

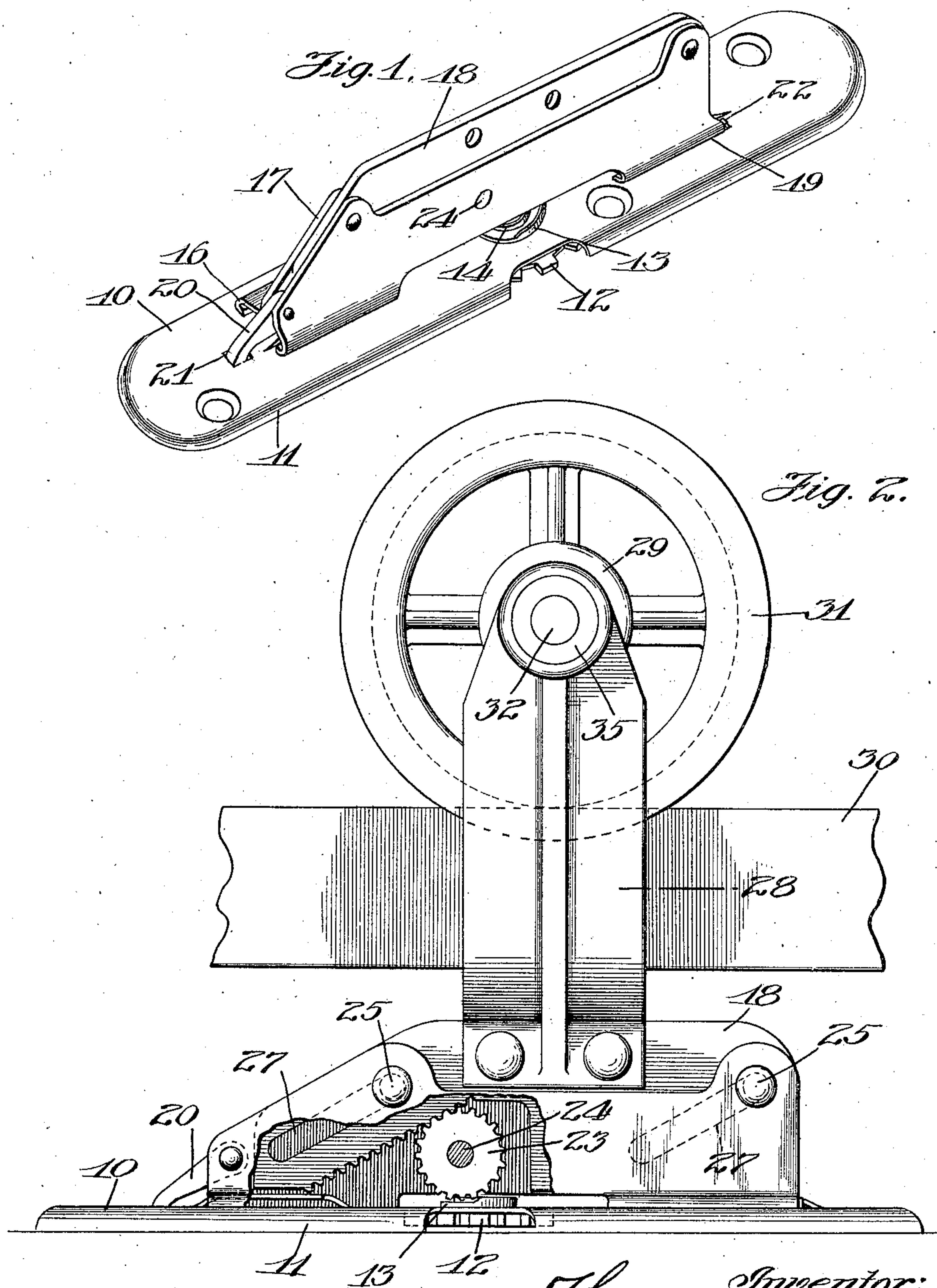
No. 844,467.

PATENTED FEB. 19, 1907.

T. C. PROUTY.  
DOOR HANGER.

APPLICATION FILED MAR. 26, 1906.

2 SHEETS—SHEET 1.



Witnesses:

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Inventor:  
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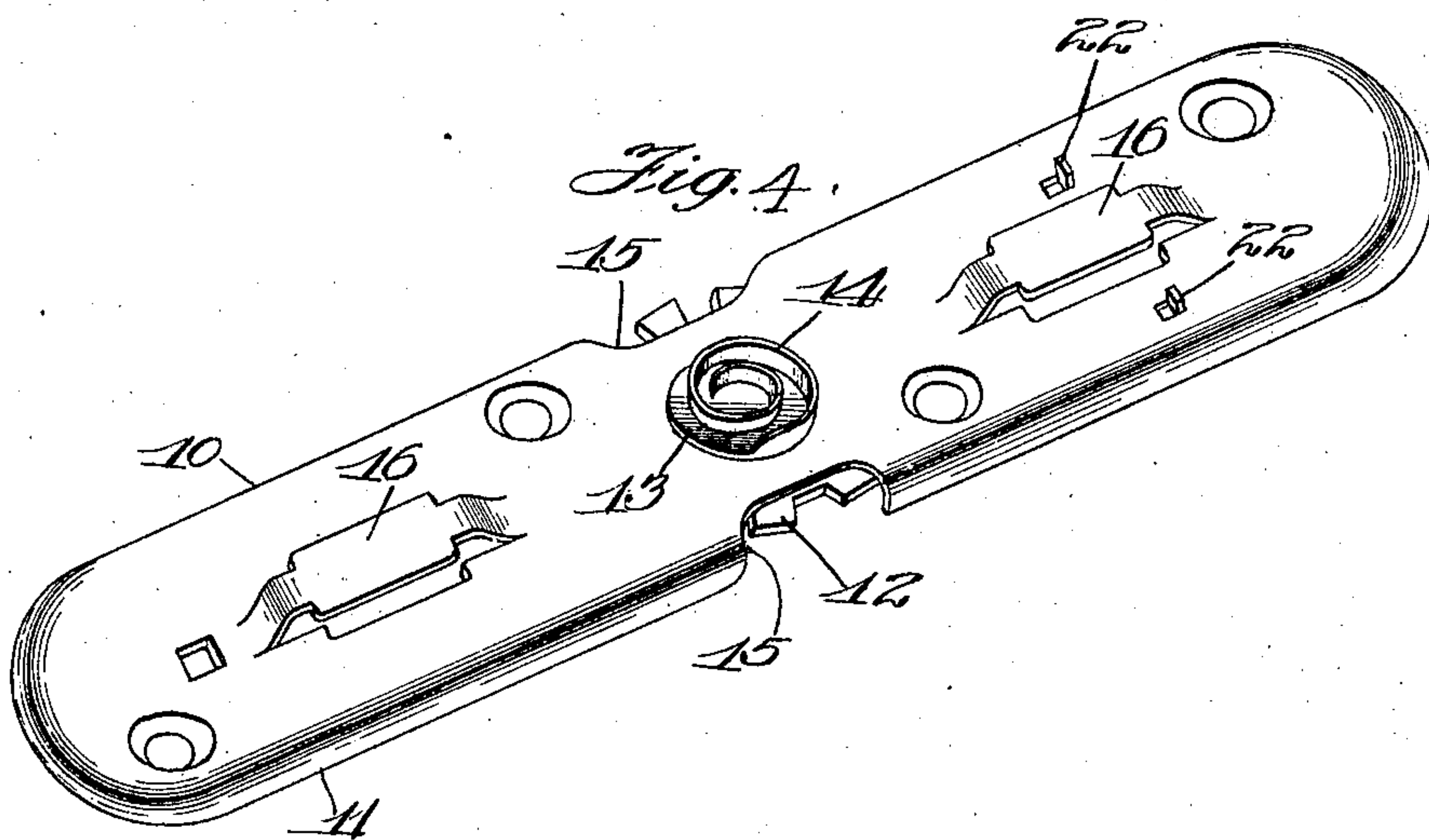
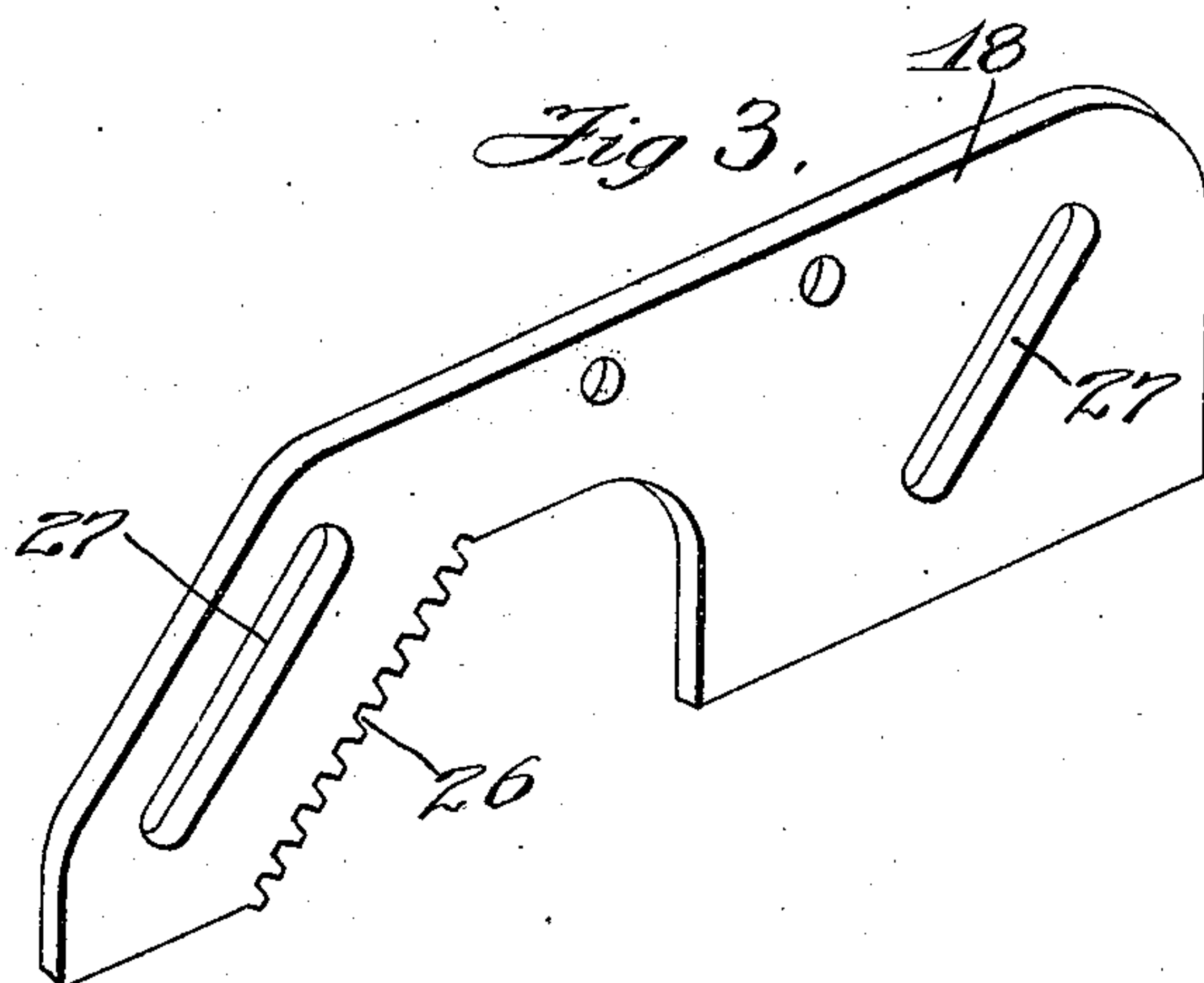
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

THEODORE C. PROUTY, OF AURORA, ILLINOIS, ASSIGNOR TO WILCOX MANUFACTURING COMPANY, OF AURORA, ILLINOIS, A CORPORATION OF ILLINOIS.

## DOOR-HANGER.

No. 844,467.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed March 26, 1906. Serial No. 308,041.

*To all whom it may concern:*

Be it known that I, THEODORE C. PROUTY, a citizen of the United States, residing at Aurora, county of Kane, State of Illinois, have  
5 invented certain new and useful Improvements in Door-Hangers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to door-hangers for  
20 use in connection with inside doors or, as they are more generally termed in the trade, "parlor-doors."

It has for its leading objects to provide improved means for effecting an adjustment  
15 of parts whereby the door carried by the hanger may be readily raised and lowered.

It is further the object of my invention to improve door-hangers of this class in various details of construction.

I accomplish these stated objects by the parts and combinations of parts hereinafter specifically described.

That which I believe to be new will be pointed out in the claims.

25 In the accompanying drawings, Figure 1 is a perspective view of the lower portion of my improved hanger. Fig. 2 is a side elevation of the complete device, a portion of the lower part of the hanger being broken away. Fig.  
30 3 is a perspective view of the plate to which the wheel-frame is attached. Fig. 4 is a perspective view of the plate that is attached to the top of a door.

Referring to the several figures of the  
35 drawings, in which corresponding parts are indicated by the same reference-numerals, 10 indicates a door-plate adapted to be attached by screws to the upper edge of a door. As shown, the edge portion of this plate is turned  
40 down to form a flange 11, which rests against the top of the door, leaving a space between the body portion of the plate 10 and the door, thus affording room for the location of a notched wheel 12, which is pivotally at-  
45 tached to the plate 10 at a point approximately the center of such plate. Upon the upper end of the pivot of this toothed wheel 12 is attached a disk 13, upon the face of which is formed a spiral 14.

50 As indicated at 15, the plate 10 is cut away at each side sufficiently to permit a portion of the edge of the wheel 12 to be exposed, so

that a person can readily turn such wheel, and with it the disk 13 and spiral 14, carried thereby.

16 indicates attaching-blocks raised slightly above the upper face of the plate 10, and in the construction shown such blocks are formed integral with the plate by suitably cutting such plate and forcing the portion 16  
60 outward. One block 16 is provided near each end of the plate 10, they being in line with each other and at the longitudinal center of said plate.

17 17 indicate a frame adapted to be re-  
65 movably attached to the upper face of the door-plate 10, such frame when so attached to the plate standing at right angles thereto. The two bars 17 17, that form this frame, are similar in construction and are spaced and  
70 held a distance apart just sufficient to receive between them without binding a plate 18, hereinafter described. Each bar 17 at its ends is extended laterally and then inwardly to form slides 19 to fit under the projecting  
75 side edges of the blocks 16 on the plate 10, whereby the frame 17 17 is firmly connected with said plate 10, but can easily be removed therefrom. This frame is provided with a pivoted dog 20 at one end, adapted to drop  
80 into a suitable hole 21 when the said frame is in proper position on the plate 10, so as to prevent accidental movement of the frame on the plate. At the opposite end the plate  
85 10 is provided with a stop or stops 22, against which the said frame abuts when it has been moved to proper position on the plate to allow the dog 20 to drop by gravity into its opening 21.

23 indicates a pinion adapted to turn freely  
90 on a suitable pivot, such as the rivet 24, that passes through the side bars 17 17, that constitute the frame described. This rivet 24 and other rivets, such as the two shown and indicated by 25, hold the two parts of the  
95 frame 17 together in proper position.

The pinion 23 referred to is so located and is of such size as to project slightly below the edge of the frame 17 17 and when the said frame is in proper position on the plate 10  
100 will be engaged by the spiral 14.

The plate 18, before referred to, that is located between the two side bars of the frame 17 17, has its lower edge cut away, as clearly



shown in Figs. 2 and 4, and one edge of the plate opposite the cut-away portion is inclined and formed with teeth, thus constituting an inclined rack 26, that meshes with the teeth of the said pinion 23. At opposite ends of the plate 18 are formed inclined slots 27, parallel with each other and parallel with the inclined rack-bar 26, through which slots the rivets 25 before mentioned pass.

28 indicates a wheel-carrying frame adapted to be attached at its lower end to the plate 18 by rivets, as shown or otherwise, and being provided at its upper end with a hub portion 29. The frame 28 is suitably shaped so that its lower end extends beneath the rail or track, as is common in devices of this kind, so that the door that is carried by the hanger will be directly beneath the rail or track.

A track-rail is shown and indicated by 30. Such track may be of any desired construction and supported by brackets of any approved pattern.

In use there will be attached to the top edge of a door ordinarily two of the plates 10, one near each edge of the door, and with the parts assembled as described and the hanger provided with a wheel running on an overhead track the door can be adjusted up or down, as required, by moving the wheel 12, such movement, of course, turning also the spiral 14, that is formed with or connected to the disk 13, that is attached to the pivot of such wheel 12. This spiral, as before stated, acts upon the teeth of the pinion 23, and such pinion is therefore turned with the turning of the wheel 12, and meshing, as it does, with the inclined rack 26, formed on the plate 18, will cause the frame 17 to move up or down on the hanger-plate 18, the limit and direction of movement being controlled by the inclined slots 27, in which the rivets 25, secured to such frame, pass, as will be well understood by those familiar with the art. The movement of this frame 17 of course moves the plate 10, to which it is attached, and the door secured thereto. It has been common to provide for the adjustment of such a door by means of a screw arranged at an incline at one end of the door-plate, and in such cases it has been necessary to provide an extra pocket in the wall for the front end of the door to be run into in order to bring the door into position where this adjusting-screw could be turned. My construction renders it unnecessary to provide any such extra pocket, for by locating the operating mechanism between the ends of the plate it is evident that such operating mechanism can be easily manipulated without having to run the forward end of the door into any such pocket. The door can be very readily removed from position without having to take the wheel from the track by simply lifting the dog 20 to free its end from the hole 21 and pulling the slides 19 out of engagement with the blocks 16, and

can be as readily replaced. In placing the door in position or in removing it the disengagement of the spiral 14 from the pinion 23 is readily accomplished, as a very slight relative movement of the plate 10 and frame 17 causes the said pinion 23 to turn slightly on its axis, and thereby pass the spiral.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a door-hanger, the combination of two members movably connected to each other, one of said members having a rack, a pinion rotatably mounted on the other of said members, said pinion being adapted to engage said rack, and means for connecting said two members with a wheel and a door, respectively.

2. In a door-hanger, the combination with a wheel-frame and a device adapted to be attached to a door, of two members interposed between said parts, said members being movably connected to each other and each connected to one of said first-mentioned parts, one of said interposed members being provided with a rack and a pinion rotatably mounted in the other of said members in position to mesh with said rack, substantially as described.

3. In a door-hanger, the combination with a wheel-frame and a plate adapted to be attached to the top of a door, of two members interposed between said wheel-frame and plate, one of said members being connected to the wheel-frame and the other to the plate and being movably connected to each other, one of said members having a rack, and a rotatable pinion on the other member meshing with said rack, substantially as described.

4. In a door-hanger, the combination with a wheel-frame and a plate adapted to be attached to the top of a door, of two members interposed between said wheel-frame and plate, one of said members being connected to the wheel-frame and the other to the plate and being movably connected to each other, one of said members having a rack, a rotatable pinion on the other member meshing with said rack, and a rotatable spiral carried by said plate and adapted to engage the teeth of said pinion, substantially as described.

5. In a door-hanger, the combination with a wheel-frame and a plate adapted to be attached to a door, of two members interposed between said wheel-frame and plate, one of said members being connected with the wheel-frame and the other with the plate, and being movably connected with each other, one of said members having a rack, a rotatable pinion on the other member meshing with said rack, a spiral pivotally attached to the upper face of said plate and adapted to engage the teeth of the pinion, and an operating device beneath said plate affixed to the pivot of said spiral, substantially as described.



6. In a door-hanger, the combination with a plate adapted to be attached to the top of a door, of a wheel-frame, a hanger-plate carried by said wheel-frame and provided with a rack, means for movably connecting said plates together, a pinion meshing with said rack, and means for turning said pinion, substantially as described.

7. In a door-hanger, the combination with a wheel-frame of a plate attached to the lower end of said wheel-frame and provided with a rack portion, another frame movably connected with said plate, a pinion carried by said last-named frame and meshing with said rack, a plate adapted to be attached to the upper edge of a door, means for connecting said last-named frame and door-plate together, and means carried by said door-plate for rotating said pinion, substantially as described.

8. In a door-hanger, the combination with a wheel-frame of a plate attached to the lower end of said wheel-frame and provided with a rack portion, another frame movably connected with said plate, a pinion carried by said last-named frame and meshing with said rack, a plate adapted to be attached to the upper edge of a door, means for connecting said last-named frame and door-plate together, a rotatable disk on said door-plate, and means carried by said disk adapted to engage the teeth of the pinion to cause said

pinion to turn on its axis when said disk is rotated, substantially as described.

9. In a door-hanger, the combination with a wheel-frame of a plate attached to the lower end of said wheel-frame and provided with a rack portion, another frame movably connected with said plate, a pinion carried by said last-named frame and meshing with said rack, a plate adapted to be attached to the upper edge of a door, means for connecting said last-named frame and door-plate together, and a rotatable spiral on said door-plate adapted to engage the teeth of the pinion to cause said pinion to turn on its axis when said spiral is rotated, substantially as described.

10. In a door-hanger, the combination with a wheel-frame and a hanger-plate secured to the lower end thereof, of a second frame movably secured to said hanger-plate by means of a rivet secured in one of said parts and passing through an inclined slot in the other part, and provided with an inclined rack parallel with said slot, a pinion journaled to said second frame and meshing with said rack, means for connecting said second frame to a door, and means for rotating said pinion, substantially as described.

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Witnesses:

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