

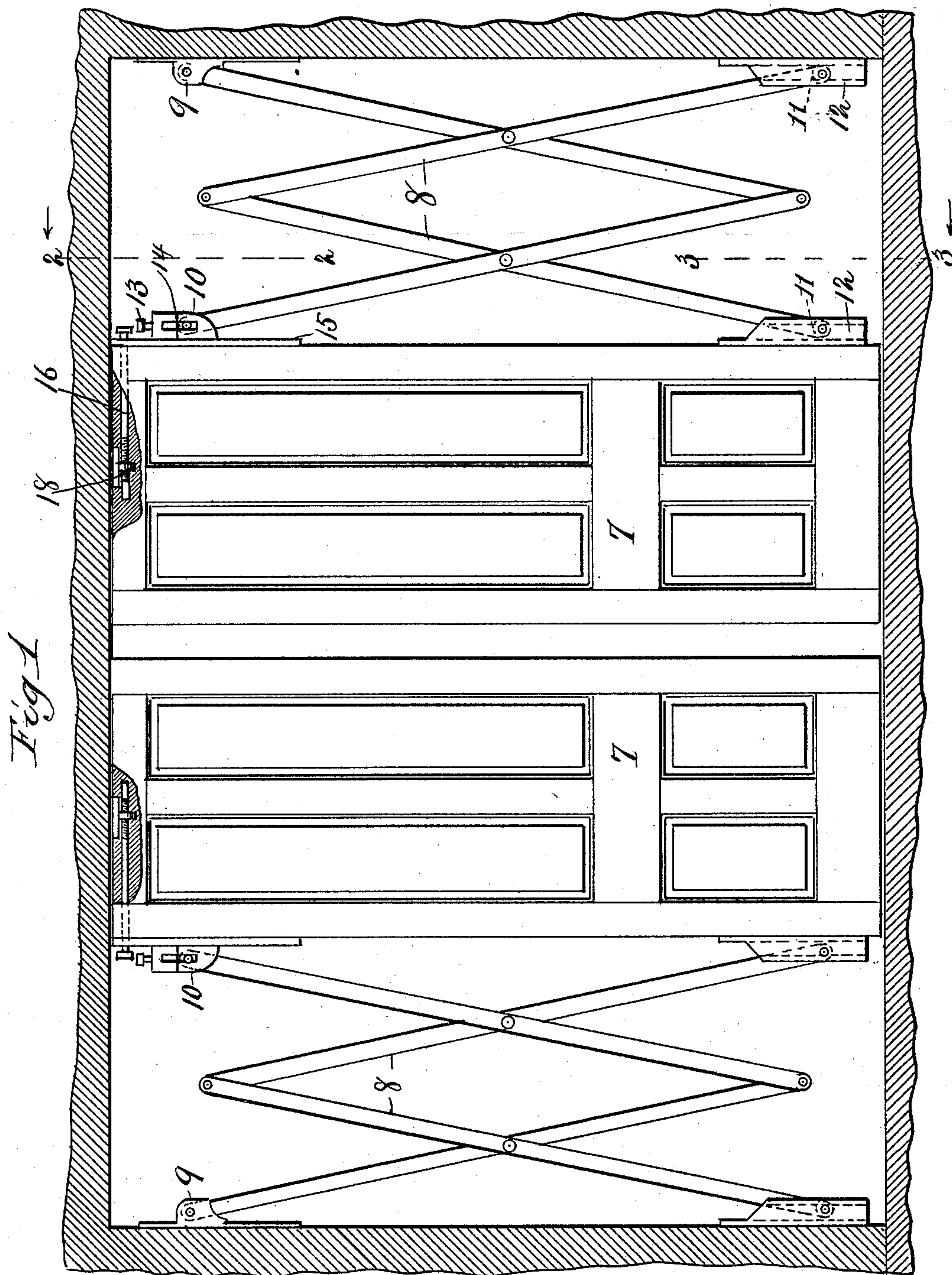
(No Model.)

2 Sheets—Sheet 1.

J. BALDERSON.  
HANGER FOR SLIDING DOORS.

No. 509,643.

Patented Nov. 28, 1893.



Witnesses  
W. C. Bailey  
Enoch Harpole.

Inventor,  
John Balderson,  
By E. C. Crawford,  
Att'y.



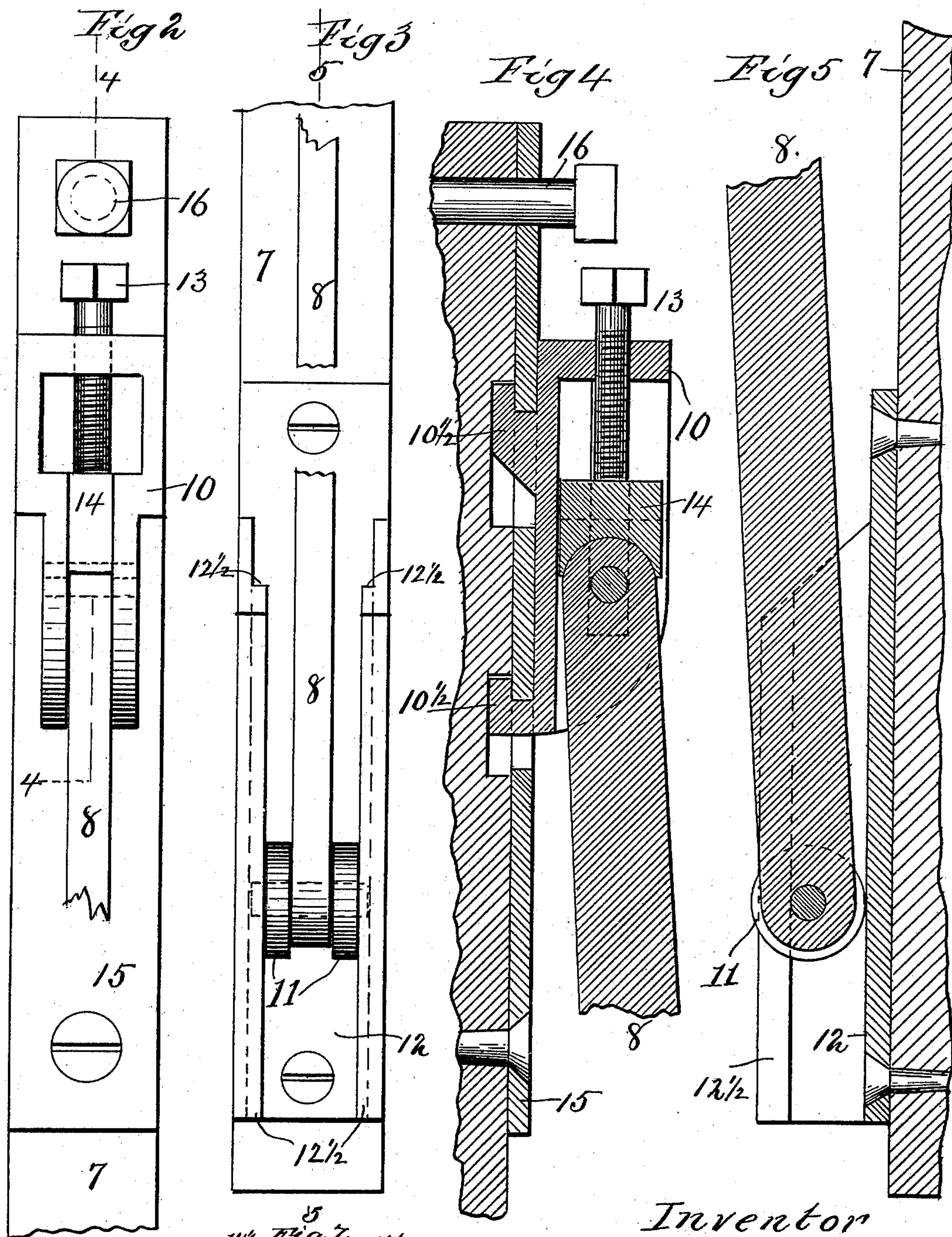
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2 Sheets—Sheet 2.

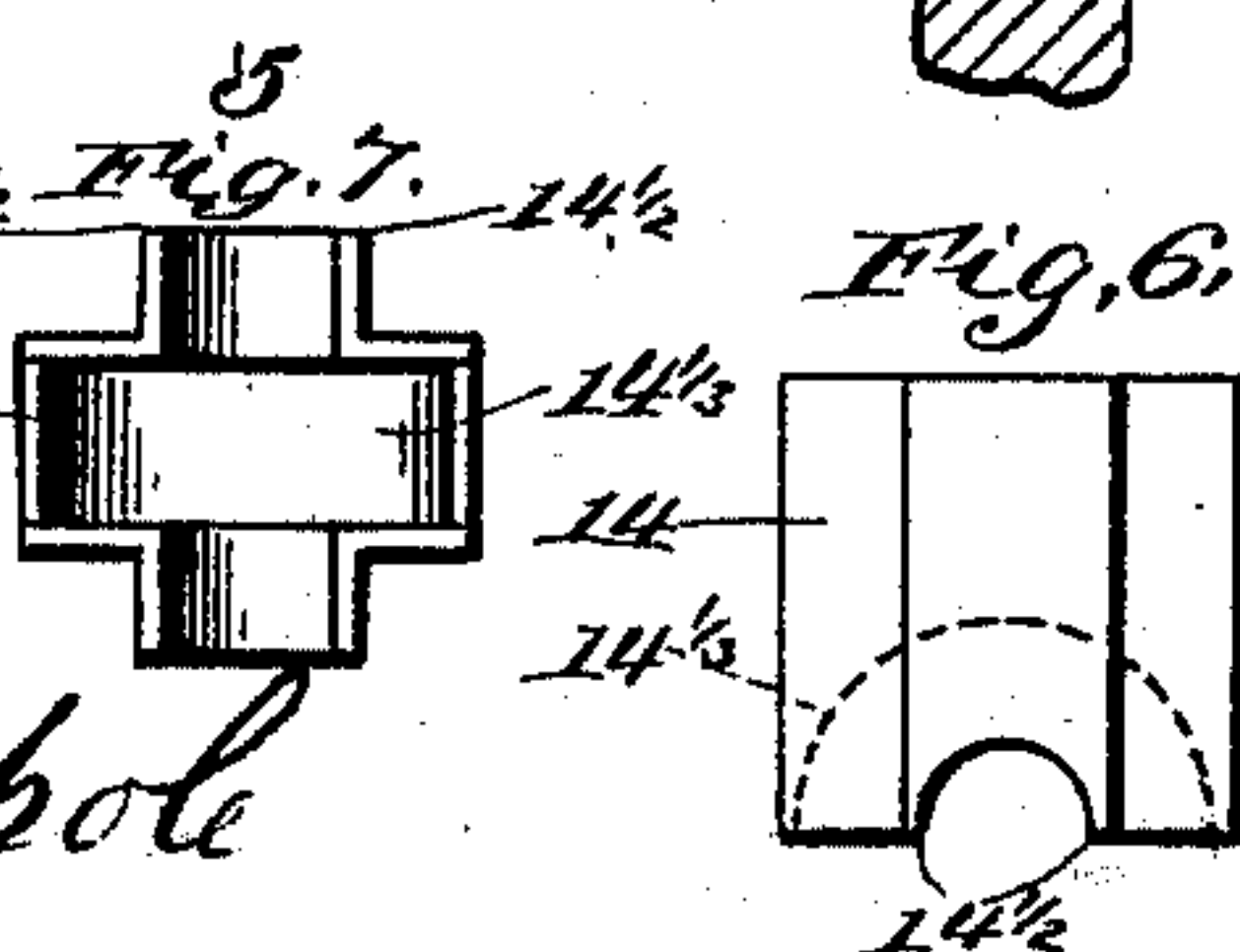
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No. 509,643.

Patented Nov. 28, 1893.



Witnesses  
W. C. Colver  
Enoch Harpole



Inventor  
John Balderson,  
By E. C. Crawford,  
Atty.



# UNITED STATES PATENT OFFICE.

JOHN BALDERSON, OF WAUKEGAN, ILLINOIS, ASSIGNOR OF ONE-HALF TO  
HENRY A. CONRAD, OF KILBOURN, WISCONSIN.

## HANGER FOR SLIDING DOORS.

SPECIFICATION forming part of Letters Patent No. 509,643, dated November 28, 1893.

Application filed March 2, 1893. Serial No. 464,323. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BALDERSON, a citizen of the United States, residing in Waukegan, in the county of Lake and State of Illinois, have invented a certain new and useful Hanger for Sliding Doors, of which the following is a specification.

My invention relates to devices used to suspend and swing sliding-doors in buildings.

My invention may also be applied to doors of elevators. It is illustrated in the accompanying drawings, in which—

Figure 1, is an elevation of two sliding-doors partly closed, showing the appliances which constitute my invention. Fig. 2, is a detail section taken on the line 2—2 of Fig. 1 showing the upper hanger in elevation, secured to the door. Fig. 3 is a like view of the roller-bearing, or track-way, secured to the lower edge of the door or the partition taken on line 3—3 of Fig. 1. Fig. 4 is a detail section of the upper hanger secured to the door, taken on the line 4—4 of Fig. 2. Fig. 5 is a detail section of the roller bearing secured to the lower edge of the door or partition, taken on the line 5—5 of Fig. 3. Fig. 6 is a side elevation of the cap 14. Fig. 7, is a bottom plan view of the cap 14.

Like numerals refer to like parts throughout the several views.

Referring to the drawings, 7 represents the sliding doors; 8, the bars pivoted in pairs at their centers, and the corresponding members of the pairs pivoted at their ends. The outer bars are secured to the inner edges of the doors and to the partition wall, the upper ends of the outer bars being pivoted in the castings, 9, and 10, secured respectively to the partition, and the spring, 15, which is secured to the edge of the door, and their lower ends being furnished with the casters, 11. The latter travel in the trackways, 12, secured respectively to the edge of the door and partition. The casting, 9, is formed with a slot in which the bar entering it can swing inward and outward, and is secured by any suitable means to the edge of the partition or the wall of the building, the center of its pivot being in the same vertical line, with the center of the pivot of the caster below.

15 is a spring secured near its lower end to the edge of the door near the top of the same, and through its upper end, the set-screw, 16, passes into the lug, 18, let into the top of the door. This spring and its set-screw are used to keep the door vertical.

10 is a casting formed with a slot to permit a lateral movement of the bar which enters it, and with a slot for the insertion of a pivot through the bar when in its proper position. It has also a square opening in its outer side near its upper end, through which the cap, 14, may be passed. It has also the lugs, 10 $\frac{1}{2}$ , formed to pass into holes prepared for them in the spring, 15. In a screw-threaded opening through the top of the casting, the set-screw, 13, is inserted. This is used together with the cap to raise or lower the door. The cap is formed with a seat 14 $\frac{1}{2}$  large enough to permit the free movement inward and outward of the bar. It also has depending lugs 14 $\frac{1}{2}$ , each having a groove to receive an end of the pivot on which the cap rests. The casting having been secured by its lugs to the spring, 15, the end of the bar is passed into the casting, the pivot is inserted in its place, and the cap is introduced so that it will rest over the end of the bar and upon the pivot; and the set-screws, 13, and 16, are adjusted as required. The track-ways, 12, have the flanges, 12 $\frac{1}{2}$ , on their inner faces, so that the pivots of the casters shall be confined within the track-way. The trackways are open at the top so that the casters may be inserted therein.

In hanging a door, the casters are first inserted in their track-ways, and then the upper ends of the outer bars are secured by their pivots in their respective castings. The set-screws are inserted and the door is adjusted by these at its proper height and angle, and is then ready for use. It is obvious that more than two pairs of bars can be added to and used in my invention as above set forth.

The double bars as used by me are perfectly counter-balanced by any weight which they are capable of sustaining, so that the door cannot move except by application of extraneous force.



I therefore do not claim broadly the use of every kind of pivoted bars for the purpose in question, but

What I do claim, and desire to secure by  
5 Letters Patent of the United States, is—

The combination of a sliding door, a hanger for the same consisting of two or more pairs of bars, the members of each pair pivoted together at their middle point and the corresponding members of each pair pivoted to  
10 each other at one end, the slotted casting 9 having the upper end of the outer bar pivoted therein; the slotted and hollow casting 10 secured to the spring 15, the inner bar being  
15 pivoted therein; the spring 15 secured to the

inner edge of the door at the top of the same; the lug 18 let into the upper end of the door; the set-screw 16 passing into the door and the said lug, the cap 14 placed in the casting  
10 over the end of the bar, being formed 20 with dependent lugs grooved to rest upon the pivot which secures the bar in the casting; and the set-screw 13 passing through the top of the casting and resting upon the top of the cap, substantially as and for the purposes 25 specified.

JOHN BALDERSON.

Witnesses:

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E. C. CRAWFORD.