

No. 828,762.

PATENTED AUG. 14, 1906.

A. L. MOREAUX.

HINGE.

APPLICATION FILED OCT. 25, 1904.

Fig. 1.

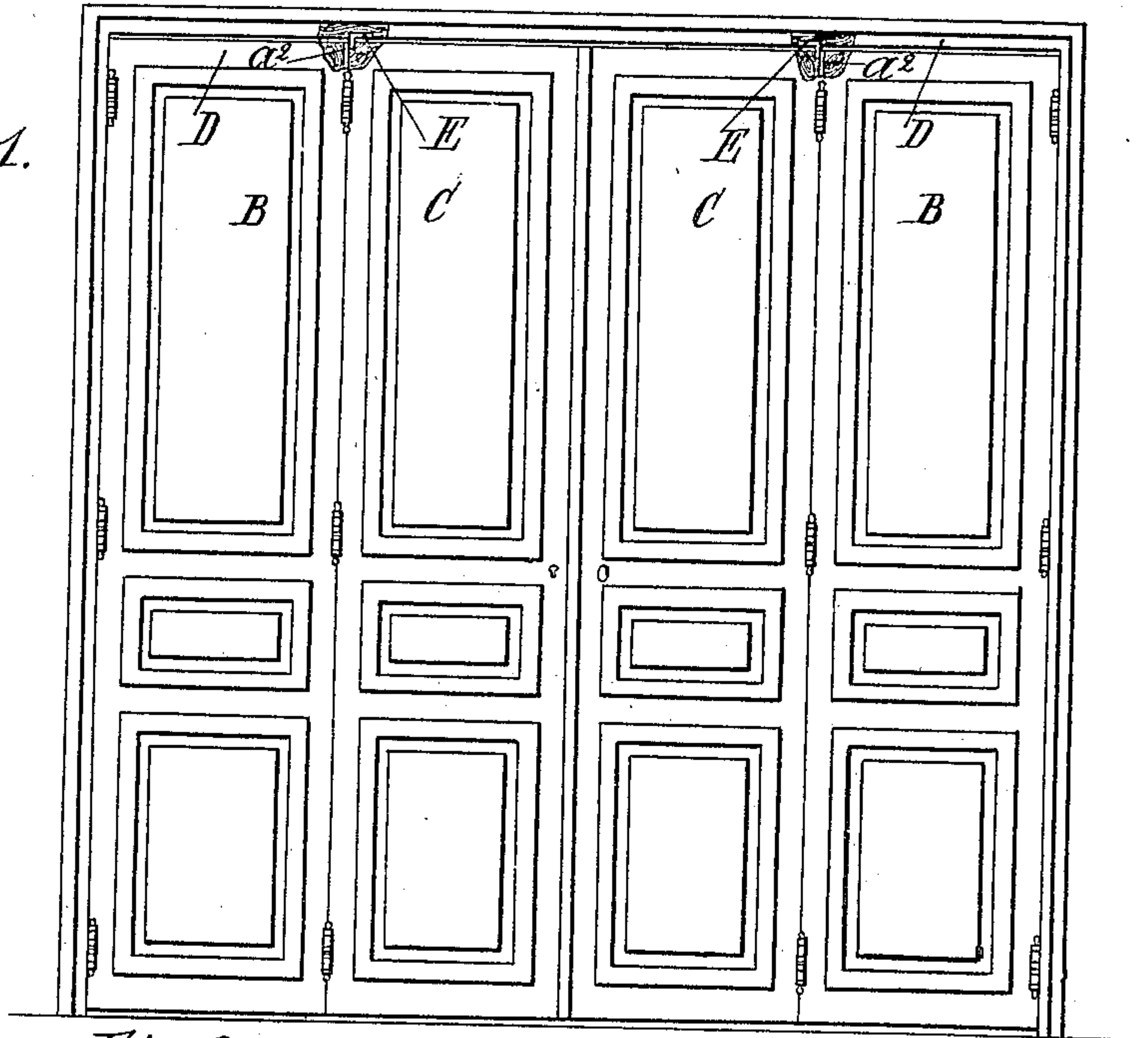


Fig. 2.

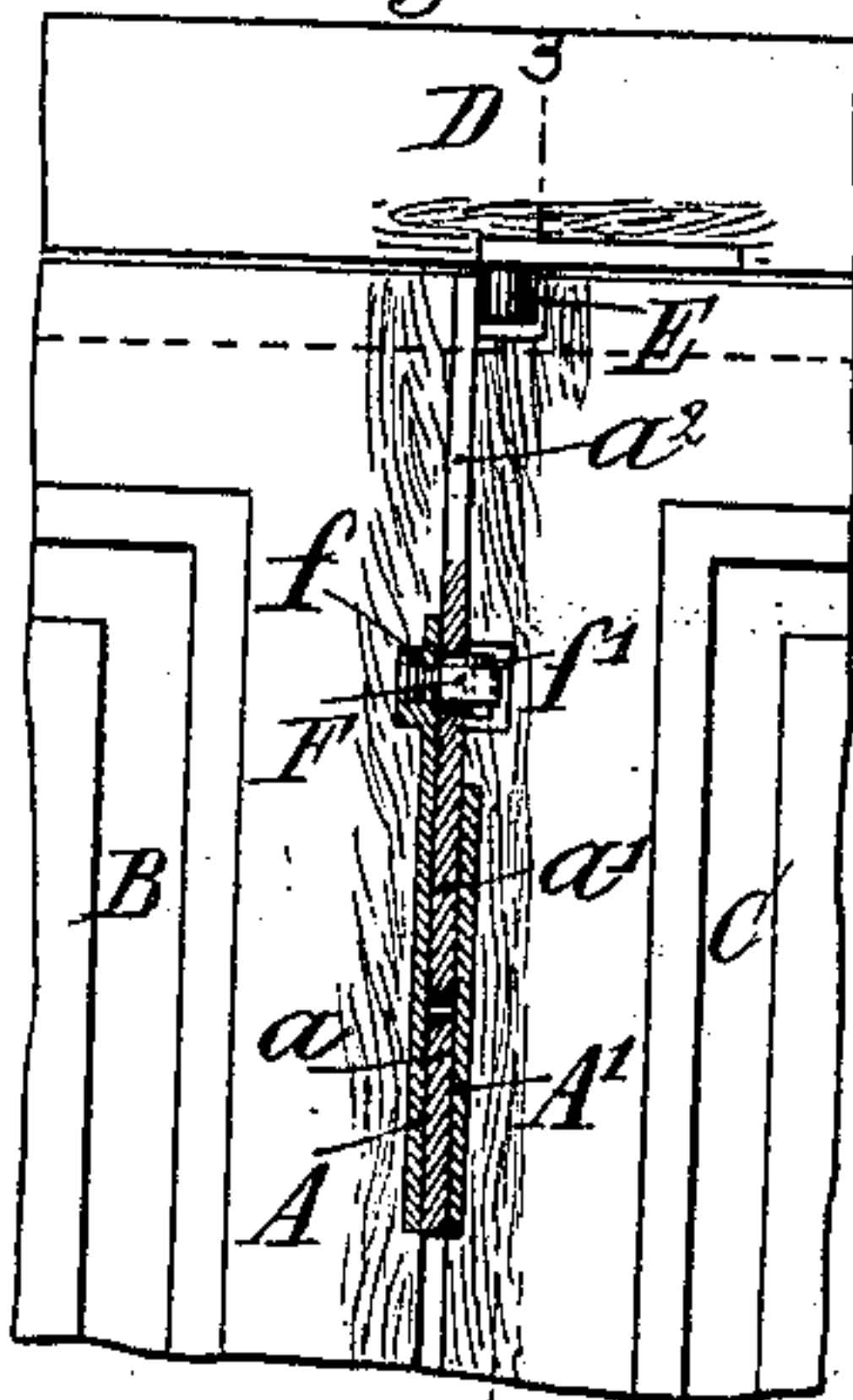


Fig. 3.

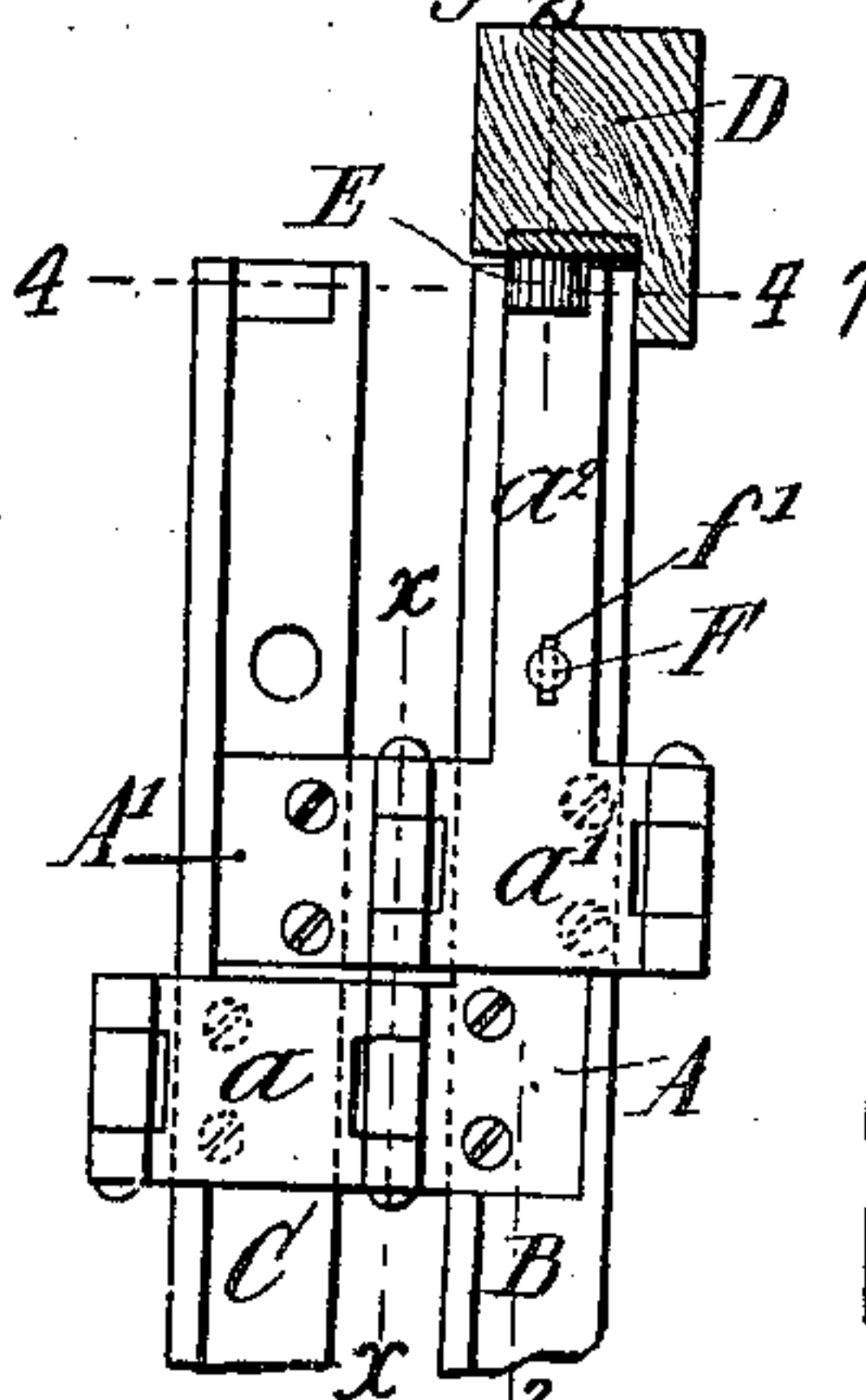


Fig. 5.

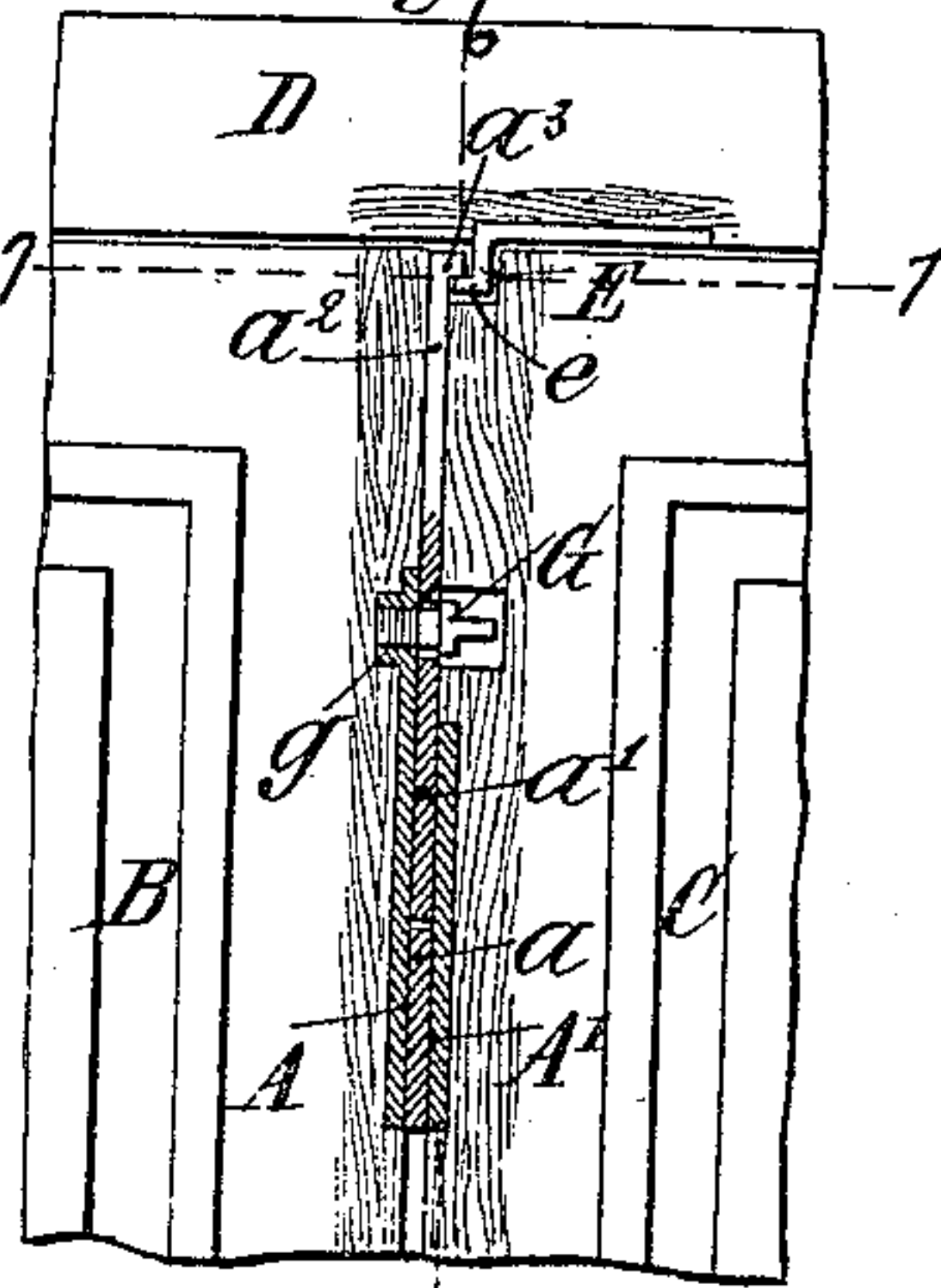


Fig. 6.

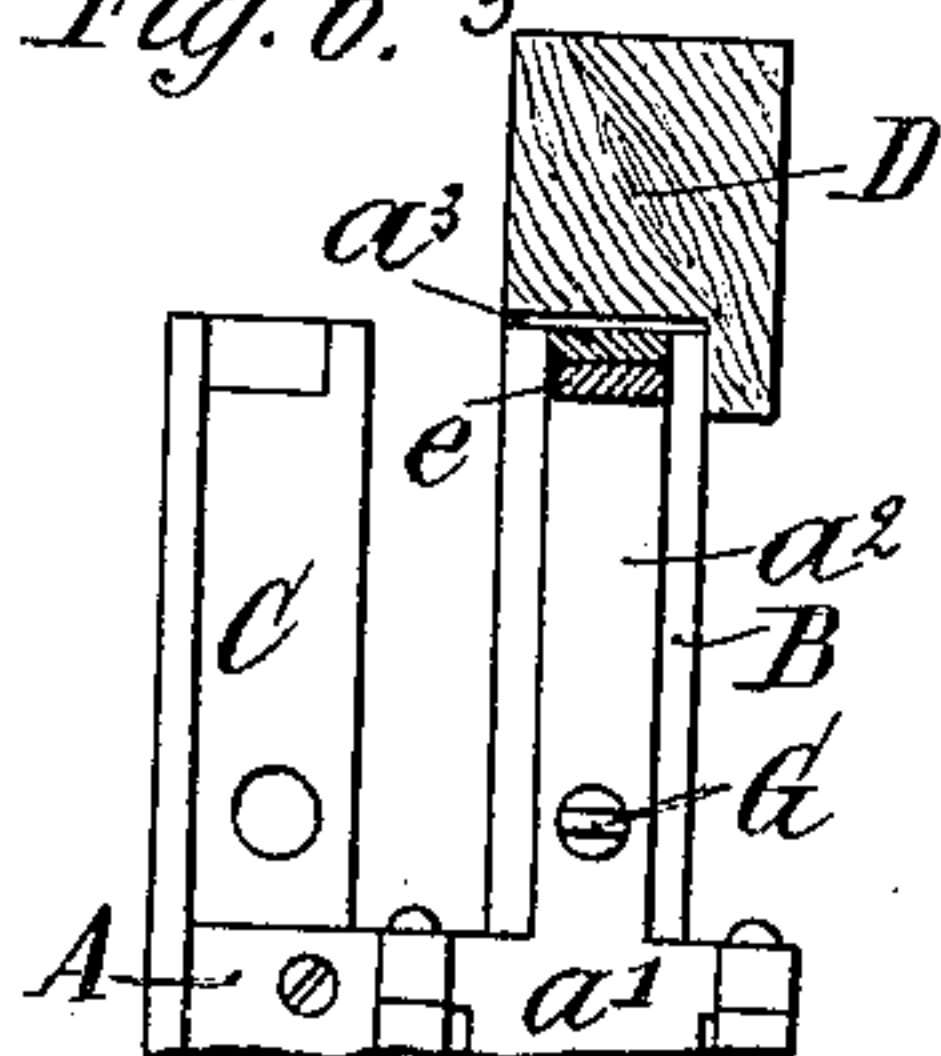


Fig. 4.

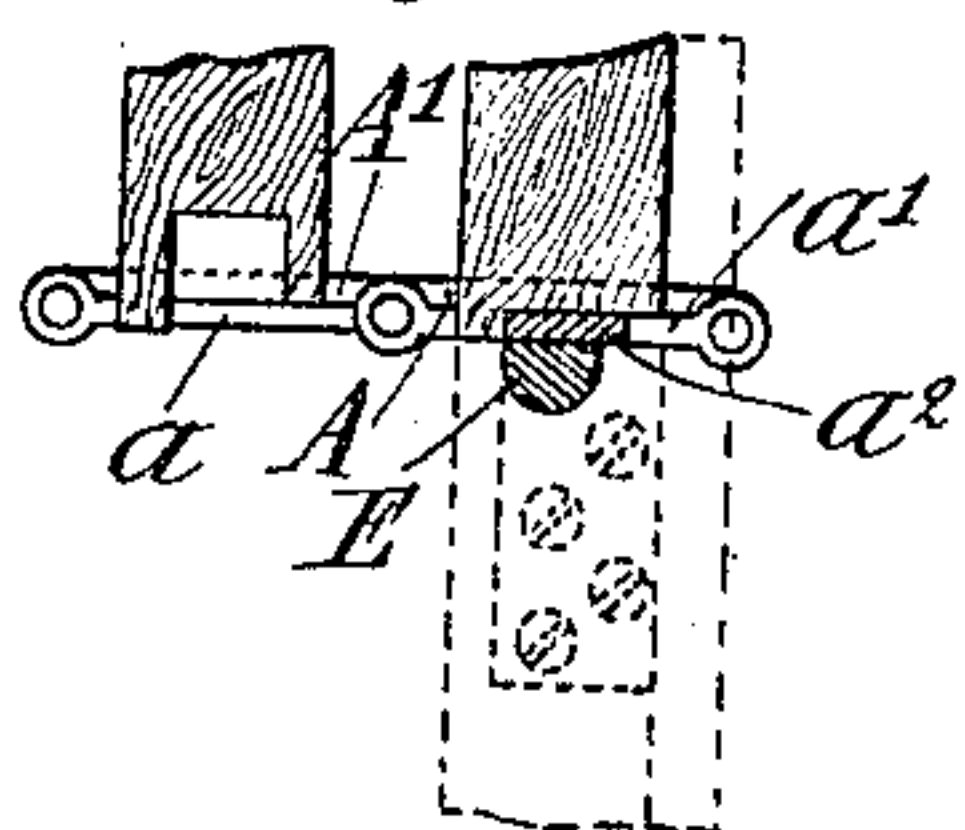
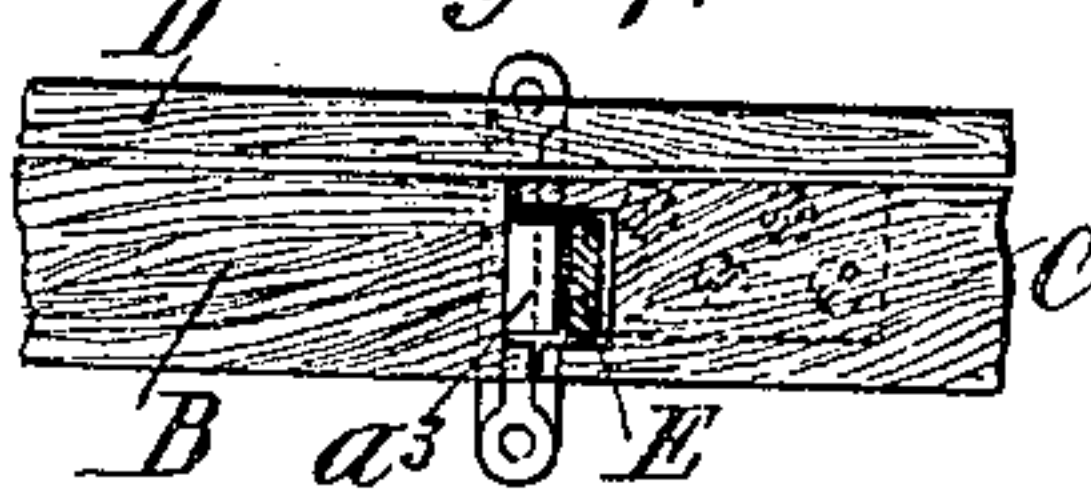


Fig. 7.



WITNESSES:

J. W. Wright

Mattie Abbe

INVENTOR

Amouls Louis Moreaux

BY

Horvath and Horvath

HIS ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ARNOULD LOUIS MOREAUX, OF PARIS, FRANCE.

## HINGE.

No. 828,762.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed October 25, 1904. Serial No. 229,932.

*To all whom it may concern:*

Be it known that I, ARNOULD LOUIS MOREAUX, artist-painter, a citizen of the Republic of France, residing in Paris, France, (postal address 166 Avenue de Suffren, Paris, France,) have invented certain Improvements in Hinges, (for which I have obtained a French patent, November 2, 1905, No. 336,402, and in Belgium, October 13, 1904, not yet issued,) of which the following is a specification.

My invention relates to hinges for doors having several leaves or sections and adapted to swing in both directions.

The first object of my invention is to produce a construction to prevent the sagging of the middle sections of the door.

Another object is to provide means whereby the middle sections or leaves of the door may swing as one, as on a simple hinge, in one direction only, as will be more fully described hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of the sectional doors and their connections with the frame and each other. Fig. 2 is a longitudinal section on the line 2 2, Fig. 3, the door being closed. Fig. 3 is a longitudinal section on line 3 3, Fig. 2, with the door open. Fig. 4 is a transverse section on the line 4 4, Fig. 3, the door being open. Fig. 5 is a section like that of Fig. 2, showing a modification. Fig. 6 is a section on the line 6 6, Fig. 5, the door being open; and Fig. 7 is a transverse section on the line 7 7, Fig. 5, the door C being closed.

The side sections or leaves B of the door are hinged in the usual manner to the vertical posts of the door-frame, the top of which is marked D, while the middle sections or leaves C are hinged to the outer sections B. In the present instance I have shown three hinges at each vertical hinging-line.

The improvement which forms the subject of this invention is applied to the upper parts preferably between the middle and outer door-sections, intended to prevent the gaping of the upper part of the middle section of the door while relieving the outer door-sections of strain.

The construction consists of an abutment E, fixed to the upper cross-piece D of the door-frame and against which bears a projection  $a^2$  of the plate  $a'$  of the double hinge when the door is closed, so that when the middle section C is employed alone as an ordinary door this door C turns as on a simple

hinge on the axis  $x x$ , Figs. 3 and 4. It is the abutment E which supports the weight of the door C, for the door-section B, resting against this abutment E, is held thereby, so that the upper part never sags under the weight of the middle section C.

The abutment E may be constructed in various ways and secured in any suitable manner. The extremity of the prolongation  $a^2$  of the free plate  $a'$  may also terminate in a right-angle bend  $a^3$ , serving to rest with some slight force upon the abutment E, which also has a right-angle bend  $e$  for this purpose, Figs. 5, 6, and 7. The advantage of this modified form of the device is that while preventing the hinge from gaping the door-section is also more certainly maintained at its proper height, as it is thus supported at the top, thus obviating the use of supports fixed to the floor, which present the grave objection of projecting from this latter and necessitating cutting of the carpet for their passage.

The abutment E may be secured in any suitable manner. Thus, for example, it may be provided with a simple point driven in by a hammer, or it may be fixed by a screw passing right through it, or, again, it might consist of a roller mounted upon a spindle.

In order to render the free plate  $a'$  solid with the door-frame to permit it to act as a simple hinge on which swings the middle section C, I arrange a pin F, Figs. 2 and 3, or a thumb-screw G, Figs. 5 and 6, threaded into the plate A, fixed to the door-piece B. The pin F passes through the extension  $a^2$ , provided with a hole for the purpose, and a key  $f'$  is passed through a hole in the end of the pin after the latter has passed through the extension  $a^2$  to maintain the plate  $a'$  against the plate A of the door B. It is the same with the thumb-screw G, that passes through the extension  $a^2$ , which is fastened to the plate A by screwing into the latter.

Although in the example given this improvement is applied to a two-way hinge having a plate secured to the middle section and a plate secured to the outer section, one hinged to the right of the first plate and the left of the second and the other to the left of the first plate and the right of the second, it is obvious that it may also be applied to hinges with one or several free plates.

I claim as my invention—

1. In combination with a door having several sections and its frame, of a hinge connect-



ing the inner and outer sections of the door, and having an extension-plate secured to the inner edge of the outer door-section, and an abutment fixed to the upper part of the door-frame, against which said plate bears, as and for the purpose described.

2. In combination with a door having several sections, and its door-frame, a hinge connecting the inner and outer sections, and having an extension-plate with an angle-piece thereon constructed to be secured to the outer section of the door, an abutment to be fixed to the upper cross-piece of the door-frame having an angle-piece thereon, the angle-piece of the plate resting on the angle-piece of the abutment to prevent the sagging of the middle door-section.

3. A hinge for sectional doors, comprising in its construction a plate to be secured to the middle door-section, a plate to be secured to the adjacent section, and two free plates, one hinged to the right of the first plate and to the left of the second, and the other to the left of the first plate and to the right of the second, one of said plates having an extension, in combination with an abutment to be fixed to the upper cross-piece of the door-frame

adapted to be engaged by said extension to hold the middle door-section.

4. A hinge for sectional doors, comprising in its construction a plate to be secured to a central door-section, a plate to be secured to the outer section, and two free plates, in combination with means to secure one of said free plates to one of said fixed plates when it is desired to have the central door-section open in one direction only.

5. A hinge for sectional doors comprising in its construction a plate secured to a central door-section, a plate to be secured to the outer section, and two free plates in combination with a thumb-screw passing through one of said free plates and threaded into one of said fixed plates, against which it holds said free plate when it is desired to have the central door-section open in one direction only.

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

ARNOULD LOUIS MOREAUX.

Witnesses:

LÉON FRANCKEN,  
JOHN BAKER.