

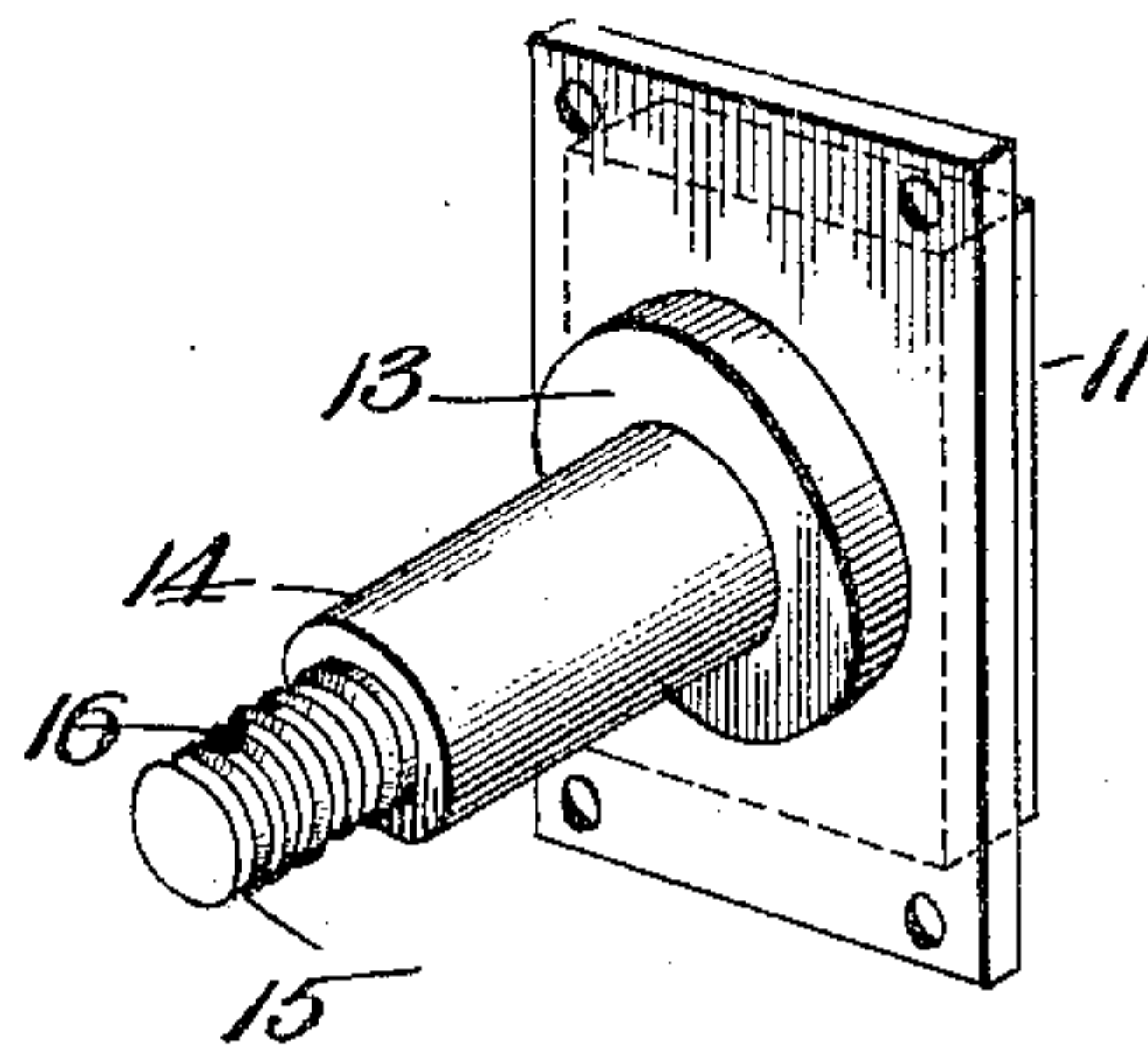
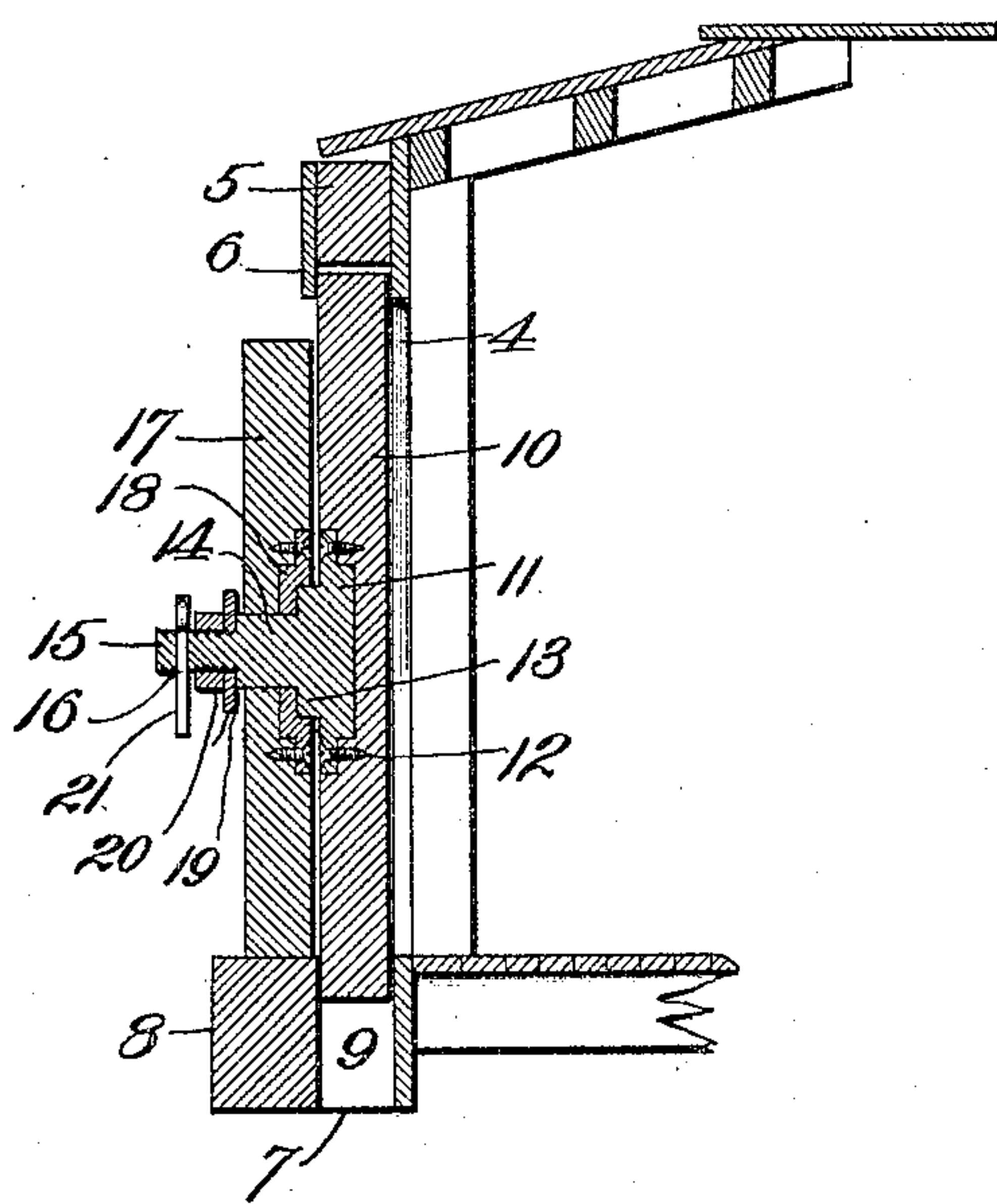
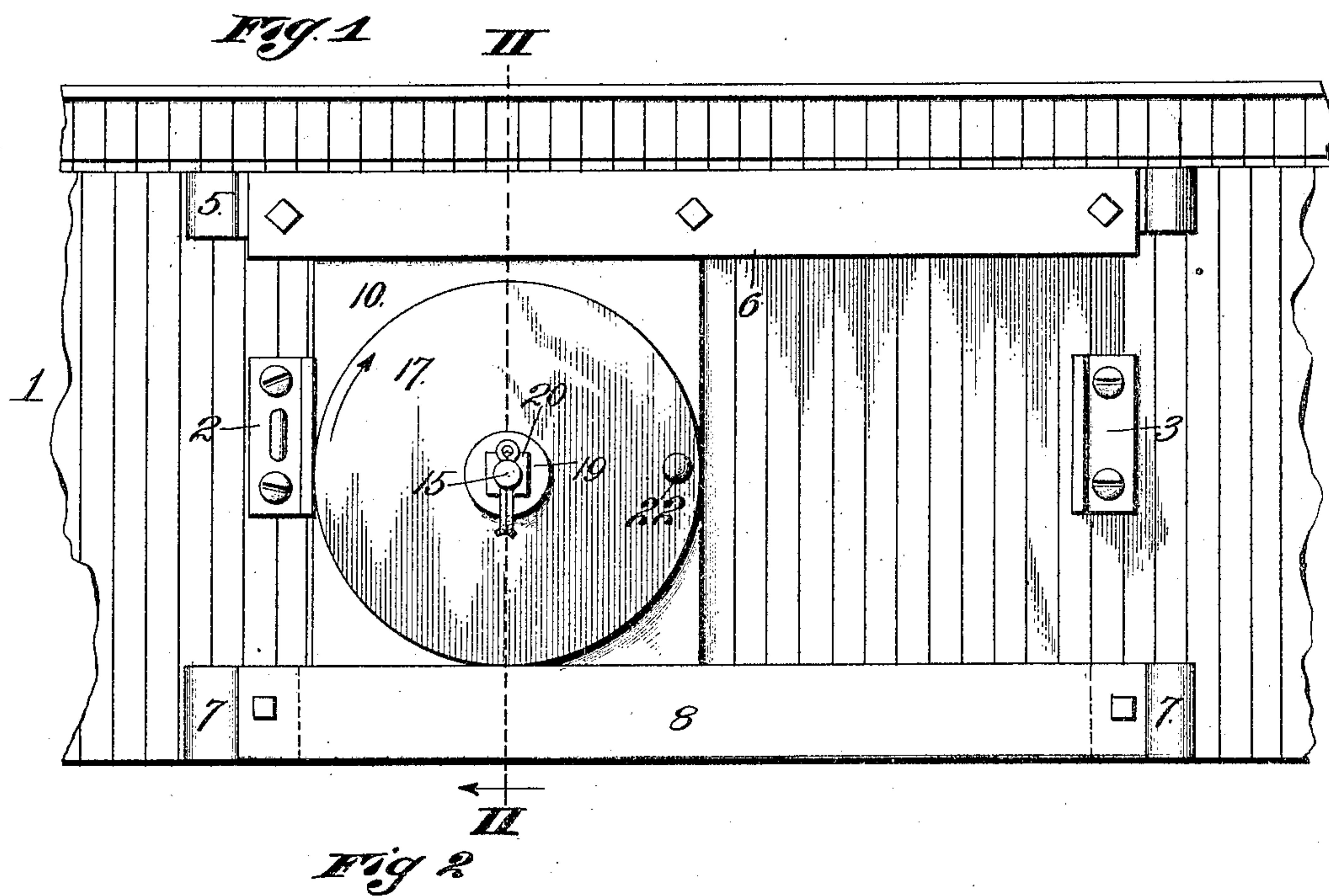
No. 791,056.

PATENTED MAY 30, 1905.

J. SWANSON.

CAR DOOR.

APPLICATION FILED APR. 27, 1904.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOSEPH SWANSON, OF KANSAS CITY, KANSAS, ASSIGNOR OF ONE-HALF  
TO WILLIAM N. HADDOCK, OF KANSAS CITY, KANSAS.

## CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 791,056, dated May 30, 1905.

Application filed April 27, 1904. Serial No. 205,258.

*To all whom it may concern:*

Be it known that I, JOSEPH SWANSON, a citizen of the United States, residing at Kansas City, in the county of Wyandotte and State of Kansas, have invented certain new and useful Improvements in Car-Doors, of which the following is a specification.

This invention relates to box-car doors, and has for its object to produce a door which can be opened or closed easily and quickly and which is of simple, strong, durable, and cheap construction.

To this end the invention consists in certain novel and peculiar features of construction and combinations of parts, as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 represents a side view of a box-car with a door embodying my invention. Fig. 2 is a section taken on the line II II of Fig. 1. Fig. 3 is an enlarged perspective view of a trunnion forming a part of the invention.

In the said drawings, 1 designates a box-car of the usual or any preferred type, and 2 and 3 abutment-brackets secured to the side of the car, bracket 2 being arranged contiguous to one vertical edge of the door-opening and bracket 3 beyond the opposite edge of the door-opening a distance about equal to the width of the latter, which is identified by reference character 4. Secured to the outer side of the car above the door-opening is a bar 5, provided at its outer side with a depending guide-flange 6, and secured vertically below the ends of bar 5, below the door-opening, are blocks 7, connected rigidly by the guide-bar 8, so as to form between it and the box-car a slot 9.

10 is a rectangular door of somewhat greater area than opening 4 and guided in proper relation to the car by flange 6 and bar 8.

A bracket 11, step-jointed, by preference, into the outer side of door 10 and centrally thereof and secured rigidly in place by screws 12 or their equivalents, is provided with a circular boss 13 at its outer side and with a cylindrical trunnion 14, terminating in a threaded stem 15, of smaller diameter, by prefer-

ence, than the trunnion, said threaded stem 50 being provided with a diametric hole 16.

17 is a large wheel or roller resting upon guide-bar 8, which constitutes a track for said roller as well as a guide for the door, and step-jointed in the inner side of and secured rigidly 55 to said wheel or roller is a bearing-bracket 18, said bearing-bracket, as well as the wheel or roller, being journaled on trunnion 14. It is also journaled upon the boss 13 and bears against the outer side of the latter, so as to 60 avoid friction between the proximate faces of the door and wheel or roller. The wheel or roller is prevented from moving outwardly upon the trunnion by a washer 19, secured upon the stem 15 by a nut 20, and the nut is 65 prevented from working off the stem by the spring cotter or key 21, extending through hole 16 of the stem.

The door is adapted to be locked in its closed position by any suitable connection (not 70 shown) with bracket 2, and when unlocked is opened by grasping handle 22 or its equivalent and pushing it in the direction indicated by the arrow, Fig. 1, which action causes the wheel or roller to travel along track 8 until 75 arrested by the contact of the door with abutment-bracket 3. The door is reclosed by revolving the wheel in the opposite direction, as will be readily understood. In the opening or closing movements of the door the weight 80 of the latter will usually maintain it in a vertical position; but to guard against any tendency of the door to rotate with the wheel or roller due to undesirable friction between the latter and the trunnion I provide the bar 5, 85 against which the upper edge of the door will strike should it have any tendency to revolve.

While I have illustrated and described the invention as a door for cars, it is to be understood that the invention is intended to cover 90 shutters for any purpose—such, for instance, as shutters for window-openings in warehouses and other buildings.

From the above description it will be apparent that I have produced a car door or shutter embodying the features of advantage enumerated as desirable in the statement of invention and which is obviously susceptible of

modification in minor particulars without departing from the principle of construction involved.

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

1. The combination with a car provided with a door-opening, a horizontal bar 5 above and outward of the said opening, a horizontal bar 10 below the door-opening and outward of bar 5, a flange 6 for and depending below bar 5, and brackets at the opposite sides of the door-opening in the vertical plane of bar 5, of a door of greater surface area than said opening and disposed between the outer side of the car and flange 6 and bar 8, and a wheel or roller having a journaled relation with the door and resting upon bar 8, all arranged substantially as described.
2. The combination with a car provided with a door-opening, a horizontal bar 5 above and

outward of the said opening, a horizontal bar below the door - opening and outward of bar 5, a flange 6 for and depending below bar 5, and brackets at the opposite sides of the door-opening in the vertical plane of bar 5, of a door of greater surface area than said opening and disposed between the outer side of the car and flange 6 and bar 8, a bracket 11 secured to the door and provided with a circular shoulder 13 and an outwardly - projecting trunnion 14, a wheel or roller journaled on said trunnion and resting on the bar 8, and provided at its inner side with a bracket step - jointed on shoulder 13, and means for securing the wheel or roller reliably upon said trunnion.

In testimony whereof I affix my signature in the presence of two witnesses.

JOSEPH SWANSON.

Witnesses:

H. C. RODGERS,  
G. Y. THORPE.