

No. 637,416.

Patented Nov. 21, 1899.

B. L. REES.

COLLECTION INDICATOR ATTACHMENT FOR MAIL BOXES.

(Application filed Mar. 25, 1899.)

(No Model.)

Fig. 1

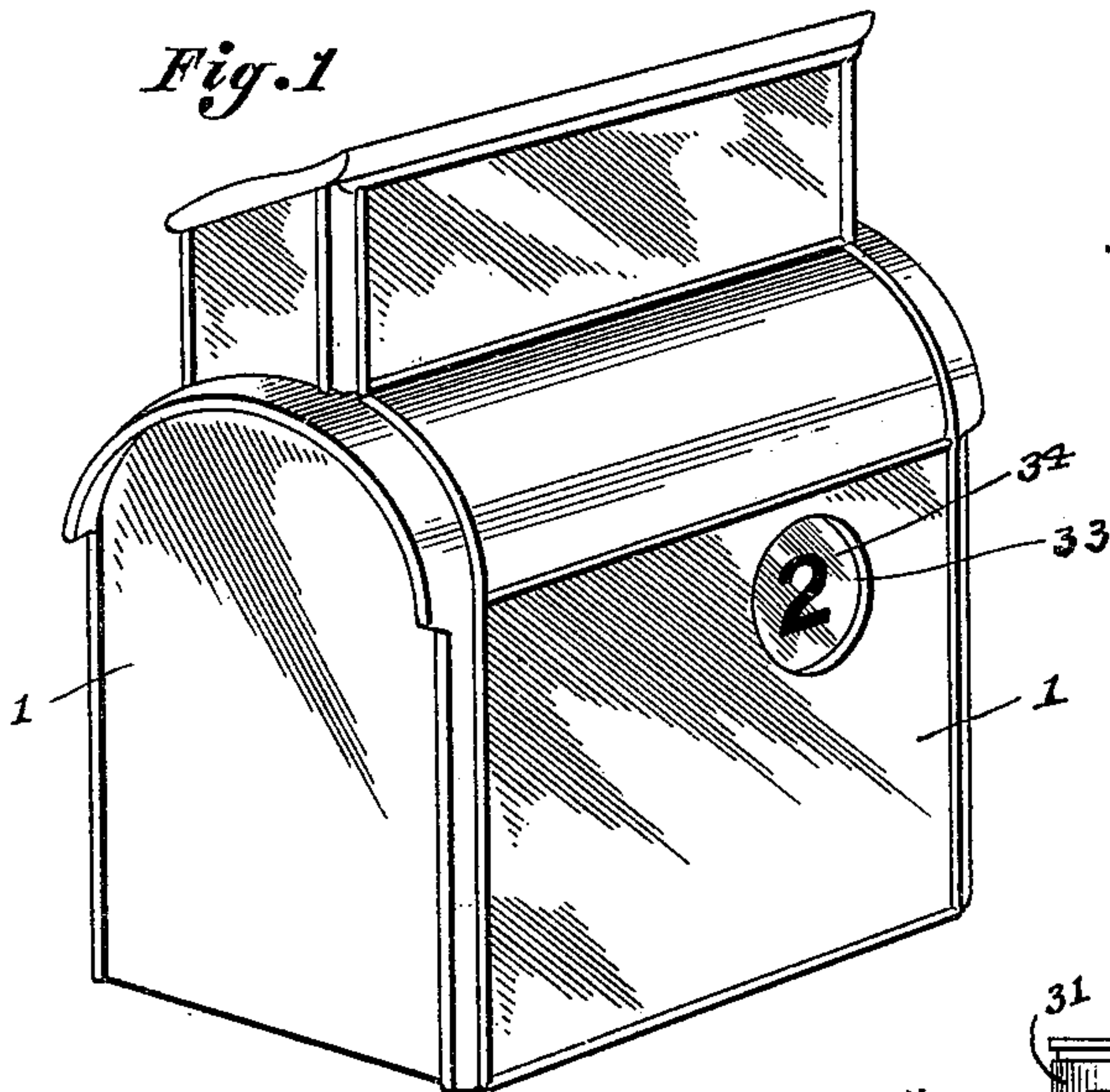


Fig. 2

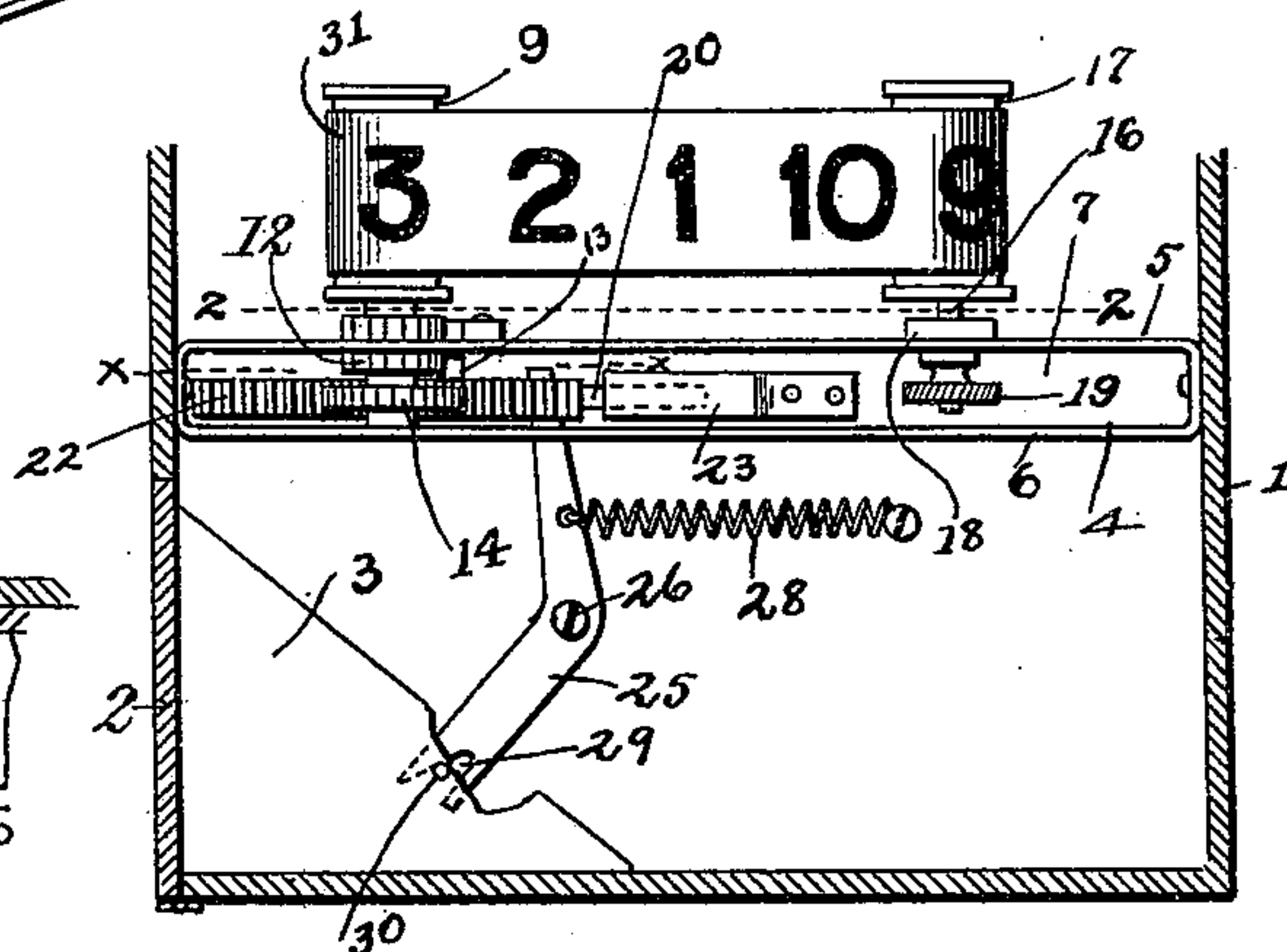


Fig. 3

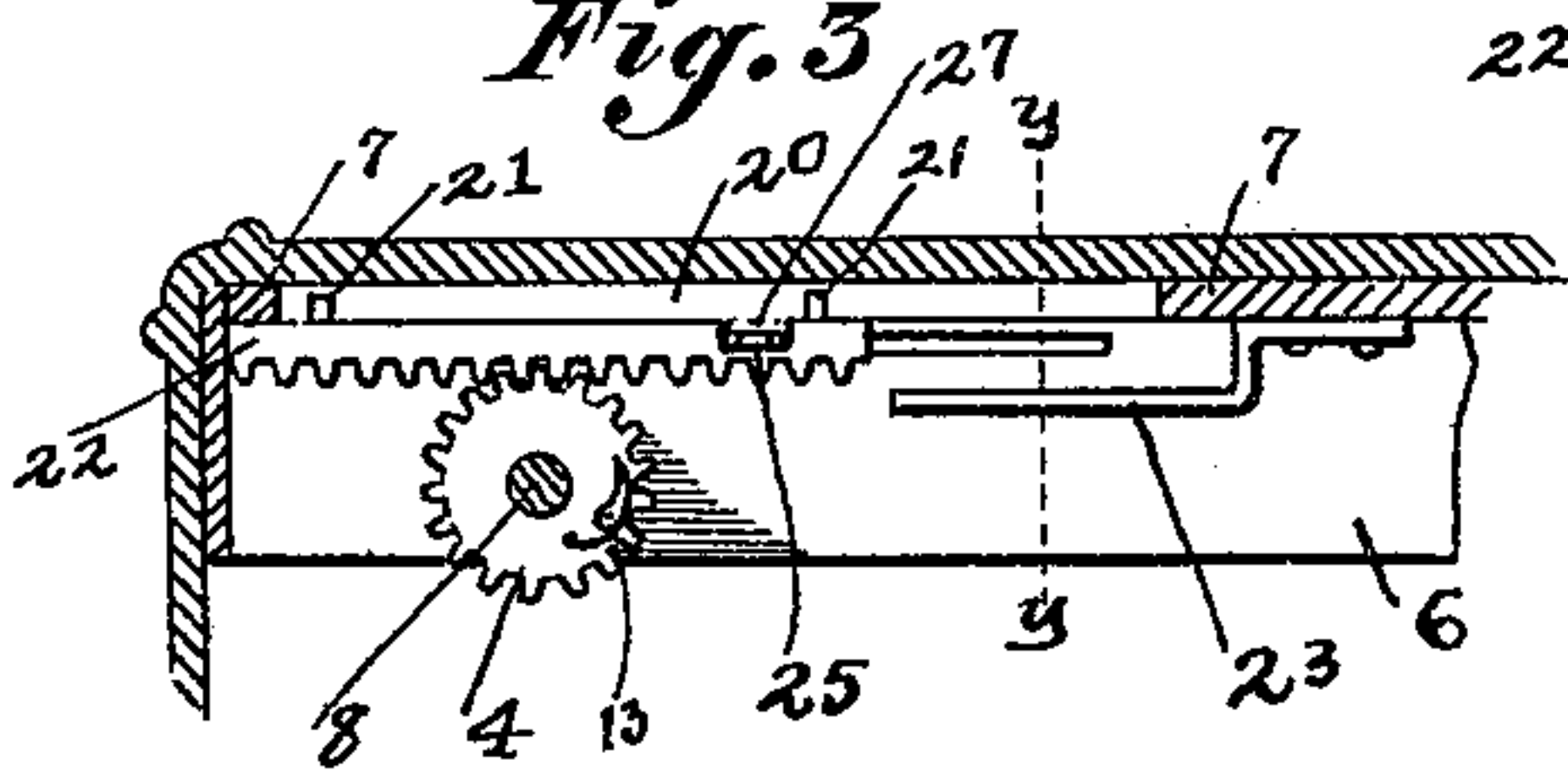


Fig. 4

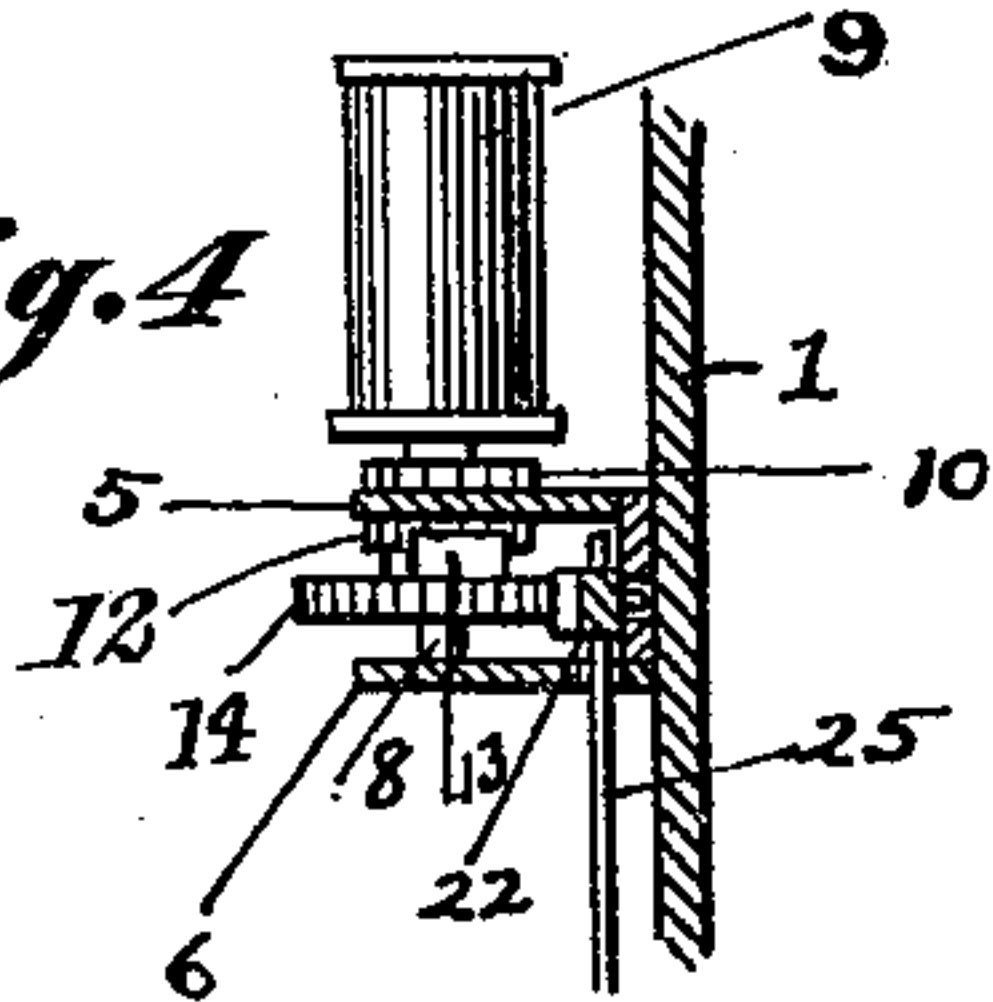
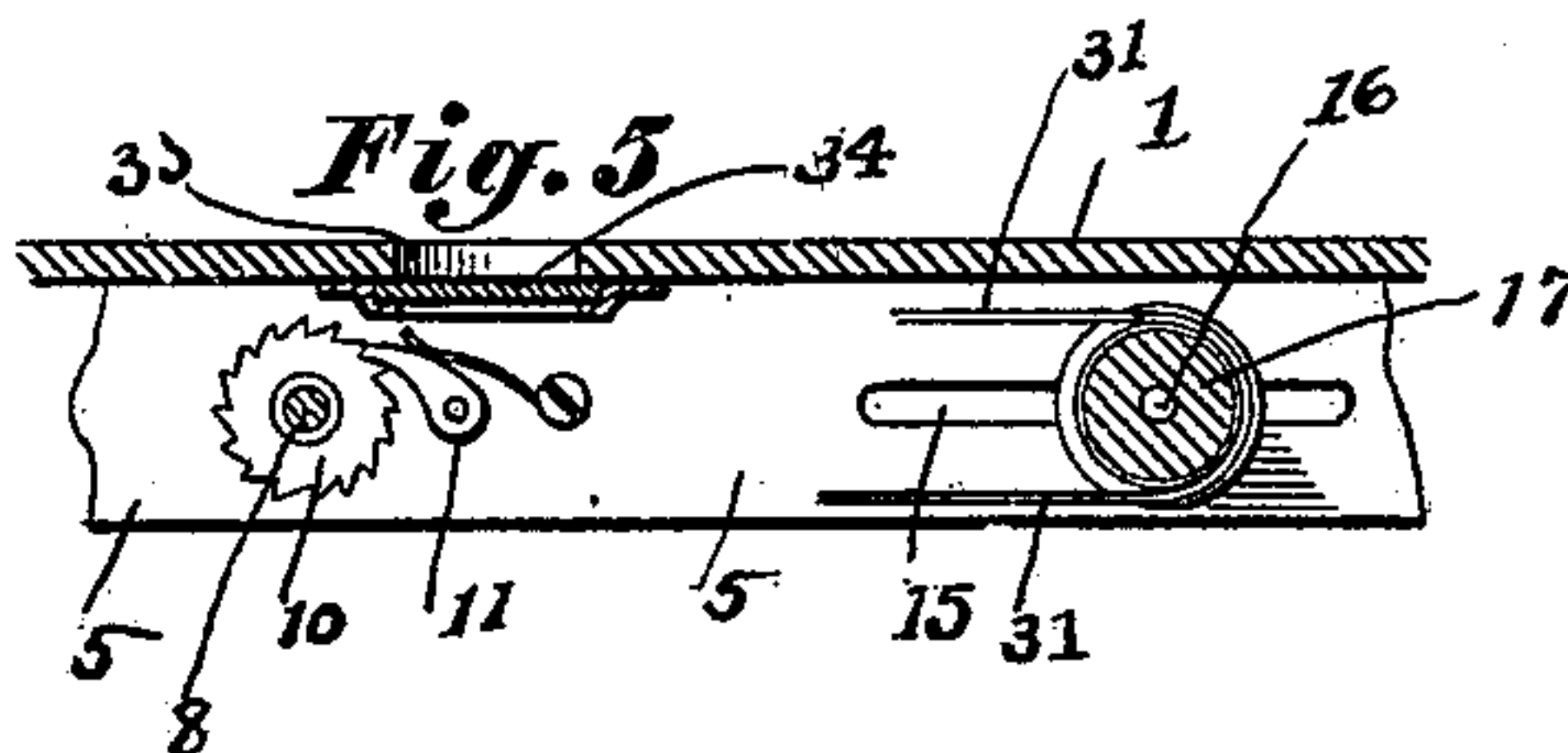


Fig. 5



WITNESSES:

J. H. Fravel
A. L. Phelps

INVENTOR

Burt L. Rees.

BY

C. C. Shepherd
ATTORNEY

UNITED STATES PATENT OFFICE.

BURT L. REES, OF COLUMBUS, OHIO, ASSIGNOR OF ONE-HALF TO GEORGE WILLIAMS, JR., OF SAME PLACE.

COLLECTION-INDICATOR ATTACHMENT FOR MAIL-BOXES.

SPECIFICATION forming part of Letters Patent No. 637,416, dated November 21, 1899.

Application filed March 25, 1899. Serial No. 710,414. (No model.)

To all whom it may concern:

Be it known that I, BURT L. REES, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Collection-Indicator Attachments for Mail-Boxes, of which the following is a specification.

My invention relates to the improvement of mail-boxes, and has particular relation to that class of mail-receiving boxes which are ordinarily employed in streets and public buildings for the reception of mail-matter.

The objects of my invention are to provide as an attachment for an ordinary mail-box a simple and effective registering and indicating mechanism, whereby the hours or fractions thereof for the collection of mail will be shown from the outside of the box and whereby the unauthorized opening of the mail-box door will be indicated, and to produce other improvements in details of construction and arrangement of parts, which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of a mail-box containing my improvement. Fig. 2 is a vertical section of a portion of a mail-box, taken through the usual end door thereof and showing my improved mechanism in connection with the inner surface of the forward side of the box. Fig. 3 is a sectional view taken on line *x x* of Fig. 2. Fig. 4 is a sectional view on line *y y* of Fig. 3, and Fig. 5 is a section on line *z z* of Fig. 2.

Similar numerals refer to similar parts throughout the several views.

1 represents an ordinary street mail-box, which is adapted to receive mail through its upper end portion, and 2 represents the usual end door for the removal of mail from the box, said end door being, as is usual, hinged to the bottom portion of the box-body and provided with inwardly-projecting side wings 3, which when said door is closed project within the box in the manner indicated in Fig. 2.

In securing my attachment within the box I provide a horizontal channel-frame 4, which consists of upper and lower connected par-

allel plates 5 and 6 and a back plate 7. The frame thus formed has its back plate secured horizontally to the inner surface of the front wall or side of the mail-box. Journaled in the upper and lower plates 5 and 6, near one end of the frame 4, is a vertical shaft 8, which above the upper frame-plate 5 carries a vertical roll 9. This shaft also carries at a point beneath said roll and above the upper frame-plate 5 a ratchet-wheel 10, which is prevented from rearward rotation through the engagement therewith of a spring-actuated pawl 11 of the usual character. Immediately below the top plate 5 is also carried a ratchet-wheel 12, the teeth of the latter engaging a spring-actuated pawl 13, which is pivoted on the upper side of a pinion 14, the latter being loosely mounted on said shaft 8. Rising from the frame 4 and through a longitudinally-slotted opening 15 in the upper side thereof is a shaft 16, on which is journaled above the top plate 5 a roll 17, corresponding in form with the roll 9. The shaft 16 has secured thereon below the roll 17 a disk or flange 18, which, as shown, is adapted to bear on the upper surface of the top frame-plate 5 and which is retained in desirable rigid contact with the upper surface of said frame-plate through the medium of a clamping-nut 19 on the lower end portion of said shaft 16. In the back plate 7 of the frame 4 I form a longitudinal slotted opening 20, into which project and are adapted to travel the rearwardly-extending guide pins or projections 21 of a horizontal rack-bar 22, the teeth of the latter gearing with those of the pinion 14.

23 represents a keeper-plate or bracket, the inwardly-bent end of which I secure to the inner face of the front side of the mail-box in horizontal alinement with the rack-bar 22, the outwardly-projecting portion of said keeper-bar being adapted to insure said rack-bar against outward movement when the same is moved toward the closed end of the box.

25 represents a lever which is substantially of a bell-crank form and is fulcrumed at 26 to the inner surface of the forward side of the box. The upper arm of this lever has its terminating portion loosely engaging a slot or recess 27 in the rack-bar 22, said upper

arm being slightly spring-pressed in the direction of the closed end of the box through the medium of a coiled spring 28. The lower arm of the lever 25, which normally inclines toward the door end of the box, is bifurcated, as indicated at 29, said bifurcated portion being adapted, when the door 2 is forced to a closed position, to engage a laterally-projecting pin 30 on one of the door-wings 3.

31 represents a continuous indicator-strip, which may be of paper or other desirable flexible material, said indicator-strip or belt having printed thereon at proper intervals figures which may represent hours or fractions thereof. The belt thus formed passes about the rolls 17 and 9 and is held sufficiently taut thereon to permit of its turning in the manner of an ordinary belt through the medium of the sliding shaft 16 and clamping-nut 19, said roll-carrying shaft being first moved to the desired position in the slotted opening 15 and the clamping-nut then turned tight against the under side of the upper frame-plate 5.

At a point opposite the belt or indicator-strip 31 I form in the forward side of the mail-box an opening 33, the latter being suitably covered with a glass plate 34 and sufficiently large to disclose to view from the outer side of the box one of the figures on the indicator-strip or belt. Above this opening and on the outer side of the box may be printed in suitable words a notice that the figure shown through the opening indicates the time at which the next mail will be taken from the box. The successive arrangement of the figures on the indicating-strip is such as to result, when said strip is moved at regular intervals distances equal to the distances between said figures, in successively disclosing the hours at which mail will be collected from the box.

The above-described movement of the indicator-strip or belt is accomplished in the following manner: In order to remove the mail from the box, the door 2 is unlocked and opened in the usual manner by a carrier or other authorized person, and owing to the previous engagement of the lower arm of the lever 25 with the door-pin 30 and the engagement of the upper arm of said lever with the rack-bar 22 it will be observed that the opening of said door must result in the lever being so turned on its fulcrum-point as to move the rack-bar toward the closed end of the box and to move the lower arm of said lever outward and upward until the pin 30 is disengaged therefrom. In this inward-sliding movement of the rack-bar it will be observed that although said bar is in engagement with the teeth of the pinion 14 the latter, owing to its being loose on the shaft 8 and to the non-engagement of its pawl 13 with the ratchet-wheel 12, will be prevented from imparting a rotary motion to said shaft 8. It will thus be seen that no motion of the indicator-belt is attained during the opening of the door 2.

On the closing of this door, however, the re-engagement of the pin 30 with the bifurcation of the lever 25 results in the latter being so moved as to force the rack-bar forward or toward the door end of the box, thereby imparting a rotation to the pinion 14, shaft 8, and roll 9, which in turn imparts a sufficient movement of the belt 31 to display the next succeeding numeral thereon through the box-opening 33.

In the above-described manner it will readily be seen that simple, reliable, and effective means are provided for successively displaying through the box-opening numerals which will indicate the hour of the next collection, which, as will readily be understood, will not only be of great convenience to those depositing mail in the box, but will serve to inform the collector of mail whether or not the box-door has been opened at any time between the regular collection hours.

It will be observed that with the exceptions of forming the opening 33 in the mail-box and the addition of the door-wing pin 30 my attachment may be connected in an operative manner with the ordinary street mail-box.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a collection-indicator attachment for mail-boxes, the combination with a mail-box having a hinged mail-outlet door, an inward extension of said door and a pin projecting therefrom and an opening 33 in one wall of said box, of a horizontal frame supported on the inner side of the box, vertical rotary rolls mounted in said frame, one of said rolls being adjustably supported therein, a numbered belt carried on said rolls, a fulcrumed lever having one of its ends adapted to engage said door-extension pin and means whereby the swinging movement imparted to said lever by the engagement of said pin therewith when the door 2 is closed, imparts a rotary movement to said belt-carrying rolls, substantially as specified.

2. In a collection-indicator attachment for mail-boxes, the combination with a mail-box having a hinged door 2 and a pin projecting from an inward extension thereof and an opening 33 in the face of said box, of a horizontally-supported frame on the inner side of the box, a roll-carrying shaft 8 journaled in said frame, a pinion on said shaft, a sliding rack-bar engaging said pinion, a shaft 16, a rotary roll thereon, a numbered belt running over said rolls and a fulcrumed lever, one arm of said lever engaging said rack-bar and the remaining arm adapted to engage said door-extension pin, substantially as specified.

3. In a collection-indicator attachment for mail-boxes, the combination with a mail-box having a mail-outlet door and an inward extension thereof, a pin projecting from said inward extension and an opening 33 formed in one wall of said box, of a horizontal frame secured within the box, a vertical shaft jour-

naled in said frame, a roll 9 carried thereon, a pinion-wheel on said shaft, a sliding rack-bar engaging said pinion, a vertical shaft 16 adjustably supported from said horizontal
5 frame, a roll 17 journaled on said shaft, a numbered belt passing over said rolls and a spring-actuated bell-crank lever fulcrumed within the box, one arm of said lever loosely engaging said rack-bar and the remaining arm thereof detachably engaging the projecting 10 pin of said door extension, substantially as specified.

BURT L. REES.

In presence of—

C. C. SHEPHERD,
W. L. MORROW.