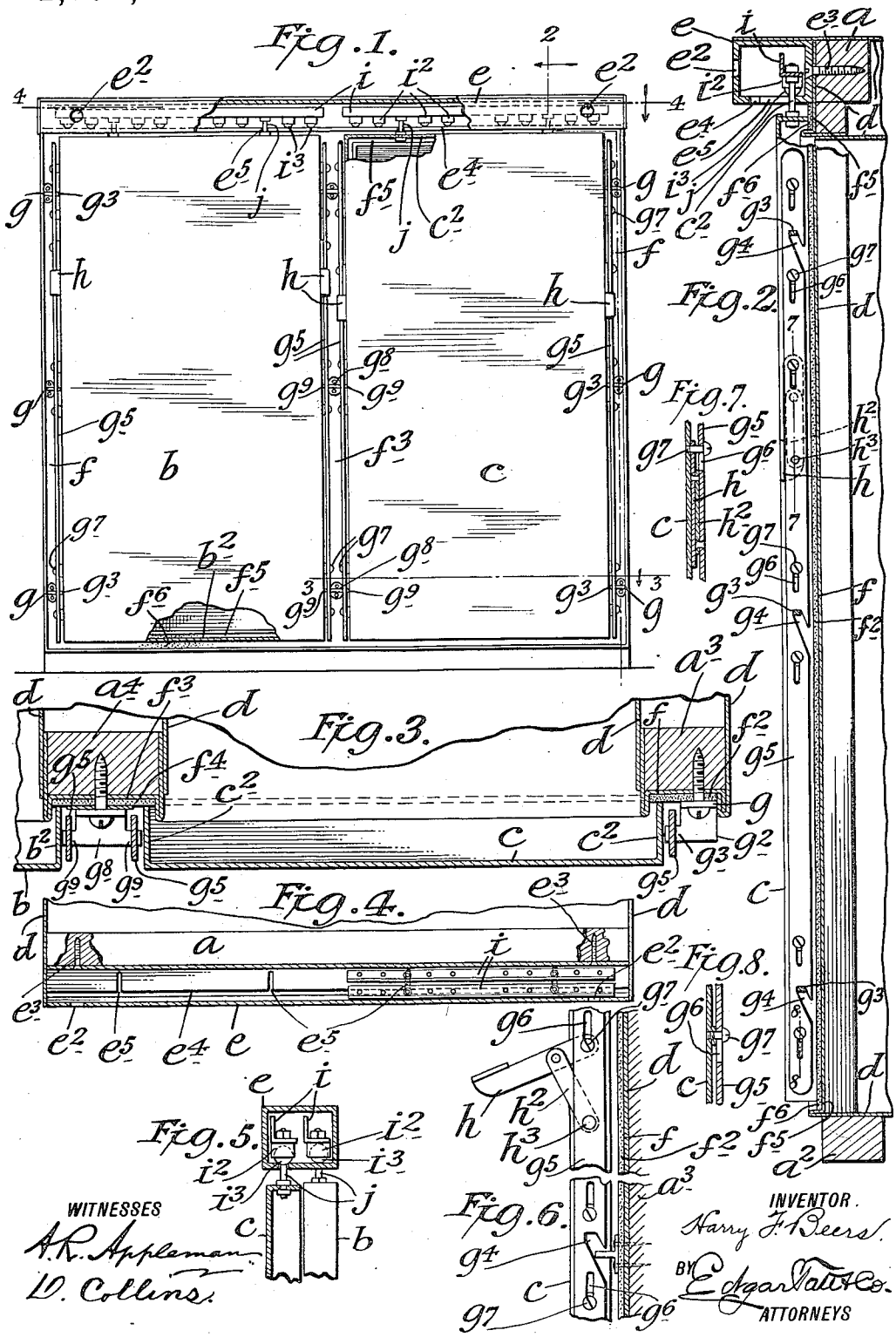
H. F. BEERS.

AIR TIGHT DOOR FOR CABINETS.

APPLICATION FILED JULY 24, 1912.

1,075,622.

Patented Oct. 14, 1913.



WITNESSES

A. R. Appleman.

D. Collins.

INVENTOR.

Harry F. Beers.

BY Edgar Tate & Co.

ATTORNEYS

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HARRY F. BEERS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JOHN E. NICHOLSON, OF NEW YORK, N. Y.

AIR-TIGHT DOOR FOR CABINETS.

1,075,622. Specification of Letters Patent. Patented Oct. 14, 1913.

Application filed July 24, 1912. Serial No. 711,339.

To all whom it may concern:

Be it known that I, HARRY F. BEERS, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Air-Tight Doors for Cabinets, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to air-tight doors for storage, sample or specimen cabinets, or like structures, and the object thereof is to provide sliding suspended doors for cabinets of this class which are all movable on the same track and one of which may be moved in front of another when it is desired to open said cabinet or a part thereof, and all of which may be securely locked and made air-tight when desired, and with this and other objects in view the invention consists in the construction, combination and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a front view of a cabinet provided with two doors constructed and operating according to my invention, part of the construction being broken away; Fig. 2 a section on the line 2—2 of Fig. 1 and on an enlarged scale; Fig. 3 a partial section on the line 3—3 of Fig. 1 and on an enlarged scale; Fig. 4 a section on the line 4—4 of Fig. 1; Fig. 5 a view similar to Fig. 2 but showing only the top portions of the doors and their immediate supports and showing the doors in a different position; Fig. 6 a view similar to Fig. 2 but showing the central part of the construction and showing the parts in a different position; Fig. 7 a section on the line 7—7 of Fig. 2; and Fig. 8 a section on the line 8—8 of Fig. 2.

In Fig. 1 of the accompanying drawing, I have shown the front of a cabinet of the class specified, and in Figs. 2, 3, 4 and 6, I have given sectional or detail views of the front framework of said cabinet consisting of a top beam a, a bottom beam a^2, vertical side posts a^3, and a central vertical post a^4, and the cabinet shown is provided with two doors b and c, but, in practice, the cabinet may be of any preferred dimensions and may be provided with any desired number of doors.

The framework of the cabinet above referred to is inclosed or covered by sheet metal casings or coverings d, or partially so, the front and back sides and the bottom of the bottom beam a being exposed in the construction as shown. Secured to the top of the cabinet is a transverse box e having front openings e^2 through which are passed screws e^3 to secure said box to the top framework of the cabinet, and in the front bottom portion of said box is a longitudinal slot e^4, and the bottom of said box is also provided at intervals with transverse recesses e^5 which communicate with said slot. The front side posts a^3 of the frame of the cabinet are provided with troughs or grooves f in which are placed packings f^2 and the front middle post a^4 is also provided with a similar trough or groove f^3 in which is placed a packing f^4, and it will be observed that the front middle post and its trough or groove f^3 are wider than the front side posts and the troughs or grooves thereof, and the top and bottom of the frame are provided with grooves f^5 and packings f^6 which correspond with the grooves and packings f and f^2 in the side posts of the frame.

The doors b and c are composed of sheet metal and are provided at the top, bottom and sides thereof with backwardly directed rim or flange members b^2 and c^2 adapted to bear on the packings f^2 and f^4, and secured in the troughs or grooves f^2 of the front side posts are lock plates g, three of which are employed, one at the middle and the others near the top and bottom of said grooves, and these lock plates are provided with outwardly directed parts g^2 having inwardly directed fingers g^3 adapted to operate in upwardly and outwardly directed slots g^4 formed in vertically arranged and vertically movable plates g^5 which are connected with the sides of the doors by means of slots g^6 formed in said plates and screws g^7 passed through said slots into the sides of the doors, and it will be observed that the middle post a^4 of the frame of the cabinet is provided with lock plates g^8 having oppositely directed fingers g^9, one of which

operates in connection with the plate g^5 on one door and the other with the plate g^5 on the other door.

The doors and plates g^5 are spaced apart or separated, as shown in Figs. 7 and 8, and at the opposite sides of each door a lever h is pivoted between the plates g^5 and the side of the door, and a link h^2 is pivoted to said lever and below said lever to the plate g^5 as shown at h^3. With this construction when the levers h at the opposite side of the door are depressed, as shown in Fig. 2, the said door will be drawn backwardly and the flanges or rims at the top, sides and bottom thereof will be forced against the packing at the top, sides and bottom of said doors, and the connection between the doors and the cabinet will be made air-tight.

In the box e at the top of the cabinet are placed two oblong suspending devices or bars i preferably composed of angle-iron, and the lengths of which are approximately the same as the widths of the doors b and c, and said bars are provided on their under side with cup-shaped holders i^2 in which are placed anti-friction rollers i^3 which rest on and are movable on the bottom of the box e, and connected with the top of the doors b and c are supports or supplemental hangers j which are movable through the slot e^4 in the bottom of the box e and into and out of the recesses e^5 communicating with said slot, and which are secured to or in the suspending bars i, as clearly shown in Figs. 2, 4 and 5.

When the doors are in the closed position, as shown in Figs. 1 and 2, the supports or supplemental hangers j are in the recesses e^5, and suppose that it be desired to open the door c, the levers h are raised as shown in Fig. 6, and the said door is pulled forwardly or outwardly by means of said levers so that the supplemental hangers j will be drawn out of the recesses e^5 and enter the slot e^4 when said door may be moved to the left in front of the door b. When it is desired to close the door c it is moved back into its proper position with reference to the door b and is then forced backwardly so that the supplemental hangers j enter the recess e^5, and the levers h are depressed so as to lock said door in position and draw the flanges at the top, bottom and sides thereof closely in contact with the corresponding packing in the door frame.

Of course, the door b may be manipulated in the same way, and my invention is not limited to any number of doors, nor to any size of cabinet, and the hanger bars i in the box e and the anti-friction rollers connected therewith may be of any desired style and construction, and changes in and modifications of the construction herein described may be made, within the scope of the appended claim, without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

The combination with a door frame and a door mounted so as to be movable laterally toward or from the door frame, a plate movable longitudinally of the door, having longitudinal slots, engaging pins projecting from the edge of the door in the plane of the door, a lever pivoted on one of the pins and pivoted to a link pivoted at its other end to said plate, said plate having inclined slots opening out of one edge of the plate and fixed lock plates on the door frame, having fingers engageable with the inclined slots, the lever being so arranged that all the pivots may be brought into line when the inclined slots are at their limit of movement, to lock the door in closed position.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 18th day of July 1912.

HARRY F. BEERS.

Witnesses:
C. MULREANY,
S. ANDREWS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."