

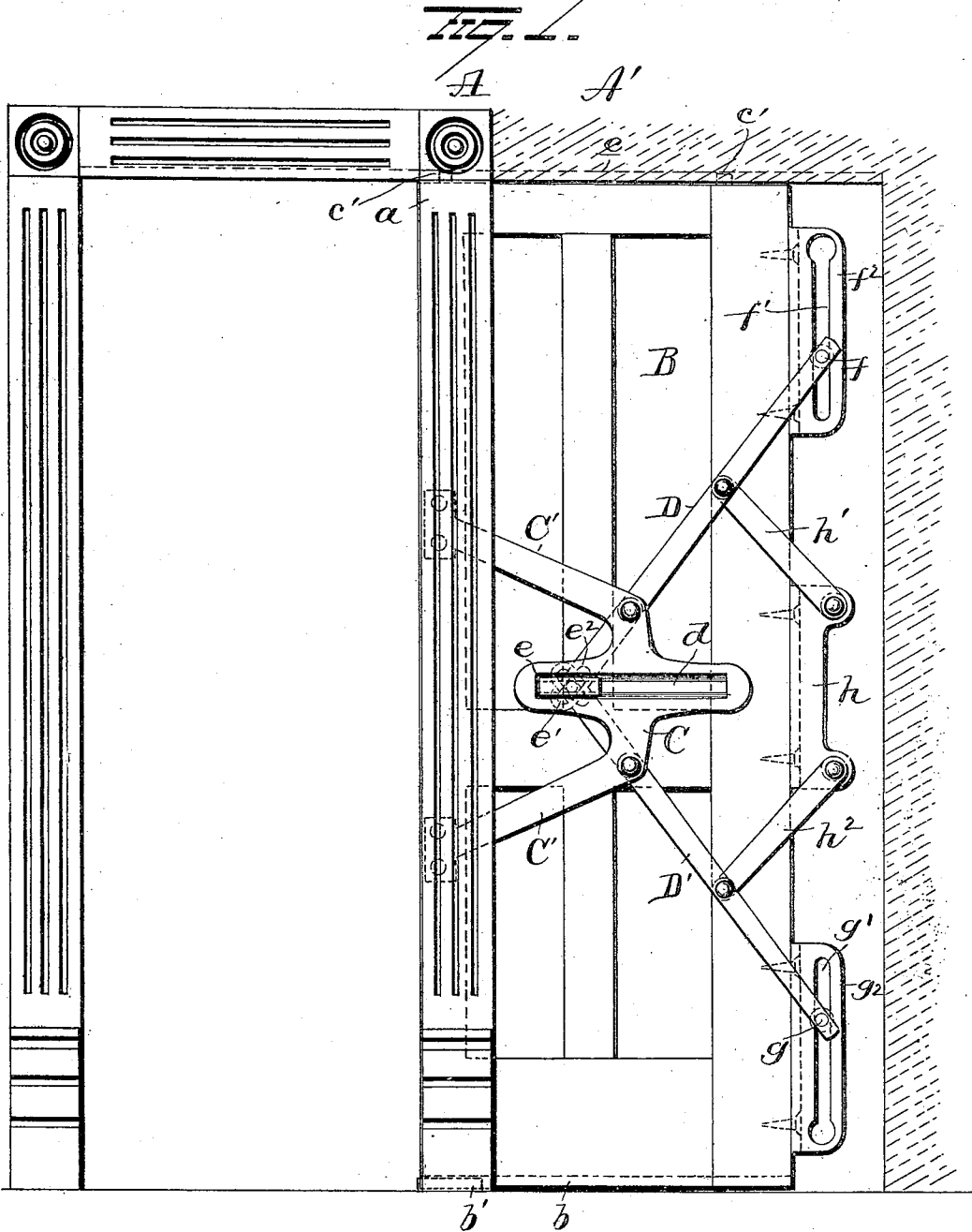
(No Model.)

2 Sheets—Sheet 1

J. C. SCHMOHL.
SLIDING DOOR.

No. 511,804.

Patented Jan. 2, 1894.



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(No Model.)

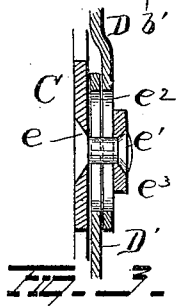
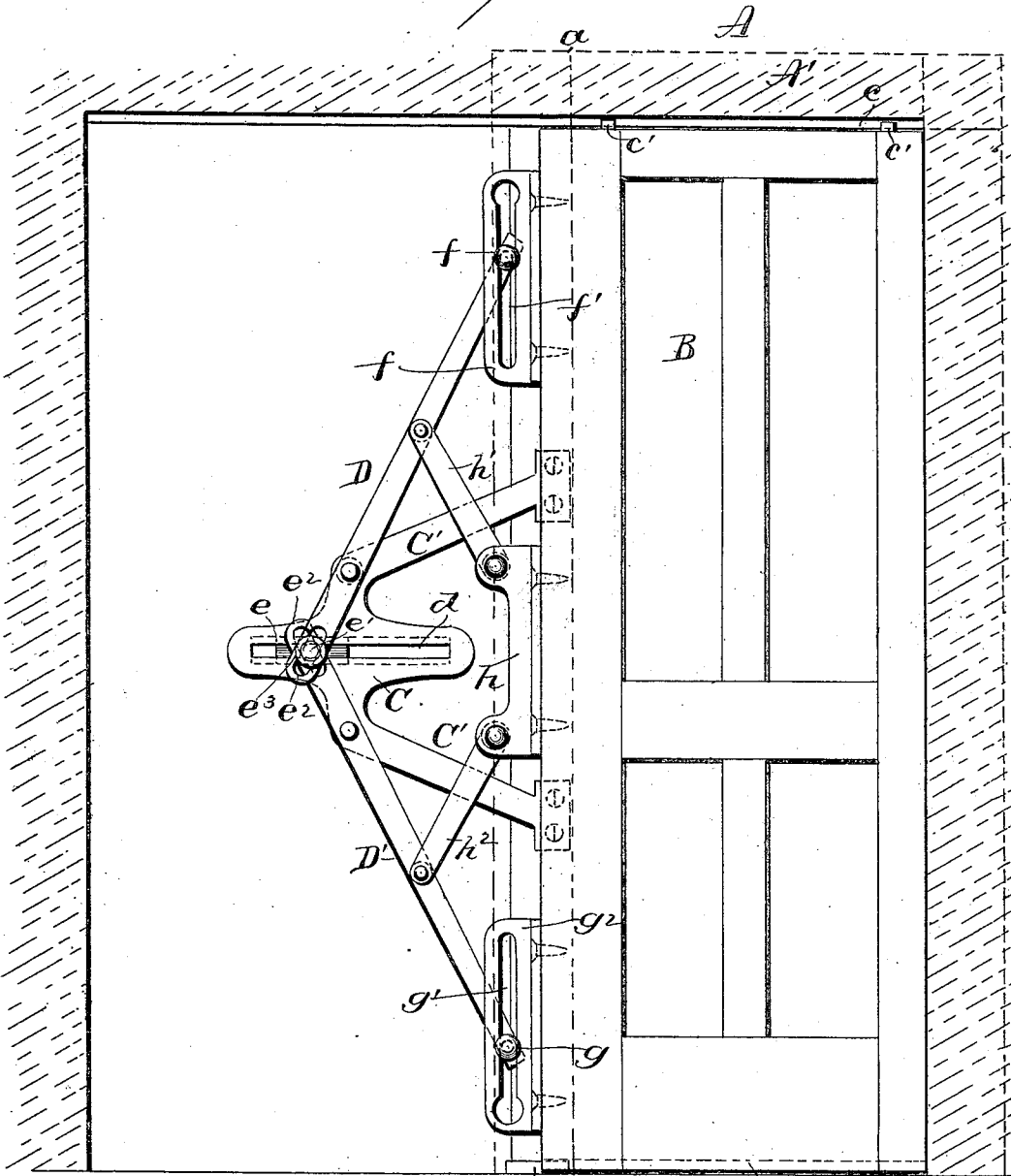
2 Sheets—Sheet 2.

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SLIDING DOOR.

No. 511,804.

Patented Jan. 2, 1894.

FIG. 2.



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UNITED STATES PATENT OFFICE.

JOHN C. SCHMOHL, OF NEWBERRY, PENNSYLVANIA.

SLIDING DOOR.

SPECIFICATION forming part of Letters Patent No. 511,804, dated January 2, 1894.

Application filed March 25, 1893. Serial No. 467,598. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. SCHMOHL, a resident of Newberry, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Sliding Doors; 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 improvement in sliding doors and more particularly to such as are used for parlors,—the object of the invention being to produce simple and efficient devices whereby to maintain the door in a perpendicular position and prevent it from binding.

A further object is to construct devices for hanging a sliding door which shall be simple, cheap to manufacture, easy to apply, durable, noiseless and effectual, in every respect, in the performance of their functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings: Figure 1 is a face view of a door and door frame having my improvements applied thereto the door being open. Fig. 2 is a similar view taken from the opposite side showing the door in its closed position. Fig. 3 is a detail view.

A represents the door frame, the rear portion of which is intended to enter the partition wall of a room, and to said frame, jambs *a* are secured,—between which jambs, the door B is adapted to move. The lower edge of the door is preferably provided with a groove *b*, into which an arm *b'*, secured to the frame A, projects. The bar *A'* of the frame is preferably provided with a groove *c*, in which pins *c'* projecting from the upper edge of the door, are adapted to move. An elongated plate C is located rearwardly from the jambs, about midway between the top and bottom thereof, and provided with arms *C'*, which latter are secured at their free ends to one of the jambs *a*, thus supporting the plate C in proper position. The plate C is provided with an elongated horizontal slot *d*, in which a slide *e* is adapted to move. A pin *e'* projects from the

slide *e* and is adapted to pass loosely through elongated slots *e²* made in the meeting ends of arms or bars D, D',—the escape of said arms or bars from the pin *e'* being prevented by a nut or washer *e³* on the end of said pin. From its sliding connection with the pin *e*, the arm or bar D projects upwardly toward the rear edge of the door B and at its upper end is provided with a laterally projecting pin *f* adapted to enter and move in a vertical elongated slot *f'* made in a plate *f²*, secured to and projecting from the rear edge of the door. The arm or bar D' from its sliding connection with the pin *e*, projects downwardly toward the lower rear edge of the door, and at its lower end is provided with a laterally projecting pin *g* adapted to enter and move in a vertical slot *g'* in a plate *g²* secured to the rear edge of the door B at the bottom thereof. A plate *h*, is secured midway between the ends of the rear edge of the door and projects rearwardly therefrom. To one end of the plate *h*, a rod or pitman *h'* is pivotally connected, the other end of said pitman being pivotally connected to the arm or bar D, at a point between its ends. A rod or pitman *h²* is pivotally connected to the other end of the plate *h* and the lower end of said rod or pitman *h²* is pivotally connected to the bar or arm D', at a point between the ends of the latter.

In order to insure the easy working of the parts, I prefer to use brass washers, between all the jointed connections.

I have shown the pitmen *h'* and *h²* pivotally connected to the arms or bars D, D' at or near the centers of the latter or at distances from the fulcrums of said arms approximately equal to the lengths of the pitmen as being the most convenient to effect the proper operation of the parts, but for different sized doors it is obvious that the size and length of parts might be varied so long as proper relative proportions are maintained.

The devices above described are very simple in construction, cheap to manufacture, easy to apply, durable, noiseless, and effectual in maintaining the door in a perpendicular position and preventing the same from binding.

Various slight changes might be made in the details of construction of my invention without departing from the spirit thereof or

limiting its scope, and hence I do not wish to restrict myself to the precise details of construction herein set forth, but,

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

1. The combination with a sliding door, of a horizontal guide supported by the door jamb, a slide adapted to operate in connection with the horizontal guide, arms or bars having loose connection with the slide and sliding connection with the door, and rods or pitmen extending from the door to the arms or bars, substantially as set forth.

2. The combination with a sliding door, of a plate having a horizontal elongated slot, supported by the door jamb, between the top and bottom thereof, a slide adapted to operate in said elongated slot, arms or bars having a loose connection at one end with said slide and at their other ends with the rear edge of the door in proximity to the top and bottom thereof, and rods or pitmen connected to said bars or arms at points between the ends of the latter, said rods or pitmen being pivotally connected at their other ends to the rear edge of the door in proximity to the center thereof, substantially as set forth.

3. The combination with a door jamb, and door, said jamb and door each provided with elongated guides, of arms or bars having piv-

oted connection with the door jamb and sliding connection with the elongated guides, and rods or pitmen extending from the arms or bars to the door and pivotally connected with each, substantially as set forth.

4. The combination with a sliding door, of a plate having a horizontal elongated slot supported by the door jamb, plates having vertical elongated slots, secured to the rear edge of the door at the top and bottom thereof, arms or bars having laterally projecting pins at their free ends adapted to enter said vertical slots, a slide adapted to operate in the horizontal elongated slot, a pin projecting from said slide, said arms or bars having elongated slots to receive said pin, a plate adapted to be secured to the rear edge of the door centrally between the top and bottom thereof, and rods or pitmen pivotally connected to the ends of said plate and pivotally connected to said arms or bars at points between the ends of the latter, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN C. SCHMOHL.

Witnesses:

JOHN HEILMAN,
W. C. GILMORE.