

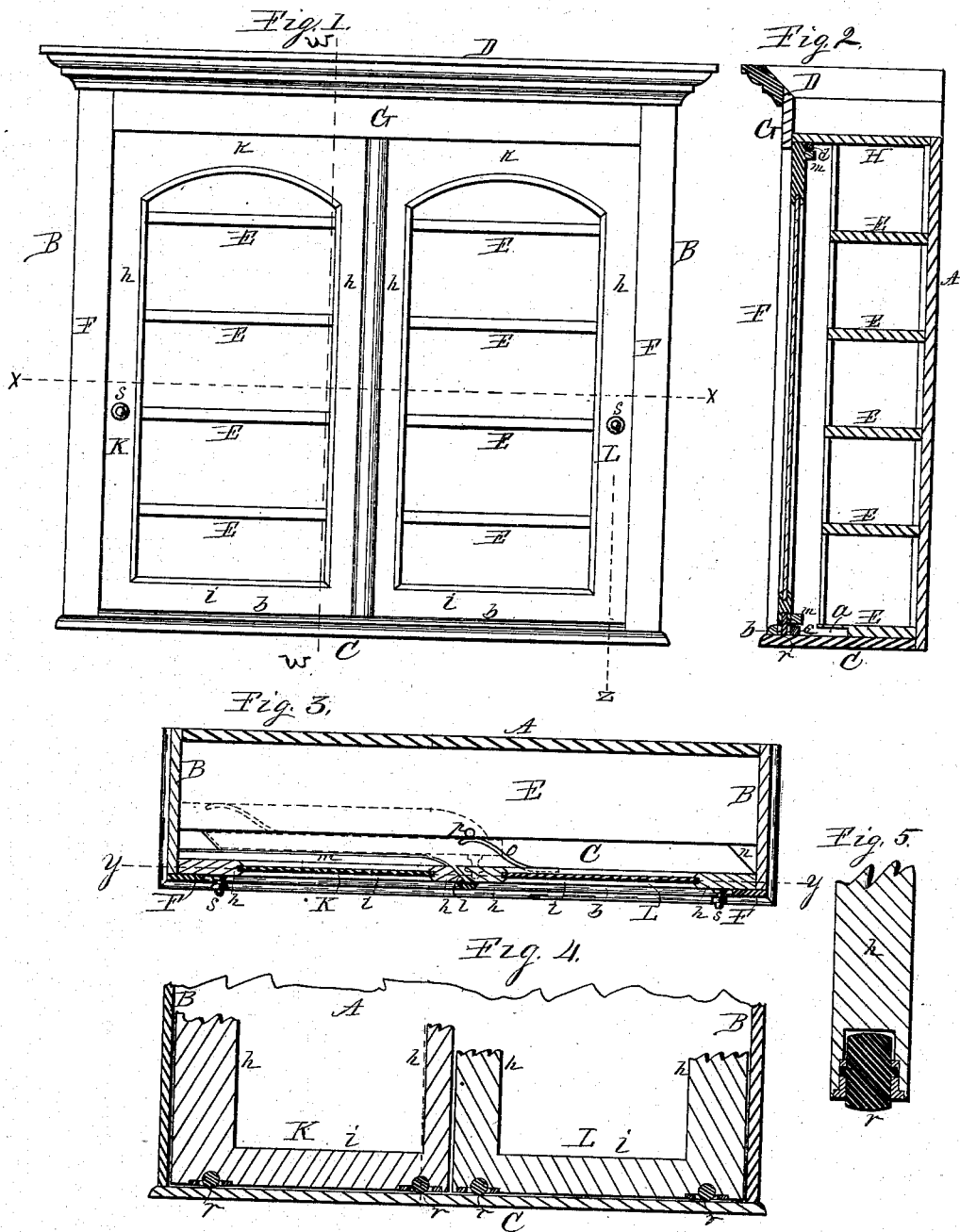
(No Model.)

2 Sheets—Sheet 1.

R. BAUCH.
SLIDING DOOR.

No. 263,670.

Patented Sept. 5, 1882.



Witnesses.
A. O. Behel
W. H. Haight

Inventor
Robert Bauch
Per Jacob Behel
Atty.

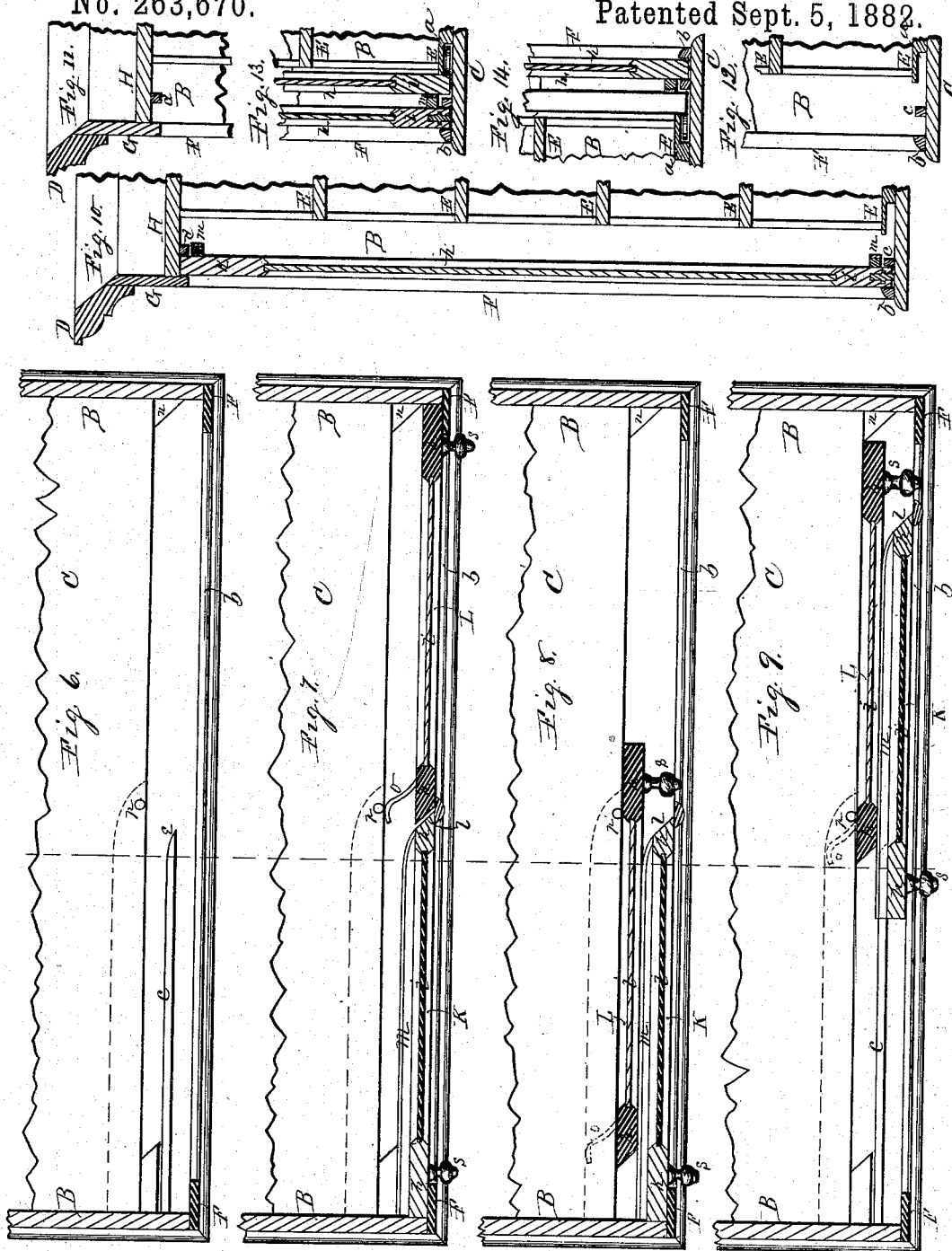
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UNITED STATES PATENT OFFICE.

ROBERT BAUCH, OF ROCKFORD, ILLINOIS, ASSIGNOR TO THE CENTRAL FURNITURE COMPANY, OF SAME PLACE.

SLIDING DOOR.

SPECIFICATION forming part of Letters Patent No. 263,670, dated September 5, 1882.

Application filed May 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BAUCH, a citizen of the United States, residing in the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Sliding Doors, of which the following is a specification.

My invention relates to improvements in sliding doors mainly designed for furniture, but applicable to other purposes; and the object of my invention is to produce doors that shall be flush or stand in the same plane when closed, and capable of a free sliding movement to slide in front of each other in opening, to accomplish which I have designed and constructed the arrangement of doors represented in the accompanying drawings, which will be hereinafter described, and in which—

Figure 1 represents the front elevation of the upper portion of an ordinary book-case embodying my invention. Fig. 2 is a transverse vertical section thereof on dotted lines *w w*. Fig. 3 is a horizontal section on dotted line *x x*, Fig. 1. Fig. 4 is a vertical lengthwise section on dotted line *y y*, Fig. 3, and Fig. 5 is an enlarged transverse vertical section through one of the rollers on dotted line *z z*, Fig. 1. Fig. 6 is a horizontal section on dotted line *x x*, Fig. 1, as seen from above, with doors removed; Fig. 7, same as Fig. 6, with doors in place in their closed position; Fig. 8, same as Figs. 6 and 7, with doors opened from the right-hand side; Fig. 9, same as Figs. 6, 7, and 8, with doors opened from the left-hand side. Fig. 10 is a section on dotted line *w w*, Fig. 1, and same as Fig. 2, but enlarged. Figs. 11 and 12 are end portions of Figs. 2 and 10, with doors removed. Fig. 13 is a section of Fig. 8 on dotted line *w w*, Fig. 1, left-hand view. Fig. 14 is a section of Fig. 9 on dotted line *w w*, Fig. 1, right-hand view.

In the figures, A represents the back, B the ends, C the bottom, D the cornice, and E the shelves, of the upper portion of an ordinary book-case, on the front of which are fixed the facings, consisting of the vertical portions F, commonly known as the "hanging stiles," and the upper transverse portion, G, commonly known as the "head-facing," all of which may be of any of the usual forms and styles com-

monly used in such or other similar articles of furniture. The front edge of the lower shelf of this case is grooved or rabbeted on its under side, as at *a*, in the form represented in the dotted lines in Fig. 3. The base and head of the front opening of the case are provided with ways to receive the door ends, and the ways to receive the foot of the doors are formed by a molding, *b*, placed on the upper side of the bottom of the case, to which it is fixed, having its inner edge in line and flush with the inner face of the vertical facings. A suitable strip, *c*, is fixed half-way across to the bottom of the case inside of the left-hand door in such a manner as to receive the door between the molding *b* and the strip *c*, and permit it to slide therein freely. The ways to receive the head of the doors are formed on the outside by the head-facing G, depending below the head-board H of the case.

At *d* is represented a strip substantially the same as the strip *c*, and fixed to the head-board H inside of the left-hand door in such a manner as to receive and permit the head of the door to slide therein freely. These inside strips, *c* and *d*, have their ends toward the center of the case beveled or rounded, as at *e*, to meet the inward bevel of the central meeting edge of the left-hand door.

At K and L are represented doors formed of stiles *h*, sill *i*, and top rail, *k*, framed in the usual manner, and in this instance fitted with glass centers or panels, as commonly employed in such doors. The door K is fitted to enter the open front to slide freely in the ways formed in the foot and head of the front opening, and is designed to close the left-hand side thereof; but is fitted to slide in the ways to the opposite or right-hand side of the opening. The central or meeting edge of this door is beveled on its inner corner at a suitable angle, as at *l*, in such a manner that its inner edge will stand slightly in advance of the beveled end of the inner strips, *c* and *d*. This door K is fitted at its end portions, on its inside immediately above the strip *c*, at its lower end, and immediately below the strip *d*, at its upper end, with strips *m*, fixed to the door, having their ends toward the beveled meeting edge beveled or rounded, substantially as are the correspond-

ing ends of the strips forming the guideways. The inner faces of these strips *m* are faced with cloth, soft leather, or other suitable material, and when so fitted project slightly beyond the strips *c* and *d*, and operate to carry the right-hand door free from the strips *c* and *d*, forming the guideways when made to slide inside of the left-hand door, and also to carry it free from them when both doors are made to slide in either direction to reduce friction, and the facing further prevents chafing or marring the finished surface of the doors. The guideways at the right-hand side of the case above and below are fitted with an angular block, *n*, which operates to hold the right-hand edge of the right-hand door against the casing.

At *o* is represented a spring of ogee or reverse-curved form, having its end portion fixed to the inner end portion of the bottom rail of the door in such position that its free end will extend about to the meeting edge thereof.

At *p* is represented a stud or pin placed in the front edge of the grooved bottom shelf in such relative position with the spring, when the door is closed, that the prominence of its convex surface will be slightly past the stud, operating to prevent the accidental opening of the door. These doors are supported on rollers *r*, placed in the edge of their lower ends and project slightly below the doors to travel in the guideways to prevent friction.

At *s* are represented mountings, which in this instance are of knob form and are fixed to the doors, forming handles to slide the doors in opening or closing the case.

In opening my improved doors I take hold of the knob of the right-hand door *L* with my right hand and exert a slight force inward and toward the left-hand side of the case, which action will carry the door inward on the angle of the meeting edges of the doors and on the angular blocks *n* in the right-hand ends of the guideways, and will carry the spring to the left of the stud *p*, when the door will be free to move on its roller-supports to the left hand, inside of the left-hand door *K*, to the position

in the dotted lines in Fig. 3, which will open the right-hand side of the case, and in which position both doors will be free to be carried on their roller-supports to the right-hand side of the case to open the left-hand side thereof. This movement is readily accomplished by means of the knob on the left-hand door, provided in a convenient position to be grasped by the left hand.

When it is desired to open the left-hand side of the case I first move the right-hand door to the inner portion of the ways, as in the instance above described, in the first opening of the case, and then by means of the left hand carry the left-hand door on its roller-supports with the right-hand door to the right.

From the foregoing it will be seen that I produce sliding doors capable of sliding one behind the other, and when closed to stand flush with each other in the same plane on the front of the case. I thus produce flush sliding doors capable of use in perhaps all or nearly all articles of furniture, or in the various kinds of cases requiring doors, and capable of use in various other situations in which sliding doors are required or found convenient.

My improvement is not confined to the use of only two doors in the same case, as any convenient or suitable number of doors may be employed—as three, four, or more—and still be within the scope of my invention.

I claim as my invention—

1. The combination, with flush sliding doors, of the anti-friction and anti-chafing strips fixed to the inner side of the door, substantially as and for the purpose hereinbefore set forth.

2. The combination of the flush sliding door having a spring fixed thereto to hold it in its flush position when closed, the grooved way to admit the spring, and a stud fixed near its front edge to engage the spring to hold the door in its closed position.

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Witnesses:

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