

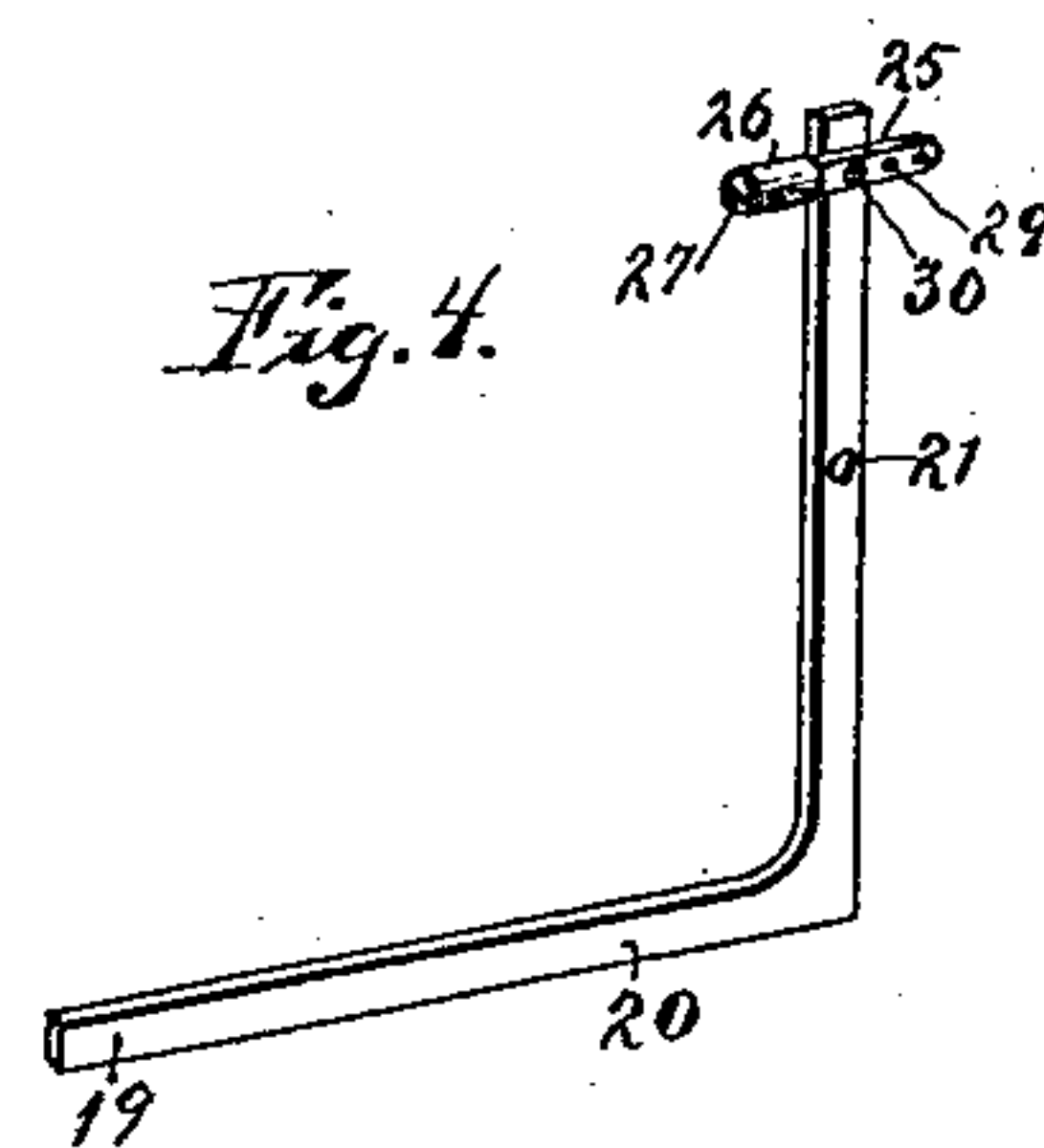
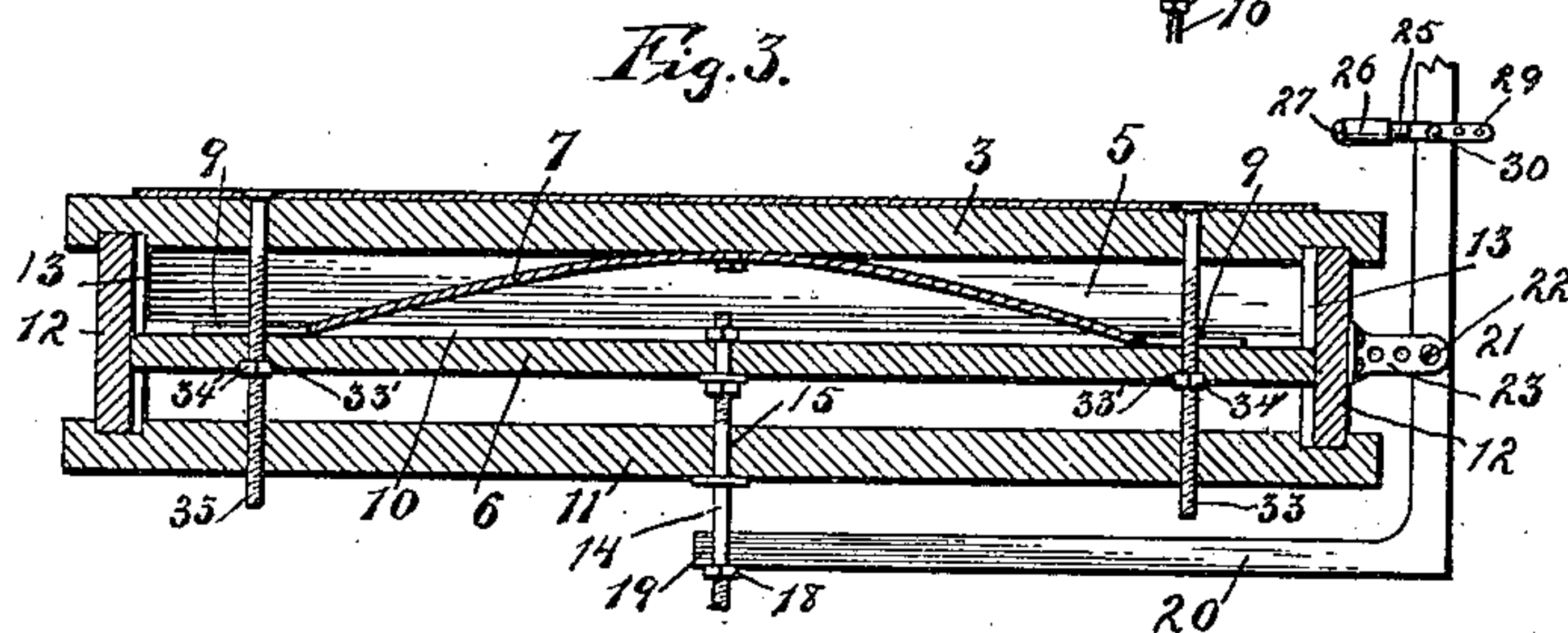
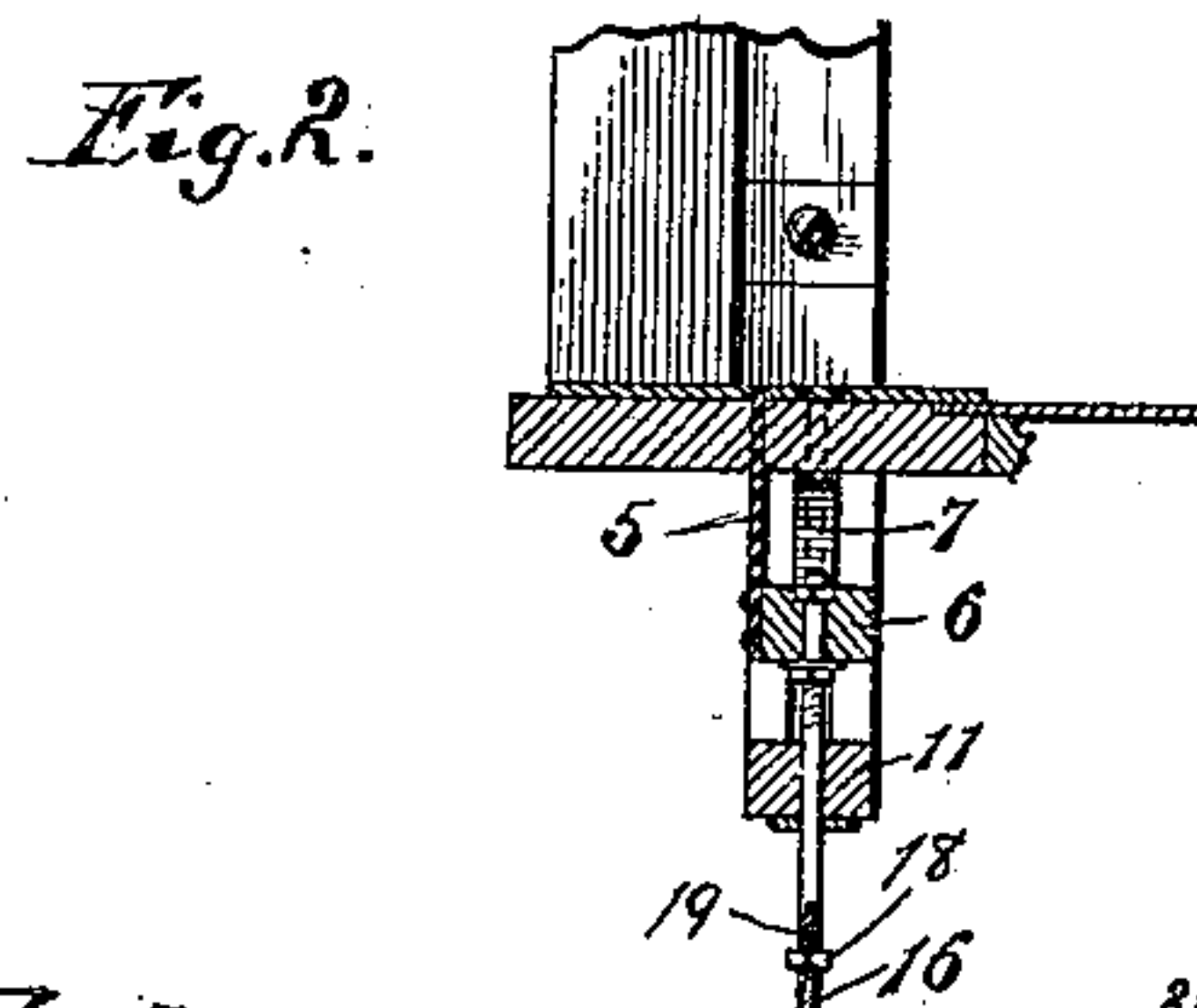
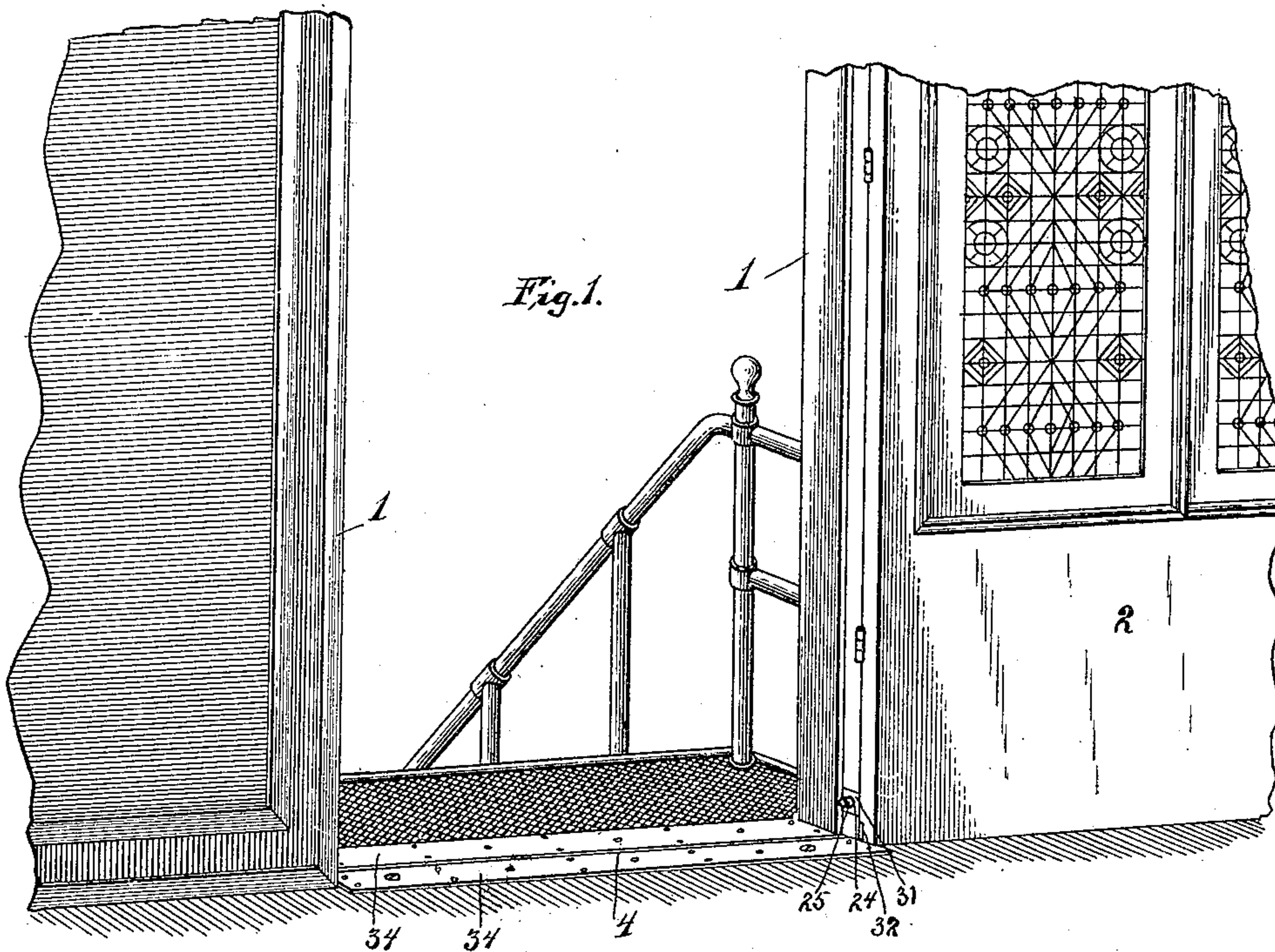
No. 617,662.

Patented Jan. 10, 1899.

C. R. SOWDEN.  
AUTOMATIC THRESHOLD.

(Application filed June 21, 1897.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

CHARLES R. SOWDEN, OF BASIN, MONTANA.

## AUTOMATIC THRESHOLD.

SPECIFICATION forming part of Letters Patent No. 617,662, dated January 10, 1899.

Application filed June 21, 1897. Serial No. 641,634. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES R. SOWDEN, of Basin, in the county of Jefferson and State of Montana, have invented certain new and useful Improvements in Automatic Thresholds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to automatic thresholds; and the object in view is to provide means for preventing the admission of water, snow, dirt, &c., under and around the edges of doors and closures, the said means being automatic in operation and thrown into action by simply closing the door, the protecting device being automatically retracted when the door is again opened.

The detailed objects and advantages of the invention will be pointed out in the course of the subjoined description.

The invention consists in an automatic threshold and operating means therefor embodying certain novel features and details of construction and arrangement of parts hereinafter specifically set forth, illustrated in the drawings, and incorporated in the claims hereto appended.

In the accompanying drawings, Figure 1 is a perspective view showing the door-frame and door with the improved threshold-strip applied thereto and adapted to be thrown partially open. Fig. 2 is a vertical section through the door-sill and the underlying frame, showing the operative parts of the mechanism. Fig. 3 is a vertical longitudinal section through the sill and underlying parts. Fig. 4 is a detail perspective view of the elbow-lever and plunger.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates the door-frame, and 2 an ordinary hinged door. For the purpose of carrying out the present invention the door-sill or threshold is provided with a longitudinal slot 4, through which operates a movable weather-strip 5 of a length equal to the distance between the door-jambs. This strip 5 is preferably composed of rubber

or some analogous resilient material and is mounted upon the carrier-bar 6, to which the bottom edge of the strip is secured in any convenient manner. At one side of the strip is a bow-spring 7, having its ends slotted, as indicated at 9, to slidingly fit into a groove 10, formed in and extending longitudinally along the upper surface of the carrier-bar 6, said springs serving to normally depress the carrier-bar and with it the strip 5.

Arranged beneath the sill 3 and at any suitable distance therefrom is a frame-bar 11, secured at or near its ends to the sill 3 by means of vertical end pieces 12, the latter being provided upon their inner adjacent surfaces with vertical grooves 13, in which the ends of the strip 5 slidingly fit and move, said grooves thus serving to guide the strip 5. Connected to the carrier-bar 6 is a depending stem 14, which passes downward through a guide-opening 15 in the frame 11, said stem being provided at its lower end with a slotted and threaded shank 16, upon which is placed a nut 18. The slotted shank 17 receives loosely the end 19 of an elbow-lever 20, which extends beneath the frame 11 and upward at one side of the door-frame, where it is fulcrumed at the point 21 on a pin or bolt 22, carried by a bracket 23, secured for convenience to one of the end pieces 12, above referred to.

The side of the door-frame adjacent to the hinged edge of the door is provided with an opening 24, through which operates a plunger 25 in the form of a threaded bolt, provided upon one end with a screw-threaded and rotatable head 26, which extends inward through the opening 24 and which is provided in its inner end with a slot 27, adapting it to be turned by a screw-driver, and thereby adjusted with relation to the shank of the plunger, so as to cause said head to project more or less beyond the inner surface of the door-frame. The shank is provided at its outer end with a plurality of openings 29, through any one of which may be passed a pin or fastener 30, which enters the upper end of the lever 20. Secured to the inner surface of the door-frame, adjacent to the head of the plunger, is an escutcheon-plate 31, having an opening through which the plunger operates.

From the foregoing description it will be



seen that upon the closing of the door the hinged edge thereof will strike against the plunger and force the same outward, thereby rocking the lever 20, raising the stem 14, and  
5 moving the weather-strip upward, so as to cause it to either engage the bottom edge of the door, when the same is closed, or enter a rabbet 32 therein. Upon opening the door the spring acts to depress the carrier-bar 6,  
10 thereby lowering the strip 5 and restoring the operative parts of the device to their normal positions.

The frame 11 may be supported from the sill by means of two or more bolts 33, which pass  
15 through said frame and sill. The bolts 33 are threaded practically their entire length and pass through openings in the bar 6. The bar 6 on its lower side adjacent to said openings is provided with square mortises 33' to  
20 receive nuts 34' on the bolts 33, and each of the bolts is provided at its upper end with a diametrical kerf to receive a screw-driver, whereby the bolt may be turned. By turning the bolts 33 the carrier-bar 6 may be raised  
25 or lowered for correspondingly elevating and lowering the upper edge of the weather-strip, so as to bring the same into the desired relation to the rabbet in the door.

34 designates a pair of metal plates secured  
30 to the upper surface of the threshold at either side of the slot through which the weather-strip operates. The adjacent edges of said plates lie in close proximity to the movable weather-strip and prevent the threshold from  
35 wearing adjacent to said strip, thus at the same time preventing the formation of cavities in which dirt and other foreign matter may accumulate and which would interfere with the proper operation of the strip. One  
40 of the strips 34 is made of sufficient width to extend beyond the inner edge of the threshold, so as to overlap the edge of the carpet, as shown, thereby serving to hold down the edge

of the carpet adjacent the door in a manner that will be readily understood. 45

Having thus described the invention, what is claimed as new is—

1. The combination with a door-sill having a slot, of a vertically-movable weather-strip operating through said slot, a carrier-bar be- 50 neath the sill having said strip attached thereto, guides in which the ends of the bar move, revoluble bolts having their heads fitted in recesses in the upper side of the sill, nuts on said bolts beneath the carrier-bar providing 55 for the accurate adjustment of the strip, and means actuated by the door for elevating the said carrier-bar, substantially as described.

2. The combination with a door, and door-sill, of a vertically-movable weather-strip ar- 60 ranged below and operating through the sill, a strip-carrier bar arranged beneath the sill, and having recesses in its lower side, a bow-spring interposed between the sill and carrier-bar for depressing the latter, means for auto- 65 matically lifting said strip when the door is closed, nuts arranged in the recesses in the carrier-bar, and bolts passing through the sill, carrier-bar and nuts and having provision whereby they may be turned from above the 70 sill, substantially as and for the purpose specified.

3. An apertured threshold in combination with a strip movable therethrough, actuating means for the strip, and independent means 75 accessible from above the sill for adjusting the height of the strip when in a position of rest, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscrib- 80 ing witnesses.

CHARLES R. SOWDEN.

Witnesses:

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