drawings those constructions which I consider best adapted for general use; but it is to be understood that the details may be variously modified, and that my invention comprehends the employment of devices for vertically guiding and suspending the boxes in any form the mechanical equivalent of those shown.

In the accompanying drawings, Figure 1 represents a perspective view of a cabinet provided with my improvements. Fig. 2 is a vertical section through the same from front to rear on the line 1 1 of Fig. 3. Fig. 3 is a horizontal section on the line 2 2 of Fig. 2. Fig. 4 is a vertical cross-section on the line 3 3 of Fig. 3. Fig. 5 is a perspective view showing the suspending devices on one edge of a file-box. Figs. 6, 7, and 8 are diagrams illustrating the manner in which the box is re-

ceived by and sustained upon the vertical guides as it is withdrawn from the cabinet. Figs. 9 and 10 are respectively a plan view and a side illustration showing the details of the cabinet. Fig. 11 is an elevation showing a modified form of the suspending devices. Figs. 12 and 13 are side elevations showing my invention in other and somewhat different forms.

Referring to the drawings, A represents a case or cabinet; B B, a series of file-boxes mounted therein, as usual, in rows, one above another, in such manner that they may be individually inserted or withdrawn at the front.

With the exception of the vertical guides and suspending devices which form part of the present invention, the cabinet and the boxes may be of any ordinary or approved construction; but I recommend for the cabinet the peculiar construction shown in the drawings, which also forms a feature of the present invention. Each box slides into the cabinet between two guide-bars, a , extending from front to rear and having shoulders a' , on which the bottom of the box rests. Each guide bar is provided with a longitudinal groove, a^2 , in its side, and the box is provided at the bottom with studs a^3 —one on each side—projecting into the grooves, and also with a rigid cross-plate, a^4 , the projecting ends of which enter the grooves above the level of the studs, as shown in Figs. 2 and 4.

At the front of the cabinet, between the boxes, there are vertical rails, standards, or guides b , each having in its side face a vertical groove, b' , extending from the top to the bottom of the cabinet and communicating with the grooves a^2 in the horizontal bars, so that as each box is drawn outward from the cabinet its studs or stops a^3 may pass from the horizontal into the vertical grooves. Each vertical guide is provided at suitable points with horizontal notches b^2 , in suitable position to permit the ends of the plate a^4 to pass outward therethrough as the file-boxes are withdrawn from the cabinet. The operation of these parts is plainly shown in Figs. 6, 7, and 8.

As the box is drawn forward, the ends of the plate a^4 pass outward, as indicated in Fig.

6, through the slots b^2 of the vertical guides to the position shown in Fig. 7, the studs a^3 at the same time passing forward from the horizontal into the vertical grooves, as shown in Fig. 7, so as to arrest the outward movement of the box. The weight of the box is at this instant received upon and carried by a rigid underlying cross bar or rod, d , at the front of the cabinet. The front of the box is now dropped, allowing the box to turn bodily over the cross-bar d as a fulcrum until its base-board assumes a vertical position, as shown in Fig. 8, whereupon the box is free to descend vertically between the guides until it reaches a suitable level to admit of its contents being readily examined. When released by the operator, the weight of the box causes the studs a^3 and the bar a^4 to pinch or bite upon the guides on opposite sides with frictional effect, whereby the file is automatically suspended or prevented from sliding downward.

From the foregoing description it will be seen that boxes located at the top of the cabinet, beyond the reach of the attendant, may be readily withdrawn by means of a staff or rod and lowered between the guides to the desired point, and that when released they will be automatically suspended in position for use. Consequently I am enabled to carry my cabinet to the full height of the room or compartment in which it is situated and to render the upper boxes as readily accessible as those at a lower level.

While I prefer to employ the devices for automatically suspending the box from the guide, it is to be understood that the suspension devices are not a necessary feature of the invention, as the box may be lowered and sustained by hand or by other and special devices provided for the purpose. If the suspension is not considered desirable, it is only necessary to omit the plate a^4 .

It will be observed that in place of the studs a^3 and plate a^4 projections in any other form adapted to embrace and frictionally engage the guides may be employed.

In Fig. 11 I have represented equivalent suspension devices consisting simply of two studs a^3 and a^4 , projecting from the edge of the file-box, and adapted to pass into the groove in the vertical guide, their position being such that when the box hangs pendent they will be crowded one against the inner and the other against the outer side of the wall of the groove with sufficient frictional effect to maintain the box.

If desired, the walls of the groove may be provided with teeth or serrations, as indicated in dotted lines, that the suspending devices may engage the more securely therewith; but in practice I have found that these are under ordinary conditions unnecessary.

While it is not necessary to do so, I may provide the box at the rear end with bottom lips, b^{10} , to underride the guides a and prevent the box from tipping forward until it is

advanced to the proper point, at which time the lips are free to rise through notches a^{10} , made in the guides a for the purpose.

While I prefer to mount the file-boxes so that they will turn downward as they are received by the vertical guides, it is in some cases desirable to construct the parts in such manner that the boxes may be withdrawn their entire length in a horizontal position and sustained by the guides in a horizontal position as they descend. In such case the boxes will be provided, as shown in Fig. 13, at the rear end with two studs, a^7 , one on each side, one above the other, and the guides so formed that these studs may enter the vertical grooves, as shown. In this way the boxes may be prevented from dropping at their outer ends, although guided in such manner as to move up and down in front of the cabinet.

While I prefer to locate the guides between the file-boxes, as above described, so that each box may be guided on both sides as it is carried upward and downward, I may employ a single guide in front of each vertical row or tier of boxes at a distance from the front of the cabinet and in suitable position to receive and guide the front of the box when the latter is withdrawn from the cabinet; or I may employ in front of the cabinet, as shown in Fig. 12, and at a distance therefrom, a vertical guide, a , having thereon a vertical carrier or traveler, a^6 , of suitable size to receive and sustain the boxes, this carrier being placed at a suitable height and the boxes simply drawn forward thereon, after which the carrier containing the box is lowered to the desired level.

To the skilled mechanic it will be obvious that the essence of my invention resides in providing at the front of the cabinet a vertical guide or guides adapted to receive the file-boxes as the latter are drawn from the cabinet and admit of the boxes being carried upward and downward; and it is obvious that these guides may be employed in various forms, and that the details may be modified in many respects within the range of mechanical skill and without passing beyond the limits of my invention.

Passing now to the peculiar construction of the cabinet represented in the accompanying drawings, it consists of a series of parallel vertical frames arranged side by side and connected by cross-bars. Each of these vertical frames consists of a front standard, b , and a rear standard, b^6 , connected by the horizontal bar a , before alluded to. Each standard is formed with a central vertical rib, e , on the inner edge. The cross-bars a are notched to fit over these ribs and are connected thereto by transverse pins e' , the vertical ends of the bar a being fitted against the vertical faces of the standards in order to give rigidity to the structure. The vertical guides b' are formed on the front of and integral with the standards b b^6 . The standards may be formed

of wood or metal. When of metal, they are composed, as shown in the drawings, of two sheet-metal halves placed face to face. The standards are connected and the cabinet as a whole tied together by the transverse rods *d*, before alluded to. These rods are passed through a series of standards, and keys *f* are driven into the standards and against the rods to hold the parts in place. Instead of these keys set-screws or equivalent fastenings may be employed.

It will be observed that my cabinet consists simply of the guide-bars, the standards, and the cross bars or ribs, and that these parts are of such character that they may be cheaply constructed in duplicate. The separated parts may be shipped in compact form and speedily and securely united without the employment of special skilled labor.

My construction is advantageous not only by reason of its simplicity and cheapness, but also in that it admits of the cabinets being enlarged either laterally or vertically to any required extent by simply applying additional sections thereto.

In order that the file-boxes may be entirely removed or disconnected from the cabinet, the vertical guides may be provided at any desired points in their length with openings of suitable size to permit the outward passage of the studs *a*³ and *a*⁴. An opening of this character is shown at *b*³, Fig. 11.

In place of or in addition to the suspending devices on the boxes a shelf, either stationary or movable, may be provided at the front of the case in suitable position to admit of the boxes being lowered thereto and supported thereon. A shelf of this character adapted to slide into and out of the case is indicated by dotted lines at *b*⁵, Fig. 9.

It is obvious that the clamping or confining devices by which the papers are held in the box may be so placed that the papers will assume either a vertical or a horizontal position when the box is withdrawn.

Having thus described my invention, what I claim is—

1. The combination, substantially as described and shown, of a file case or cabinet, movable file-boxes therein, and vertical guides at the front to receive the boxes when withdrawn and admit of their being carried upward and downward.

2. A case or cabinet and a contained file-box removable at the front, in combination with two side guides extending downward at the front of the case to receive the box when withdrawn and guide it in its descent.

3. A case or cabinet and two vertical guides, bars, or rails at its front, in combination with a vertical row of file-boxes arranged to slide inward and outward between the guides, and to slide upward and downward thereon when withdrawn from the cabinet.

4. The case or cabinet provided with the horizontally-grooved bars or guides *a* and the vertical grooved guides at the front, in com-

bination with the file-boxes having studs arranged to travel in said guides, whereby the boxes are held and guided in both their horizontal and their vertical movements.

5. A file case or cabinet provided at the front with vertically-grooved guides or rails, in combination with file-boxes provided with side studs or projections to enter the said vertical grooves as the boxes are withdrawn from the case.

6. A file case or cabinet provided with vertical front guides or rails having horizontal notches or openings therethrough, in combination with file-boxes arranged to slide into and out of the cabinet and provided at each side with two projections, one of which passes through the corresponding notched guide when the file is withdrawn from the case, whereby the box is adapted for withdrawal to slide upon and interlock with vertical guides.

7. In combination with a cabinet having the horizontal rails or bars *a*, the vertical notched guides, and the cross-bars *d*, the file-boxes provided with lateral studs or projections *a*³ and *a*⁴, whereby the boxes are vertically guided and automatically suspended when withdrawn from the cabinet.

8. The file case or cabinet composed of the standards, the horizontal guides *a*, attached thereto, the transverse rods extended through the standards, and the keys or fastening devices connecting the rods and standards.

9. The knockdown file-case consisting of parallel vertical frames provided with horizontal bars or guides *a* and cross-bars passed through and keyed to the standards, as shown.

10. The sheet-metal standard for a file-case, composed of the vertical halves having their forward edges bent apart to form vertical guides or flanges.

11. In combination with the bar *a*, having the notched ends, the two-part standard having its rear edges brought together and inserted into the bar *a*, as shown.

12. The case having the vertically-grooved front guides and the horizontally-grooved guides *a*, with notches *a*¹⁰ therein, in combination with the file having the rear lips, *b*¹⁰, and the side studs to ride in the grooves, whereby the box is compelled to slide horizontally on guides *a*, but permitted to tip forward and slide downward in the vertical guides.

13. The case or cabinet provided with vertical guides, the movable file-boxes adapted to engage said guides, and a shelf applied to the case and adapted to sustain the boxes when lowered thereon.

In testimony whereof I hereunto set my hand, this 4th day of December, 1888, in the presence of two attesting witnesses.

WILLIAM T. WOOD.

Witnesses:

PHIL. T. DODGE,
W. R. KENNEDY.