

No. 782,491.

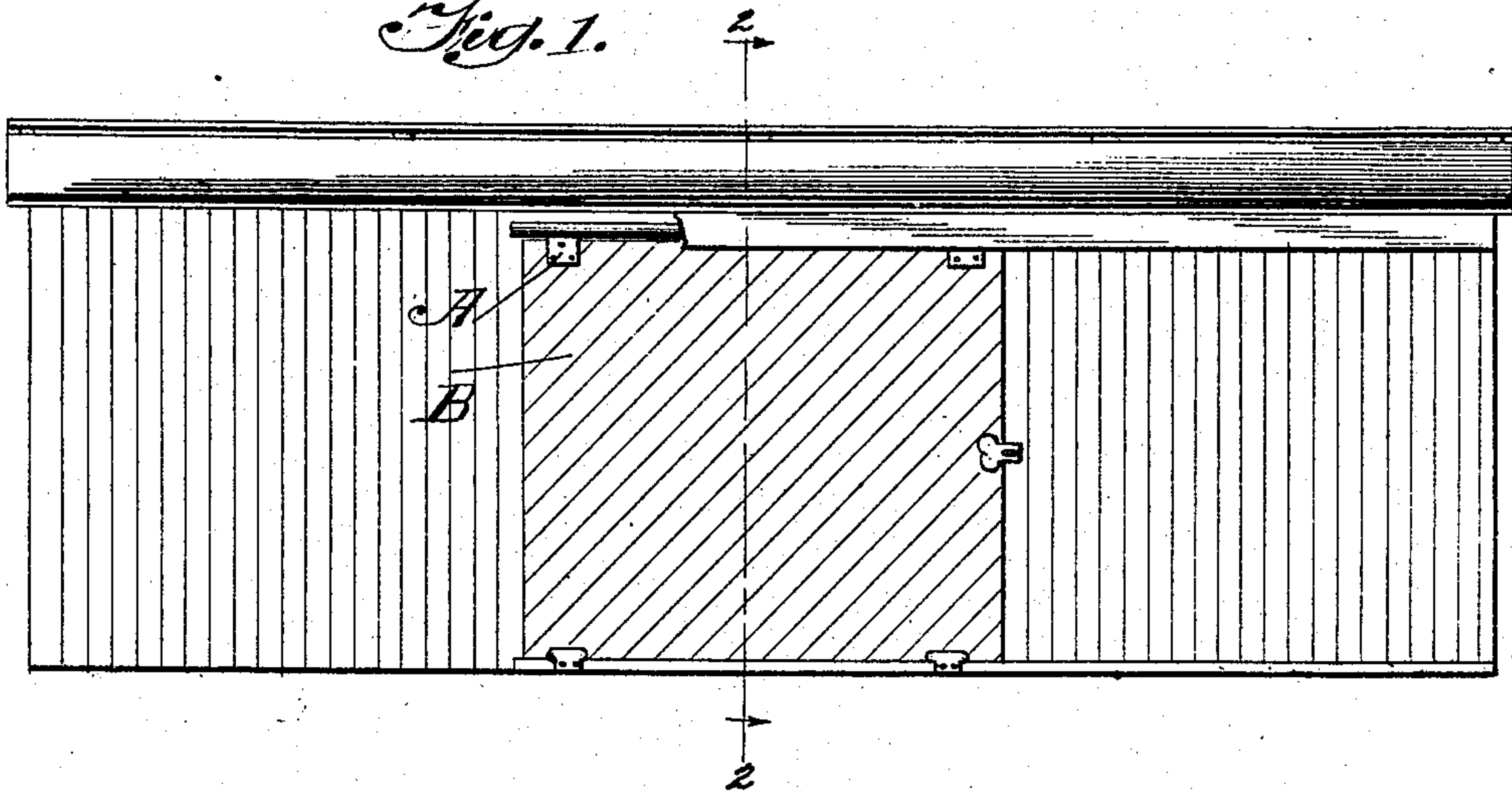
PATENTED FEB. 14, 1905.

F. B. COOK.  
DOOR HANGER.

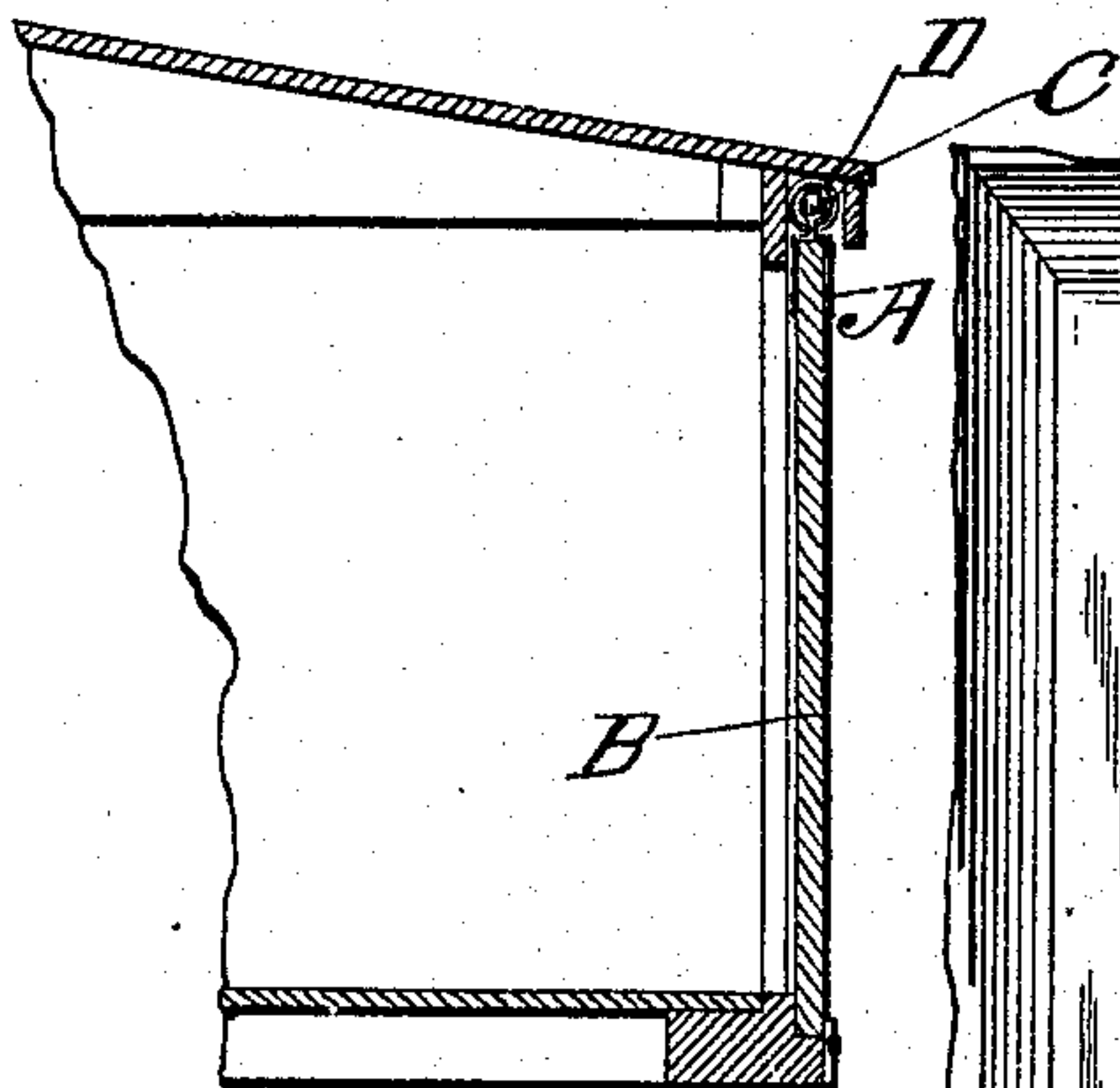
APPLICATION FILED MAY 16, 1903.

3 SHEETS—SHEET 1.

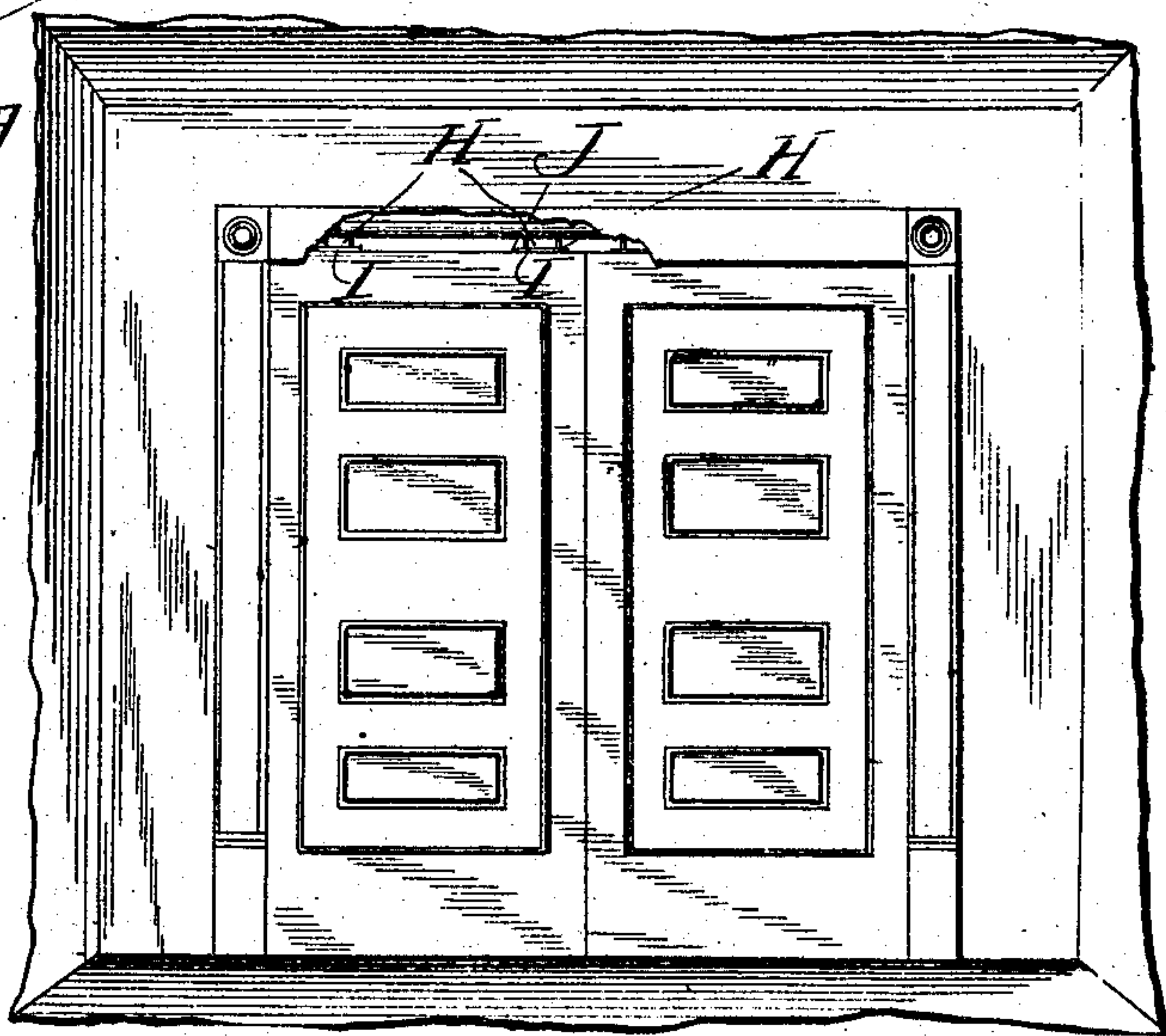
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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3 SHEETS—SHEET 2.

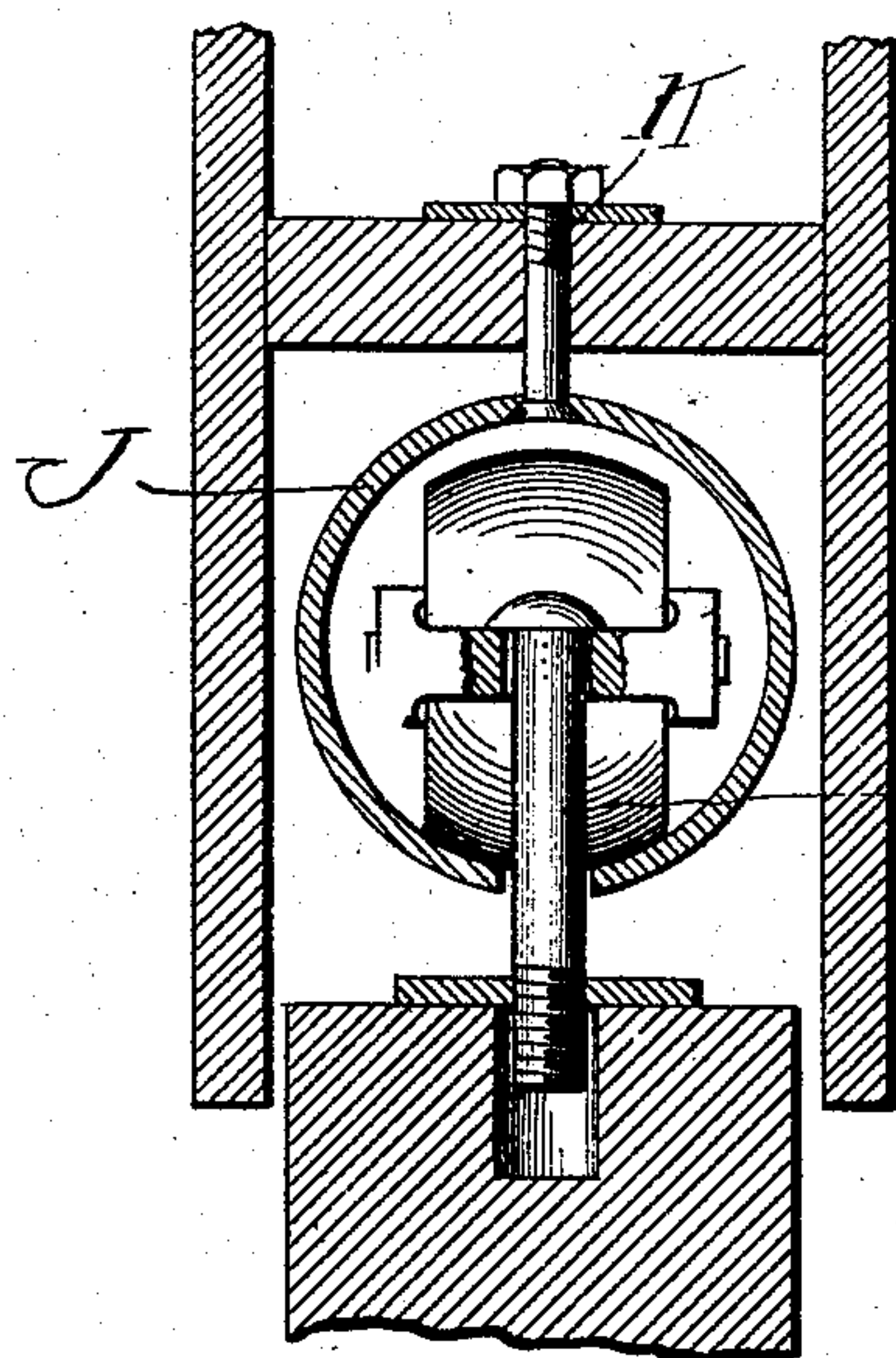


Fig. 6.

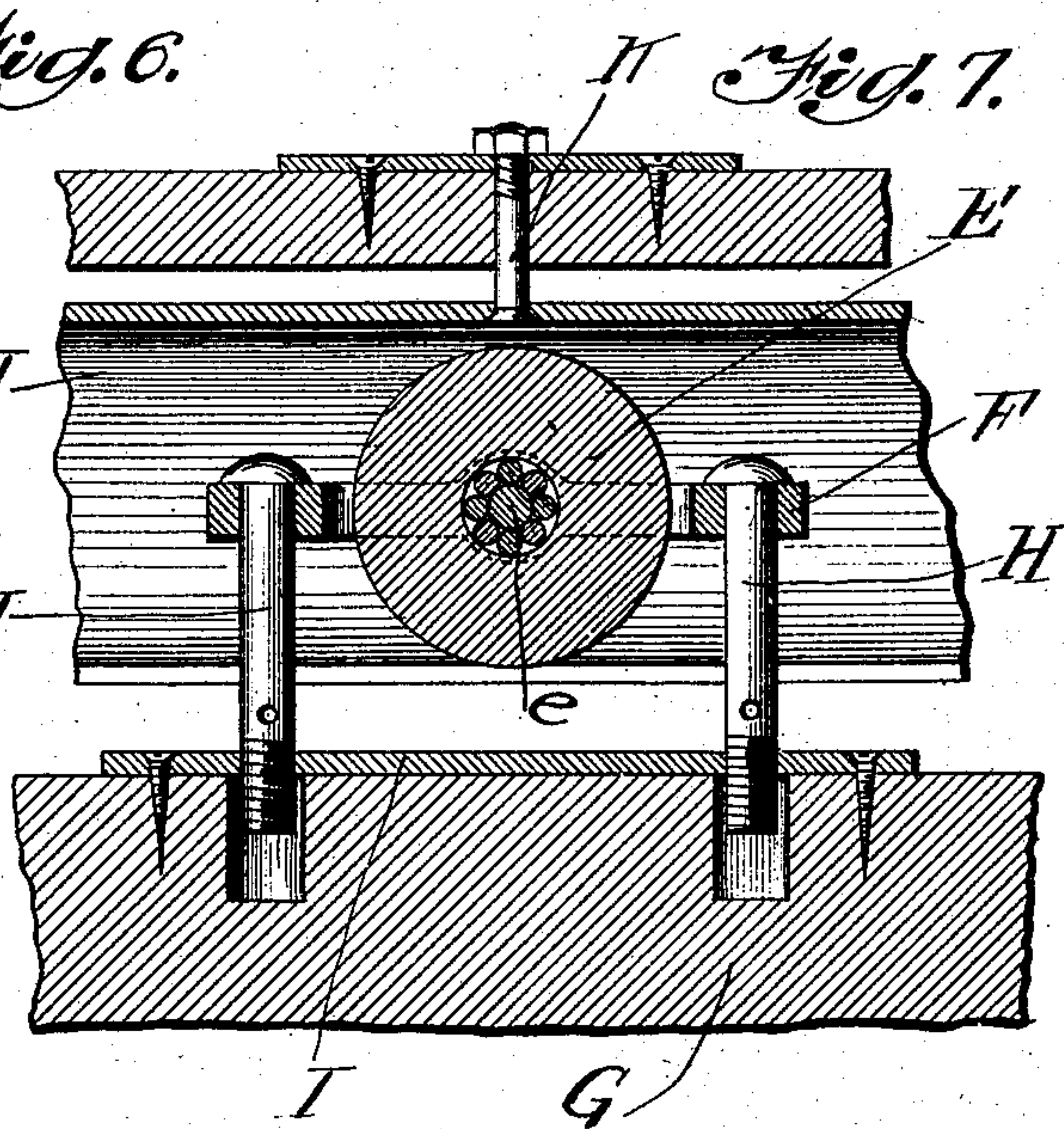


Fig. 7.

Fig. 4.

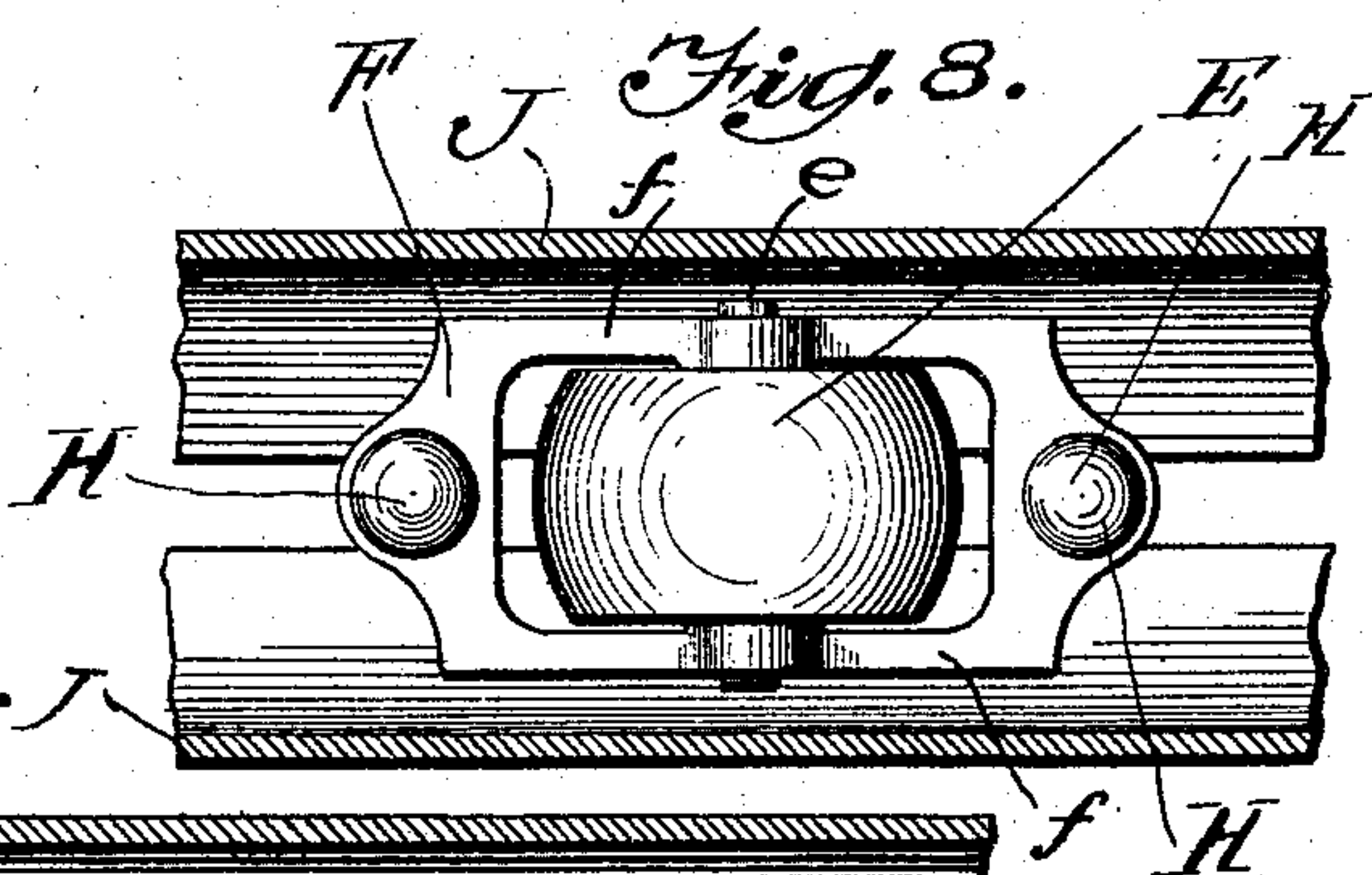
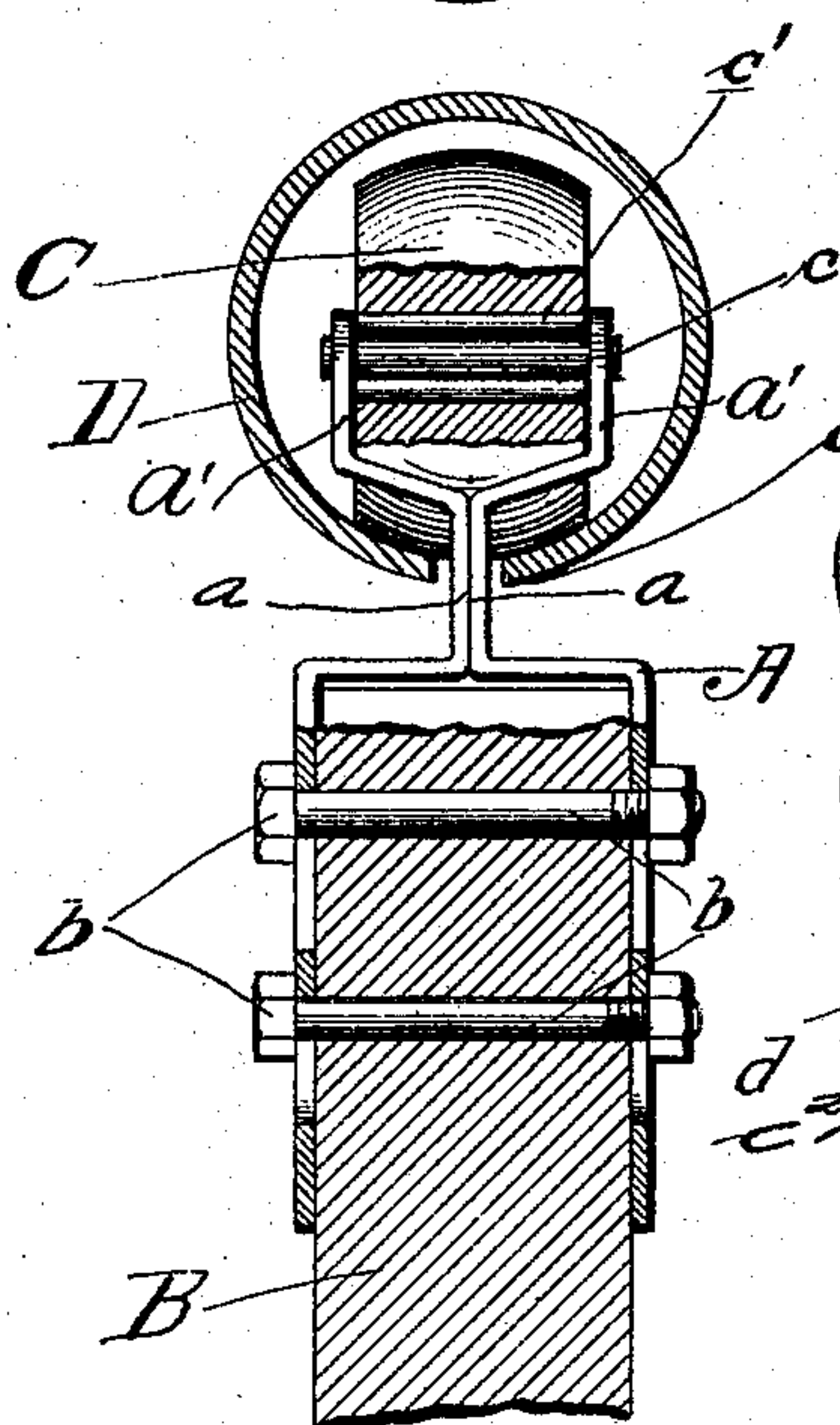


Fig. 8.

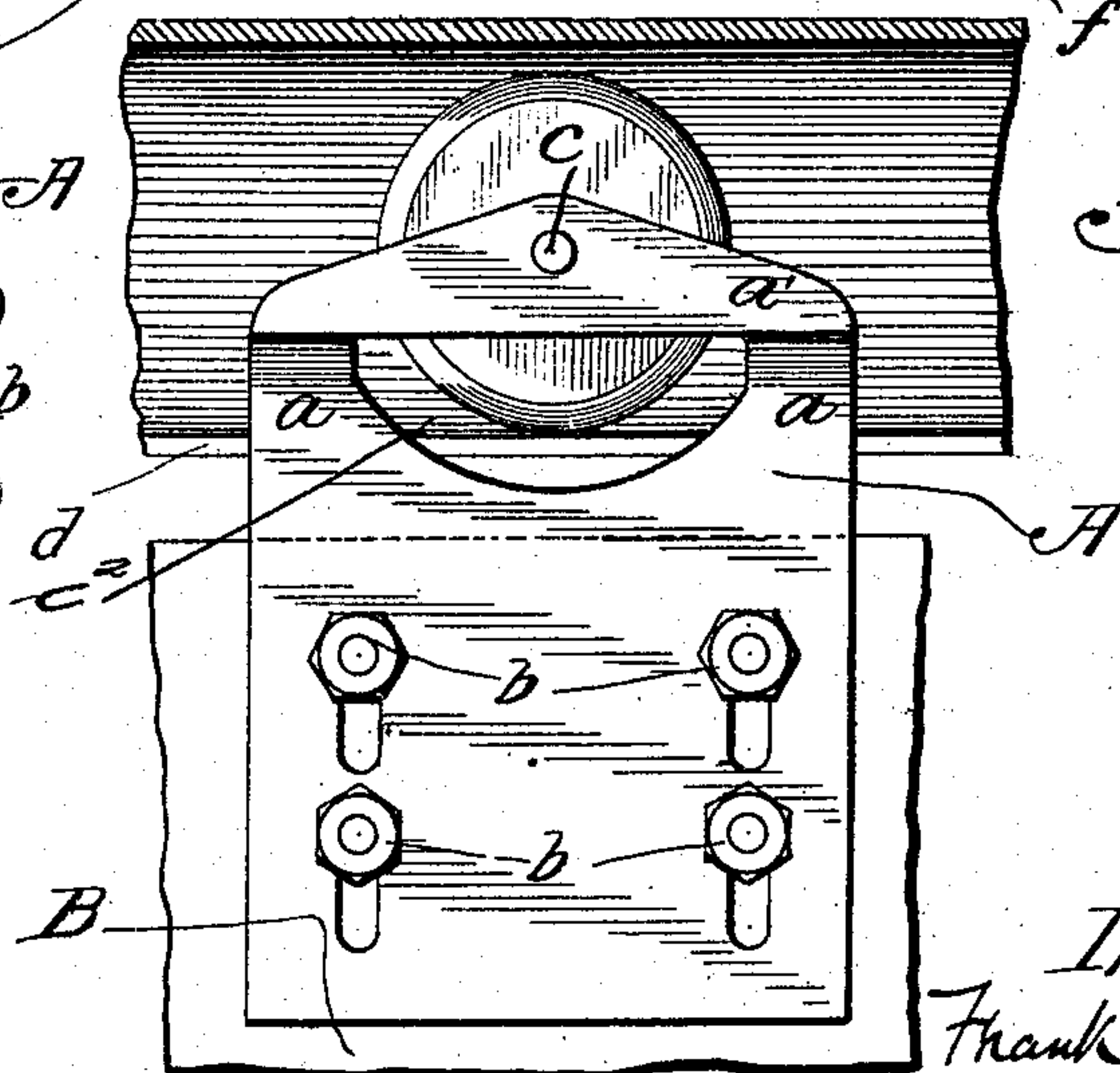


Fig. 5.

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# UNITED STATES PATENT OFFICE.

FRANK B. COOK, OF CHICAGO, ILLINOIS.

## DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 782,491, dated February 14, 1905.

Application filed May 16, 1903. Serial No. 157,347.

*To all whom it may concern:*

Be it known that I, FRANK B. COOK, a citizen of the United States of America, and a resident of Chicago, Cook county, Illinois, have  
5 invented a certain new and useful Improvement in Door-Hangers, of which the following is a specification.

My invention contemplates an improved door-hanger of that type in which one or more  
10 rolls or wheels are arranged to travel back and forth within a tubular track or way.

Generally stated, the object of my invention is to provide a simple and highly-efficient hanger of the foregoing character.

15 A special object is to provide an improved construction and arrangement which will obviate the necessity of using centrally-divided rolls in a hanger of this type.

It is also an object to provide certain details and features of improvement tending to increase the general efficiency and serviceability of a door-hanger of this particular character.

In the accompanying drawings, Figure 1 is  
25 a side elevation of a car having a door provided with my improved hangers. Fig. 2 is a vertical cross-section on line 2 2 in Fig. 1. Fig. 3 illustrates a pair of parlor-doors provided with my improved hangers. Figs. 4  
30 and 5 are respectively an enlarged cross-section and a side elevation of the improved hanger which I employ in connection with car-doors. Figs. 6, 7, and 8 are respectively an enlarged cross-section, an enlarged longitudinal  
35 section, and a plan of the improved hanger which I employ in connection with parlor-doors. Figs. 9, 10, and 11 are respectively a side elevation, a plan, and an end view, the latter being in vertical section, of another  
40 form of hanger.

Referring to Figs. 4 and 5, my improved hanger, as illustrated, comprises a hanger-body A, consisting of a couple of either cast or pressed metal plates  $a$  and  $a'$ . These plates  
45 are so bent or formed as to have their lower portions embrace the door B and also so as to have their upper portions embrace the hanger-roll C. Bolts  $b$  are employed for both holding the plates together and clamping the  
50 hanger to the door. Preferably the roll is mounted upon a pin or axle  $c$ , which has its

ends mounted in the upper embracing portions of the hanger-body. In order to reduce friction, antifriction-rolls  $c'$  are interposed between this axle and the inner surface of the  
55 hanger-roll. As illustrated, the hanger-body is provided at each side with an opening  $c^2$ , through which the tread of the roll projects. In this way the tread of the roll is exposed at each side to an extent sufficient to enable  
60 it to roll upon a slotted track or way. For example, the slotted track or way consists of the slotted tube or tubular member D, which is suitably maintained in a horizontal position and which is provided in its under side with  
65 a continuous longitudinally-extending slot  $d$ . Thus the hanger-roll is solid or undivided in character and is embraced by the hanger-body, notwithstanding that it is adapted to travel upon a slotted track or way—such, for exam-  
70 ple; as the said slotted tube or tubular member.

In Figs. 6, 7, and 8, which illustrate a construction adapted more particularly for use in connection with parlor-doors, the hanger-body consists of a yoke F, adapted to em-  
75 brace the hanger-roll E and connected with the parlor-door G by means of a couple of adjustable bolts H, screwed into a plate I, secured to the top of the door. In this way the door can be slightly raised and lowered upon  
80 the hanger. The hanger-body otherwise is substantially like the one previously described, inasmuch as it embraces the roll and has an opening at each side for exposing the tread of the roll. The tubular track or way  
85 J is similar to the one previously described, but is preferably adjustably supported by the bolts or screws K. Thus there is an adjustable connection between the door and the hangers and also between the slotted track or way  
90 and the means of support.

In Figs. 9, 10, and 11 the construction is substantially the same as in the preceding figures, with the exception that in this case two rolls are employed in tandem instead of one.  
95 The hanger-body L, as in the case of Figs. 4 and 5, is composed of two cast or pressed metal plates  $l$ , having a lower portion for attaching to a door and provided with upper portions  $l'$  at each end, adapted to embrace  
100 the two rolls M. Like the others, these rolls M are mounted on axles  $m$ , carried by the



hanger-body. Antifriction-rolls  $m'$  are interposed between the axles and the rolls, so as to reduce friction.

Thus it will be seen that I provide a very simple, serviceable, and efficient form of hanger adapted for use in connection with either parlor or car doors or any other kind of door. In each case the hanger, although it is arranged to extend through and travel along a slotted track or way, is provided with a solid or undivided roll, the weight of the door being sustained at each side of the roll rather than at its center, and in each case the hanger-body is provided at each side with a gap or opening through which the tread of the hanger-roll projects, whereby the roll is enabled to travel along the slotted track or way.

The hanger-rolls, although traveling within the tube and although they are mounted at each side, rather than in the center, have fixed points of connection with the parallel side portions of the hanger-body and are so formed as to be wholly within the bore of the tubular track or way, no peripheral portions of the rolls extending through the slot in the tube. More specifically considered, the constructions illustrated in Figs. 4, 5, 9, 10, and 11 are preferable. As thus illustrated each construction involves a pair of plates adapted to be secured flatwise together with the roll or rolls between their upper parallel portions, and in each case the plates are cut away in order to allow the roll or rolls to travel on the slotted bottom portion of the tube. In Fig. 5, as well as in Fig. 7, the openings at each side of the hanger-body through which the roll projects and engages the slotted bottom portion of the tube, are of a circumscribed character; but in Fig. 9, for example, the openings through which the rolls project and engage the slotted bottom portion of the tube are in the form of notches extending inwardly from the edges of the plate. Both in Fig. 7 and in Fig. 5 it will be seen that a yoke is provided which embraces the roll and which has its ends connected by vertical portions with the door or with the balance of the hanger-body. In Fig. 7 the yoke consists of the parallel portions  $f$ , to which the opposite ends of the axle  $e$  are rigidly secured and the united end portions of which are connected with the door through the medium of the vertical portions  $H$ . In Fig. 5 the yoke consists of the parallel portions  $a'$ , to which the opposite end portions of the axle  $e$  are rigidly secured, and the end portions of which are connected with the balance of the hanger-body through the medium of the vertical portions  $a$ . In either case it will be seen that these vertical portions are adapted to travel back and forth in the slot in front and rear of the roll. Also in Fig. 9 the two plates of which the hanger-body  $L$  is composed have vertical portions  $l$ , which connect the roll-embracing portions  $l'$  with the balance of the hanger-

body. In Figs. 5 and 9—that is to say, in both constructions—the plates have parallel upper portions, the roller means being mounted between said portions, and in each construction it is also true that the two plates are brought together to provide vertical portions adapted to extend through and travel in the slot of the tube.

What I claim as my invention is—

1. A door-hanger arrangement comprising a longitudinally-slotted tube, roller means inclosed by said tube and adapted to travel upon the slotted bottom portion thereof, a hanger-body made in halves, and suitable axle means supporting the roller means and mounted at opposite ends on the two halves of the hanger-body, said halves consisting of two metal plates provided with separated parallel upper portions, said roller means being mounted between said parallel portions, and said plates being brought together to provide vertical portions adapted to extend through and travel in the slot of said tube.

2. A door-hanger arrangement comprising a longitudinally-slotted tube, roller means inclosed by said tube and traveling upon the slotted bottom portion thereof, a hanger-body provided with a yoke embracing said roller means, and suitable axle means supporting the roller means and mounted at opposite ends upon the side portions of said yoke, vertically-disposed portions rigid with the ends of said yoke and adapted to extend through and travel back and forth in the slot in front and rear of said roller means, whereby space is afforded below the yoke and between the said vertical portions to permit the roller means to engage the tube.

3. A door-hanger arrangement comprising a longitudinally-slotted tube, roller means inclosed within said tube and adapted to travel upon the slotted bottom portion thereof, a hanger-body composed of complementary halves, and axle means supporting the roller means and mounted at opposite ends upon the two halves of the hanger-body, said halves comprising two plates provided with separated parallel upper portions constituting a yoke embracing said roller means, each plate being formed with a circumscribed opening to permit said roller means to engage the inner surface of the said tube, and the two plates being bent together to provide vertical portions rigid with said yoke and adapted to travel back and forth in the slot in front and rear of said roller means, the lower separated portions of the plates being adapted to receive and hold the upper portion of a door between them.

Signed by me at Chicago, Illinois, this 12th day of May, 1903.

FRANK B. COOK.

Witnesses:

CHARLES HICKOK,  
WM. A. HARDERS.