

No. 773,128.

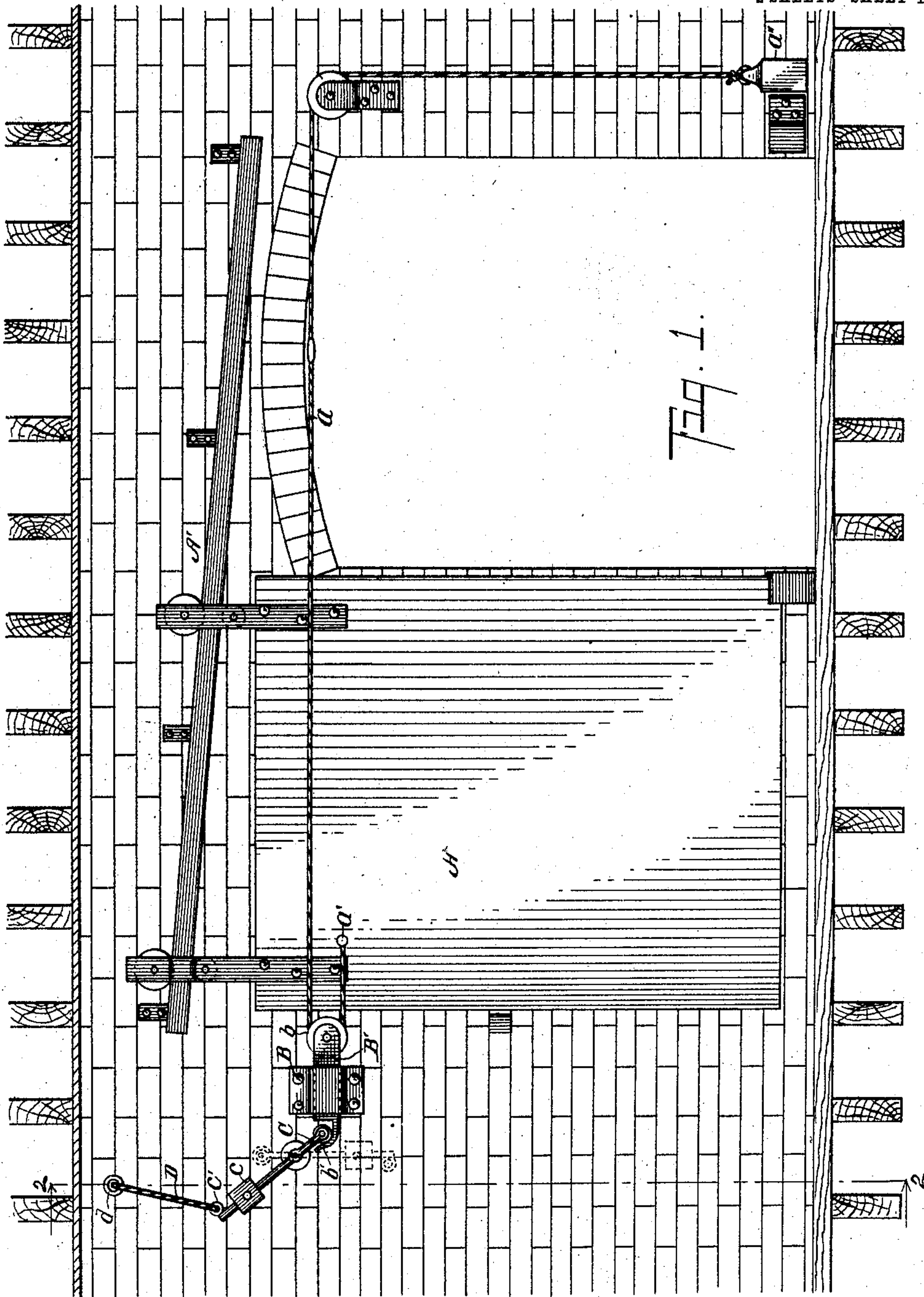
PATENTED OCT. 25, 1904.

F. DENTLER.
AUTOMATIC SLIDING DOOR.

APPLICATION FILED MAY 6, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

Ethel A. Teller

Herndon A. Adams

Inventor,

Frank Dentler

By Chas. A. Earl

Att'y.

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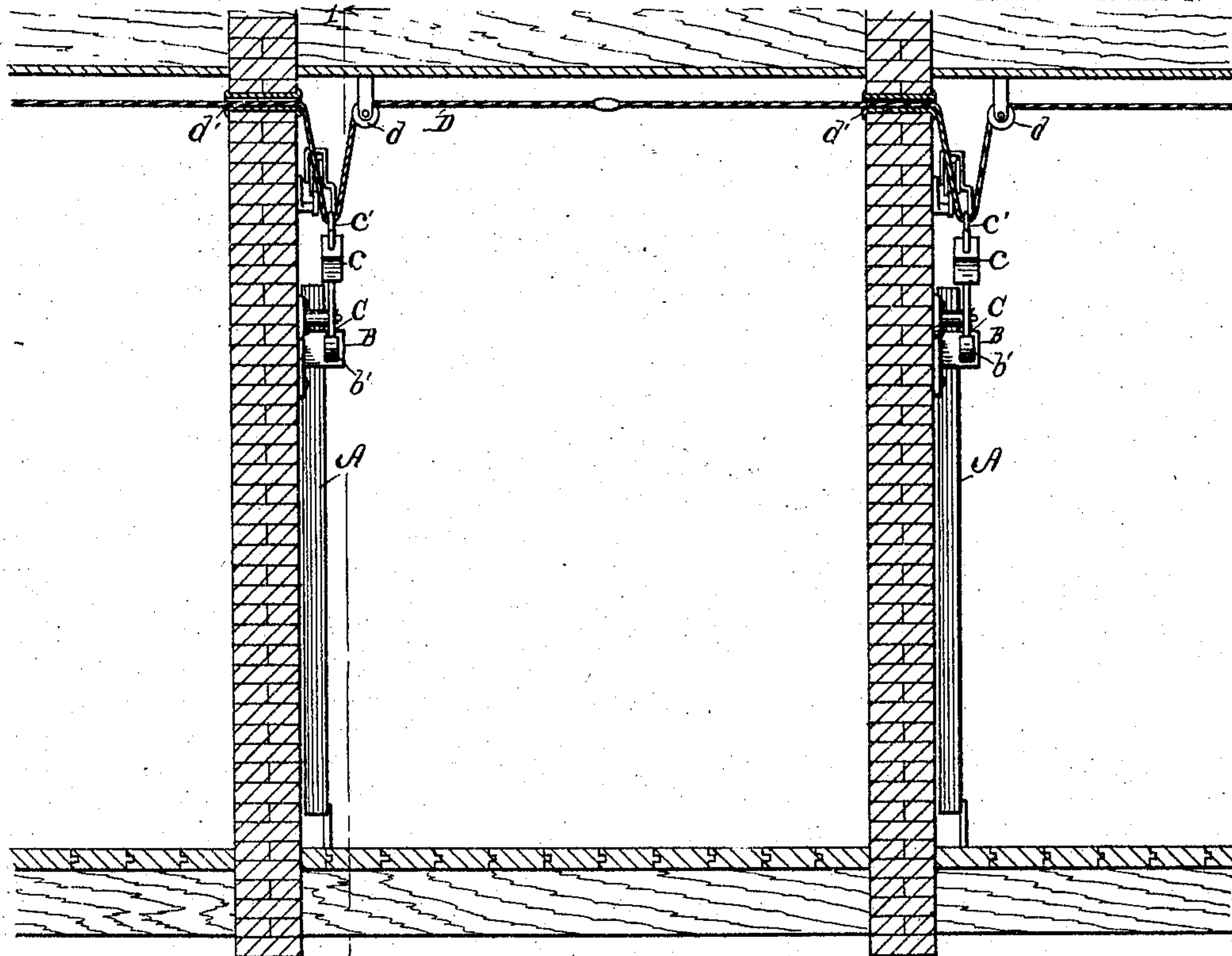


Fig. 2.

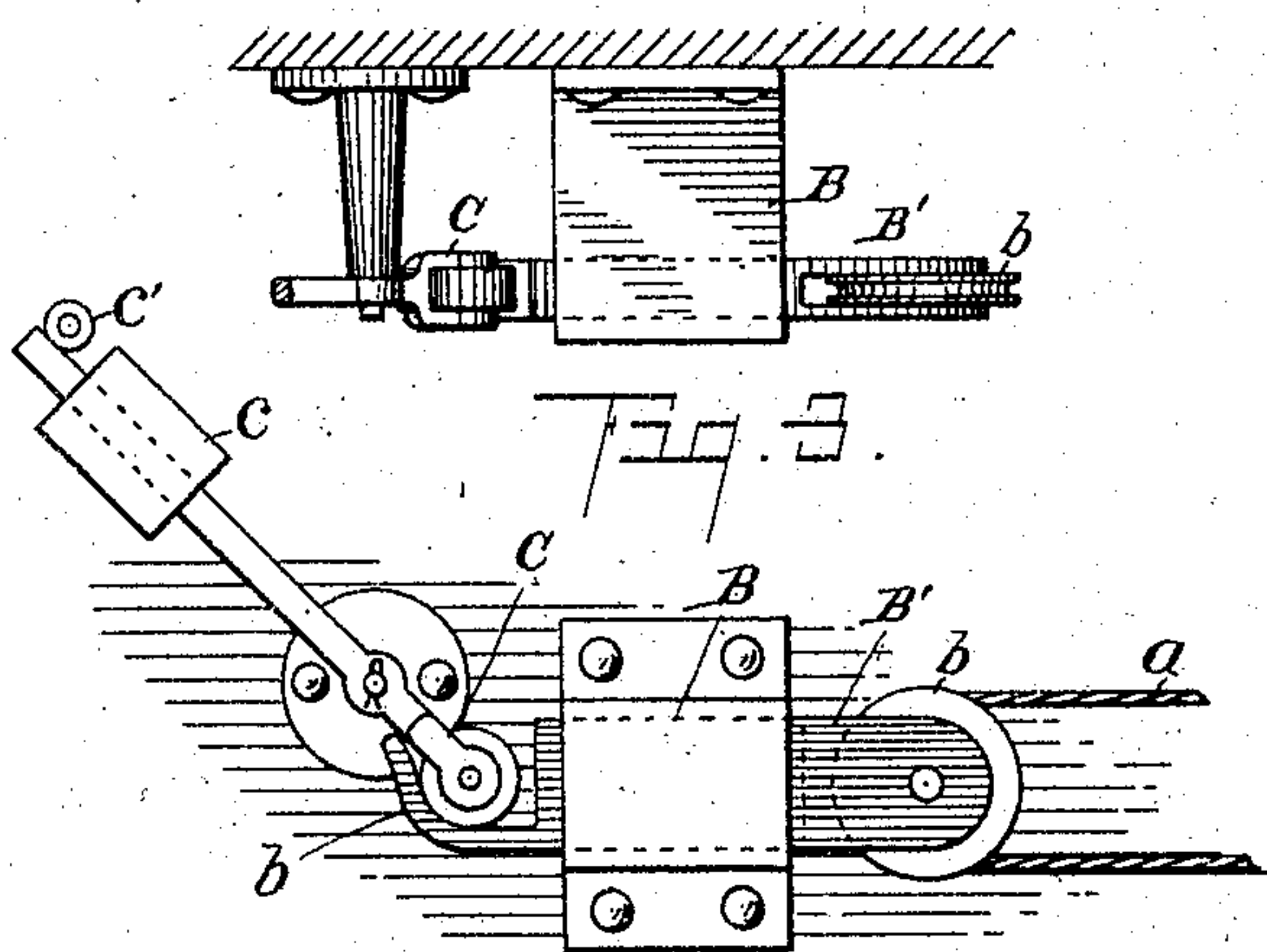


Fig. 3.

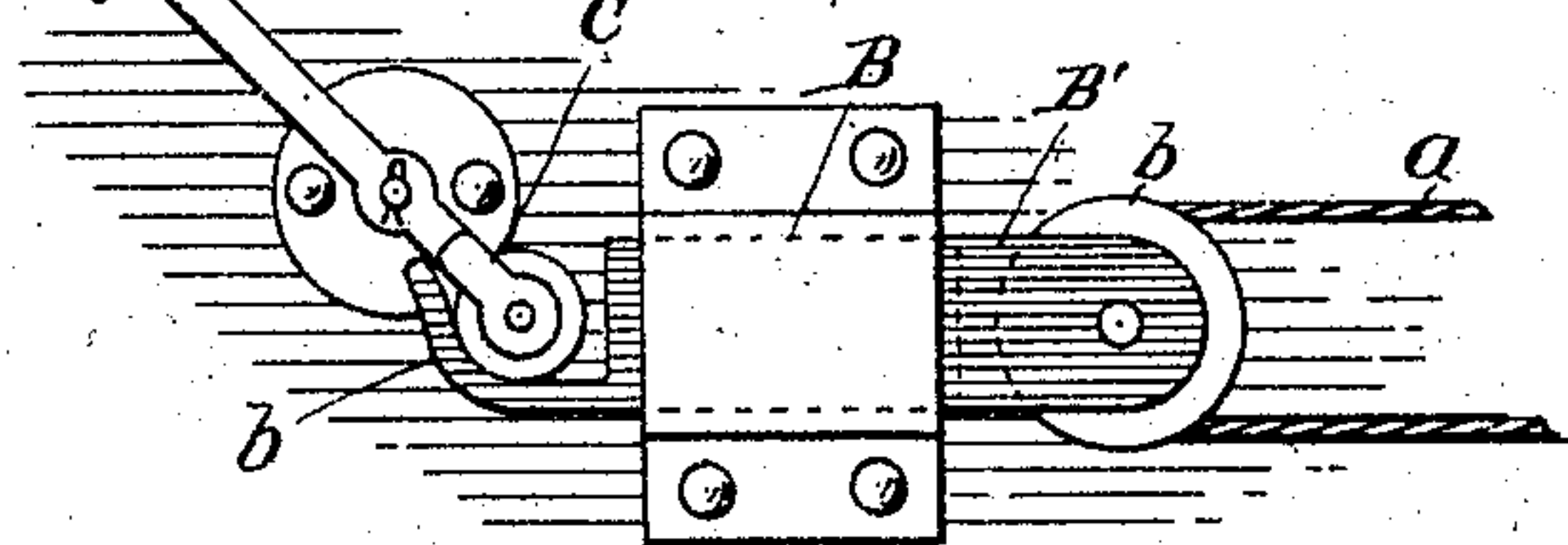


Fig. 4.

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UNITED STATES PATENT OFFICE.

FRANK DENTLER, OF VICKSBURG, MICHIGAN.

AUTOMATIC SLIDING DOOR.

SPECIFICATION forming part of Letters Patent No. 773,128, dated October 25, 1904.

Application filed May 6, 1904. Serial No. 206,706. (No model.)

To all whom it may concern:

Be it known that I, FRANK DENTLER, a citizen of the United States, residing at the village of Vicksburg, county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Automatically-Sliding Doors, of which the following is a specification.

This invention relates to improvements in automatically-closing doors.

The main object of this invention is to provide, in connection with a door or doors adapted to close automatically when released, means whereby such door or doors may be released at a distance therefrom.

Further objects and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined, and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail side elevation view of a structure embodying the features of my invention, taken on a line corresponding to line 1 1 of Fig. 2. Fig. 2 is a detail transverse sectional view taken on a line corresponding to line 2 2 of Fig. 1. Fig. 3 is an enlarged detail plan view of the counterweight pulley-block B', showing its support and retaining means. Fig. 4 is an enlarged detail side elevation view of the same.

In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines, and similar letters of reference refer to similar parts throughout the several views.

Referring to the drawings, the doors A, two of which are illustrated in the drawings, are mounted on the tracks A'. These tracks are inclined, so that when the doors are freed they automatically close. The door structure is preferably that illustrated and described in my application for Letters Patent, filed March 26, 1904, Serial No. 200,196. The doors are provided with counterweights a'. Support-

ing-cables a are provided for these counterweights. These cables are secured to the rear of the doors, as at a'. The cables a are passed over the pulleys b on the blocks B', which are supported on the walls beyond the rear edge of the doors when in their open position.

The pulley-blocks B' are supported in the brackets B, which are provided with suitable ways to receive the blocks. The pulley-blocks are retained in the brackets by the pivoted levers C, which engage the upwardly and rearwardly projecting catches b' on the rear ends thereof. The outer ends of these levers are provided with counterweights c, so that when released the lever swings free from the pulley-block catches, thereby releasing the pulley-blocks, allowing them to drop from the supports. This releases the counterweights so that the doors automatically close. The pivoted levers C are provided with rollers on their inner ends which are adapted to engage the hooks b' on the pulley-blocks, so that when the levers are released the pull of the door and counterweight insures the disengagement of the levers from the pulley-blocks. The levers C are supported in their engaging positions by a cord or cable D, which is adapted to be severed by the fire or heat, so that in case of fire the retaining-levers are released and the doors freed. This cord D is passed through suitable eyes c' on the ends of the levers, so that it is free to slide therein. Supporting and guiding pulleys d are provided for the retaining-cords D, so that they are supported close to the ceiling, where they are not likely to be accidentally engaged. In case there are several compartments in the building the retaining cord or trip D is passed through the walls, as at d', and through each compartment, so that a single cord serves to retain all the doors. When thus arranged, in case of fire in any compartment the releasing of the cord releases all the doors.

In Fig. 2 I have illustrated my invention applied to two doors, from which it is evident that any number may be thus connected.

While I prefer to form the retaining-cord D of some combustible or fusible material, it is evident that it is of advantage if formed of some material so that it would be necessary

to release it manually, as a series of doors can thus be simultaneously released.

With the parts thus arranged the doors may be freely operated in the usual manner.

5 I have illustrated and described my improved fire-door structure in detail in the form preferred by me on account of its structural simplicity, although I am aware that it is capable of numerous modifications in structural
10 details without departing from my invention.

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

1. The combination of a number of doors
15 adapted to close automatically when released; counterweights for said doors; supporting-cables for said counterweights; pulley-blocks for supporting said cables, having upwardly and rearwardly inclined catches thereon; sup-
20 ports for said pulley-blocks; pivotally-supported levers adapted to engage the catches on said pulley-blocks to retain them in said supports; and a retaining-cord slidably connected to said levers, all coacting for the pur-
25 pose specified.

2. The combination of a number of doors adapted to close automatically when released; counterweights for said doors; supporting-cables for said counterweights; pulley-blocks
30 for supporting said cables, having upwardly and rearwardly inclined catches thereon; supports for said pulley-blocks; pivotally-supported levers adapted to engage the catches on said pulley-blocks to retain them in said
35 supports; and a retaining-cord connected to said levers, all coacting for the purpose specified.

3. The combination of a number of doors adapted to close automatically when released;
40 counterweights for said doors; supporting-cables for said counterweights; pulley-blocks for supporting said cables; supports for said pulley-blocks; pivotally-supported levers adapted to engage said pulley-blocks to retain
45 them in said supports; and a retaining-cord slidably connected to said levers, all coacting for the purpose specified.

4. The combination of a number of doors adapted to close automatically when released;
50 counterweights for said doors; supporting-cables for said counterweights; pulley-blocks for supporting said cables; supports for said pulley-blocks; pivotally-supported levers adapted to engage said pulley-blocks to retain
55 them in said supports; and a retaining-cord connected to said levers, all coacting for the purpose specified.

5. The combination of a number of doors adapted to close automatically when released;

counterweights for said doors; supporting-ca- 60
bles for said counterweights; pulley-blocks for supporting said cables; supports for said pulley-blocks; catch devices for retaining said pulley-blocks in said supports; and a retain- 65
ing-cord slidably connected to said catch de-
vices, all coacting for the purpose specified.

6. The combination of a door adapted to close automatically when released; a counter-
weight for said door; a supporting-cable for
70 said counterweight; a pulley-block for sup-
porting said cable, having an upwardly and
rearwardly inclined catch thereon; a support
for said pulley-block; a pivotally-supported
lever adapted to engage the catch on said pul-
75 ley-block to retain it in said support; and a
retaining-cord connected to said lever, for the
purpose specified.

7. The combination of a door adapted to close automatically when released; a counter-
weight for said door; a supporting-cable for 80
said counterweight; a pulley-block for sup-
porting said cable; a support for said pulley-
block; a pivotally-supported lever adapted to
engage said pulley-block to retain it in said
support; and a retaining-cord connected to 85
said lever, for the purpose specified.

8. The combination of a door adapted to close automatically when released; a counter-
weight therefor; a supporting-cable for said
90 counterweight; a pulley-block for supporting
said cable; a catch device for retaining said
pulley-block; and a cord for tripping said
catch, for the purpose specified.

9. The combination of a door adapted to close automatically when released; a counter- 95
weight therefor; a supporting-cable for said
counterweight; a pulley-block for supporting
said cable; and a releasing-cord for said pul-
ley-block, for the purpose specified.

10. The combination of a number of doors 100
adapted to close automatically when released;
counterweights therefor; supporting-cables
for said counterweights, catch devices for sup-
porting said cables, and a common releasing-
cord for said catch devices for the purpose 105
specified.

11. The combination of a door adapted to close automatically when released; a counter-
weight therefor; a supporting-cable for said
110 counterweight; a catch device for supporting
said cable; and a cord adapted to release said
catch device, for the purpose specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

FRANK DENTLER. [L. S.]

Witnesses:

ETHEL A. TELLER,
OTIS A. EARL.