

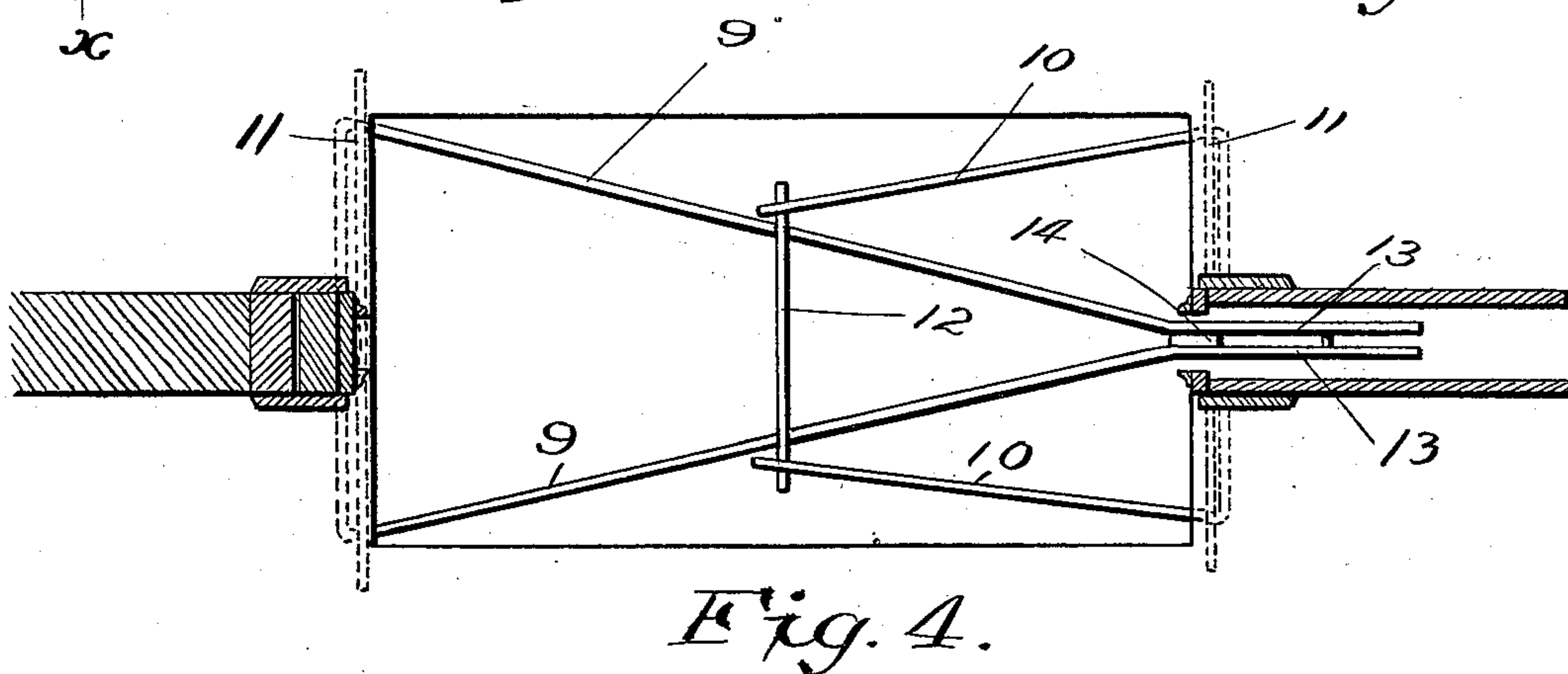
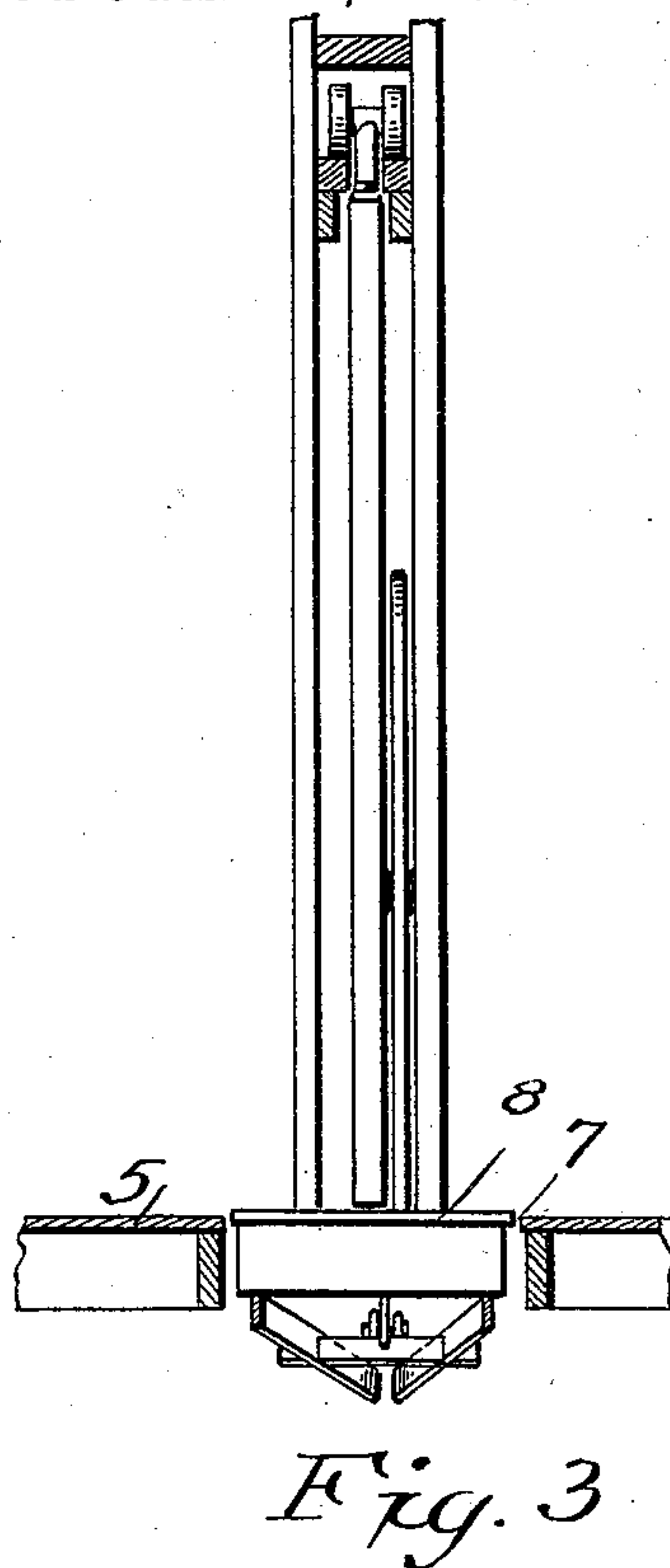
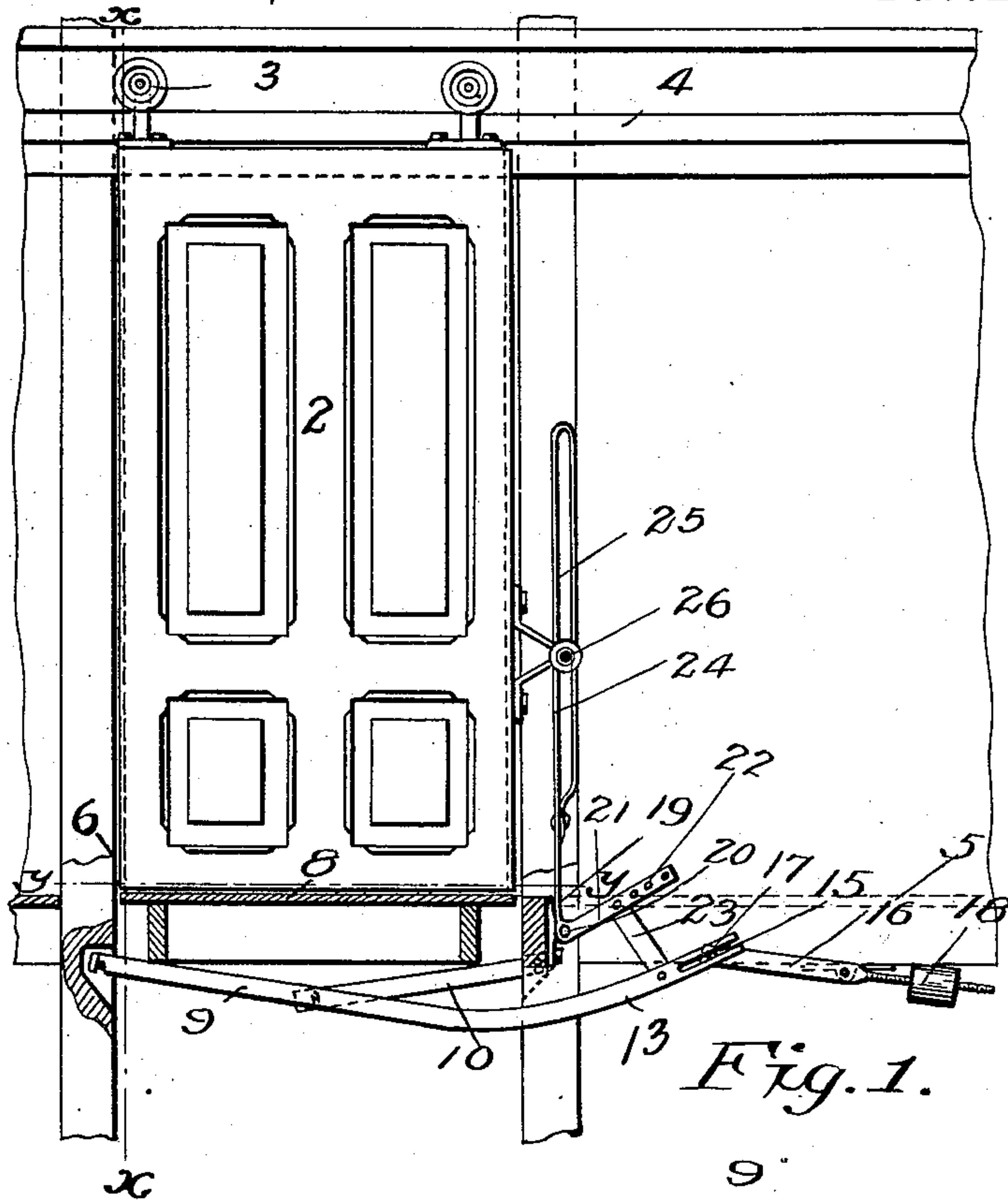
(No Model.)

2 Sheets—Sheet 1.

B. RASMUSON.
AUTOMATIC DOOR OPENER.

No. 532,581.

Patented Jan. 15, 1895.



Witnesses:
C. E. VanDorn.
W. E. Gooley

Inventor:
Borre Rasmussen
By Paul & Hawley
his attorneys

(No Model.)

2 Sheets—Sheet 2.

B. RASMUSON.
AUTOMATIC DOOR OPENER.

No. 532,581.

Patented Jan. 15, 1895.

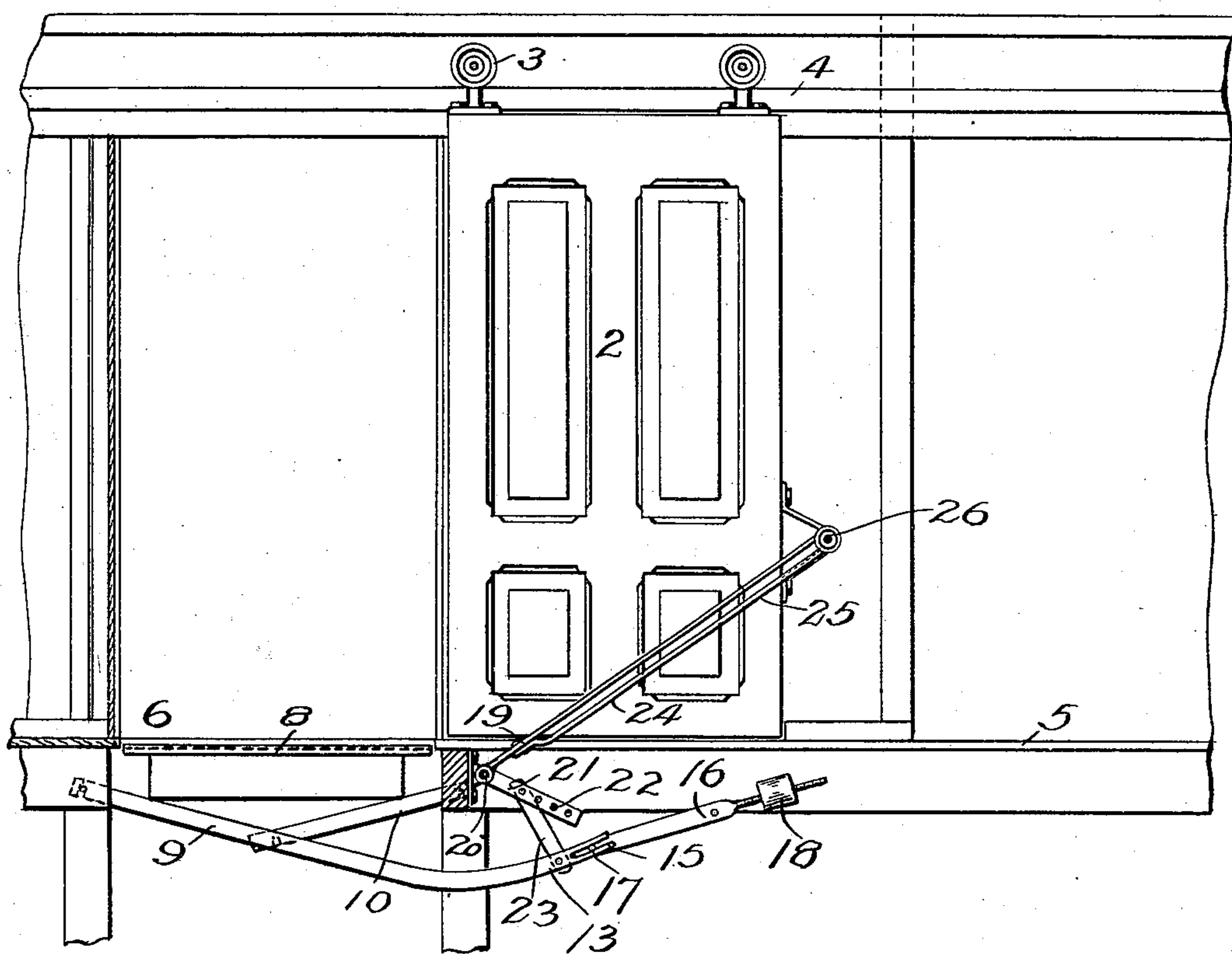


Fig. 2.

Witnesses:
C. E. VanDoren.
W. E. Gooley

Inventor:
Borre Rasmuson.
By Paul Hawley
his Attorneys.

UNITED STATES PATENT OFFICE.

BORRE RASMUSON, OF AITKIN, ASSIGNOR OF ONE-HALF TO CARL ULSTEEN,
OF MINNEAPOLIS, MINNESOTA.

AUTOMATIC DOOR-OPENER.

SPECIFICATION forming part of Letters Patent No. 532,581, dated January 15, 1895.

Application filed June 11, 1894. Serial No. 514,256. (No model.)

To all whom it may concern:

Be it known that I, BORRE RASMUSON, of the city of Aitkin, Aitkin county, State of Minnesota, have invented a certain new and Improved Automatic Door-Opener, of which the following is a specification.

My invention relates to means for automatically opening a door as a person approaches the same, and the object which I have in view is to provide means whereby as a person steps upon the floor near a closed door said door will be moved back out of the way without other effort on the part of the person. Further, to provide means whereby the door will be held back until the person has passed entirely through the door way.

A further object is to provide a door and door opening mechanism which may be operated from either side of the single door, and further, to greatly simplify the construction of such devices and to render the same not only adjustable to different doors but also more durable.

My invention consists in general in an automatic door opener of the construction and combination of parts all as hereinafter described and particularly pointed out in the claims.

The invention will be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal and vertical section showing a door and a device embodying my invention applied thereto the door being closed across the doorway. Fig. 2 is a similar view showing the door open. Fig. 3 is a transverse vertical section on the line $x-x$ of Fig. 1. Fig. 4 is an enlarged plan view on the line $y-y$ of Fig. 1.

In the drawings I have shown a section of wall and a sliding door. The door 2 is of any suitable form and is supported upon the rollers 3 adapted to run on the track 4, which track is preferably horizontal.

5 represents the floor line of the room and 6 the doorway which is to be closed by the door 2.

In the floor 5 between the two rooms and beneath the lower edge of the door I provide an opening 7 adapted to receive the platform 8, which platform is preferably of the full

length of the lower edge of the door, so that a person may stand thereon when the door is closed without being too close to the door.

The door is adapted to slide back within the space provided in the wall, moving easily on the rollers or wheels.

The platform 8 is supported upon the levers 9 and 10 pivoted on cross-rods 11 and connected at the middle by a rod or pin 12, the whole being similar to a scale-platform. The levers 9 join at their rear ends and are extended in the straight arms 13 connected by one or more blocks 14 and provided with the slots 15. (See Fig. 1.) The rear end or ends of the levers 9 are preferably curved upwardly, as shown to occupy as little space as possible and to be engaged by the forward end of the pivoted lever 16 which enters between the arms 13, and is provided with the pivot pin 17. This lever carries on its end an adjustable weight 18 which may be adjusted by means of the screw-thread or a set screw as desired, the weight being adapted to counter-balance the weight of the platform and the levers.

Upon the cross beam 19 in the floor I provide a box or boxes 20 for the bell crank 21. The lower arm of this bell crank is preferably provided with several holes 22 to receive a pivot pin by which the connecting link 23 is secured, the link extending to a like connection with the rear end of the platform lever 9. The upper arm 24 of the bell crank is much longer than the lower arm and is preferably made of a strip of iron formed in a loop, the long slot 25 in the same containing a fixed pin 26 provided on the door. As a person steps upon either side of the platform 8 the levers which support the platform and the platform will be depressed thereby drawing down the bell crank into the position shown in Fig. 2 and thus moving the door back into the wall to open the passage-way. Moreover, the door will be held open while the person is passing through the door-way, as the platform 8 is of sufficient width to carry a person until entirely out of line with the door. When the person steps off the platform the weight 18 acting on the levers and thus on the bell crank, will cause the door to return to place.

My device is rendered applicable to doors of various weights and sizes by means of the adjustability of the counterbalance weight and the connection of the link 23 at either
5 of the points on the lever and the bell crank.

In order to show my device distinctly it is deemed necessary considerably to enlarge the parts in proportion to the door, showing the same as occupying considerable space be-
10 neath the floor, while as a matter of fact the platform has a movement which is often less than one-half an inch, and all the parts are contained within the space between the floor and the ceiling beneath.

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

1. In an automatic door opener, the combination, with a sliding door, of a suitable plat-
20 form, supported upon levers 9 and 10, each having one end pivoted on a cross-rod 11, a rod 12 passing through the levers 9 and having its ends connected to the free ends of said levers 10, a bell crank 24 suitably pivoted and
25 having one arm connected to said sliding door, and an adjustable link 23 connecting the lower arm of said bell crank 24 and the free ends of said levers 9, substantially as described and for the purpose set forth.

2. In an automatic door opener, the combi- 30
nation, with a sliding door, of a platform 8 supported upon levers 9 and 10, said levers being pivoted at one end on cross-rods or pins, and the free ends of levers 10 being connected
35 by a rod passing through levers 9, the arrangement being similar to a scale platform, a bell crank 24 suitably pivoted and having one arm slotted, and connected to said sliding door by
40 a pin said pin being adapted to slide in said slot when the door is opened or closed, an adjustable link 23 having one end pivoted in
one of a series of holes in the lower arm of said bell crank 24, and the other end pivoted
45 to the free ends of said levers 9, a pivoted lever 16 having one end connected to said levers 9 by the pivot pin 17, and its other end bearing
an adjustable weight 18, whereby said
levers 9 are returned to their original position
and the door closed when the weight is re-
50 moved from said platform, substantially as described.

In testimony whereof I have hereunto set my hand this 17th day of May, A. D. 1894.

BORRE RASMUSON.

In presence of—

CHAS. S. YOUNG,
GEO. H. KAPP.