

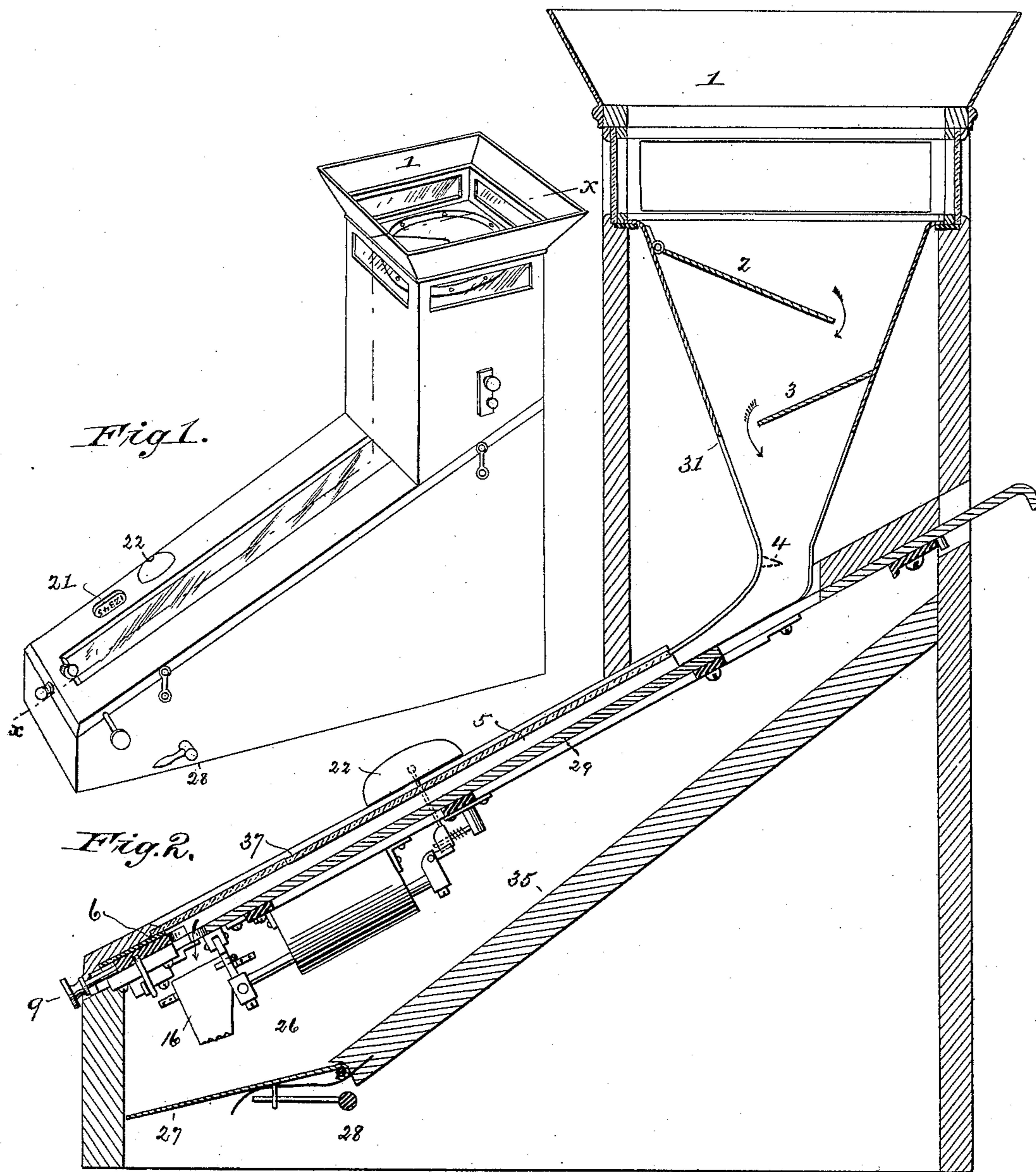
(No Model.)

2 Sheets—Sheet 1.

V. A. KREPPS.
COIN RECEIVER AND REGISTER.

No. 486,111.

Patented Nov. 15, 1892.



Attest;
C. H. Benjamin.
H. G. Ducharme

Inventor;
Virgil A. Krepps
by Read & Price
his attorney

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2 Sheets—Sheet 2.

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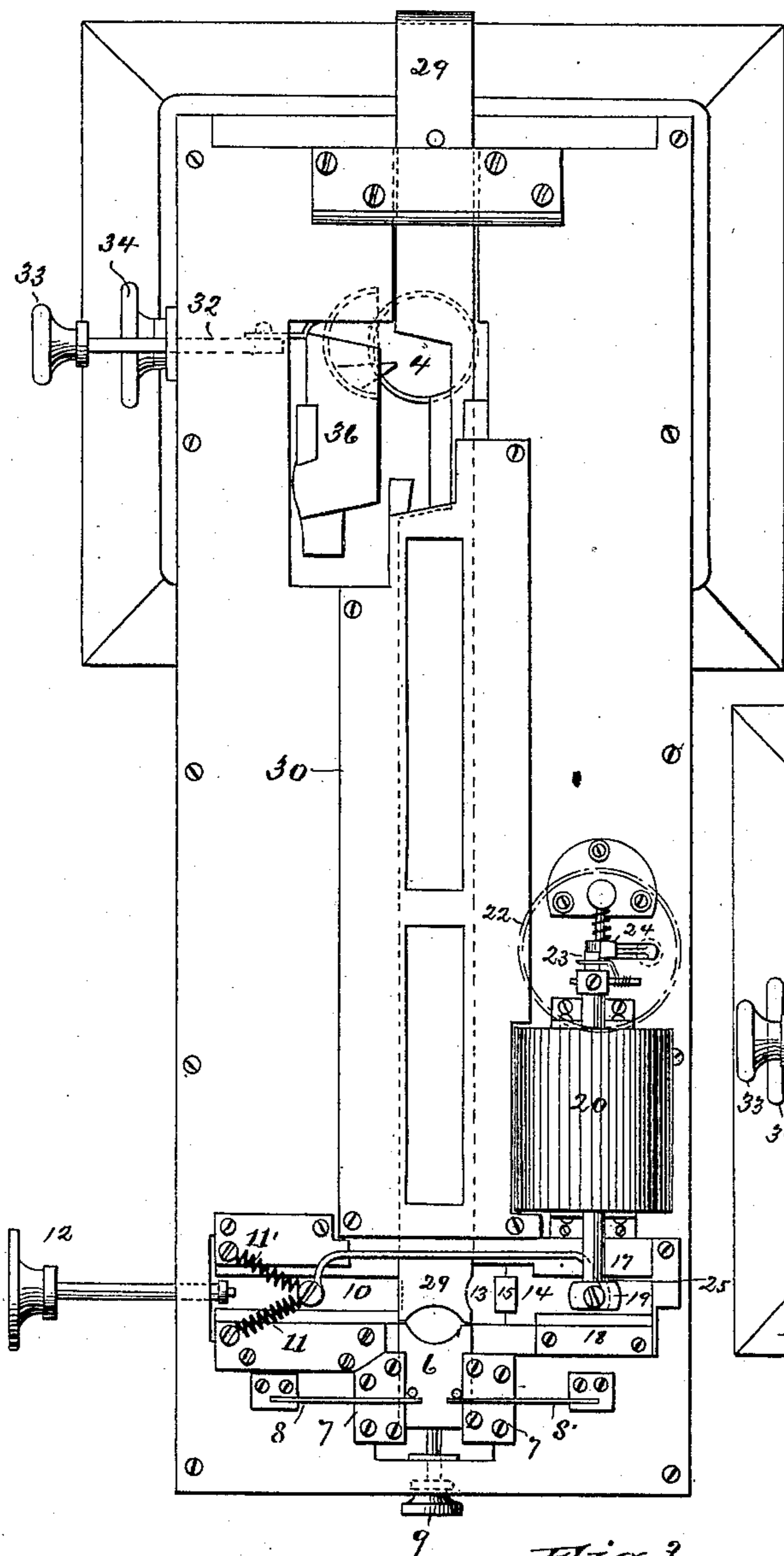


Fig. 3.

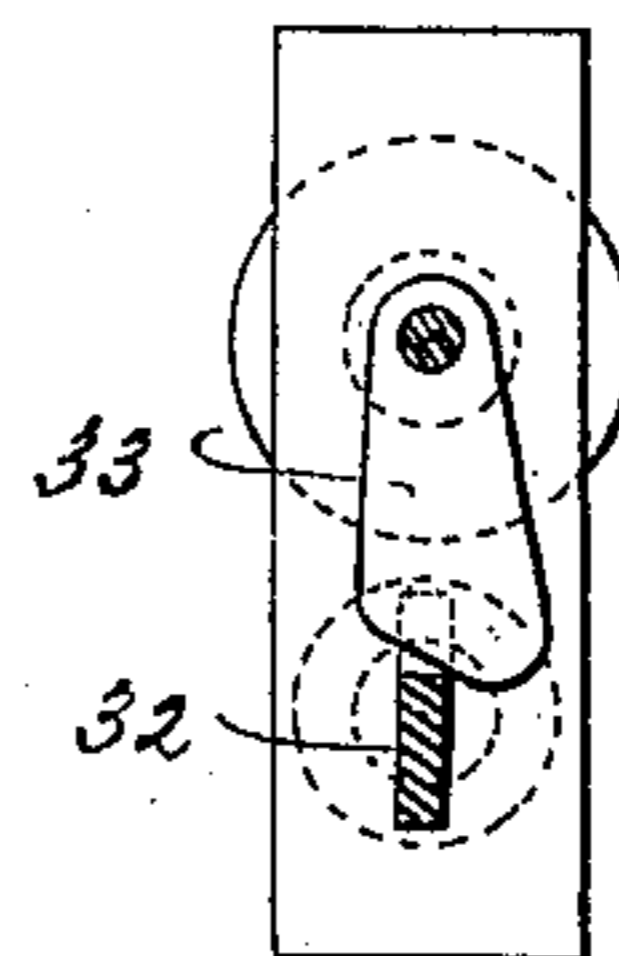


Fig. 5.

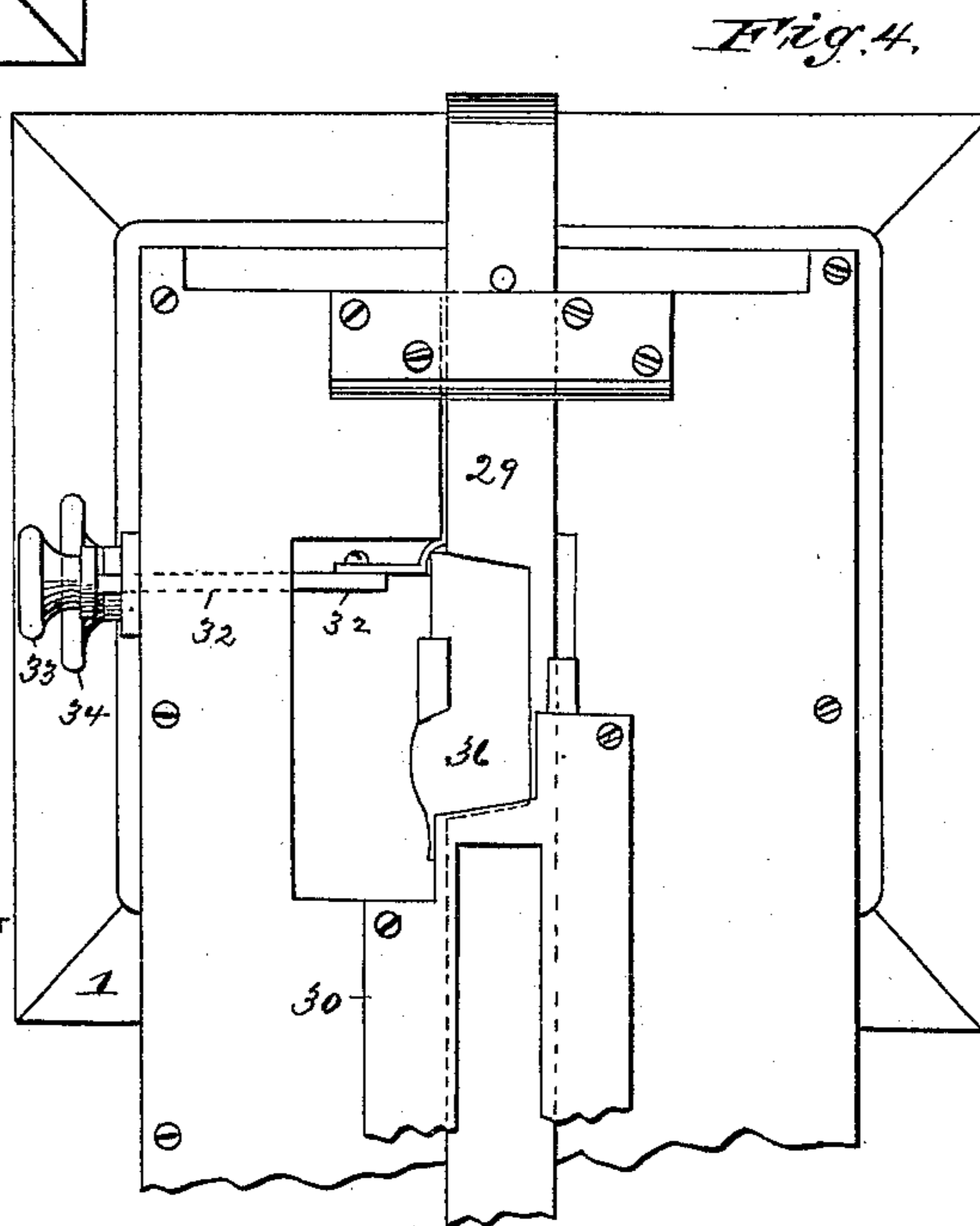


Fig. 4.

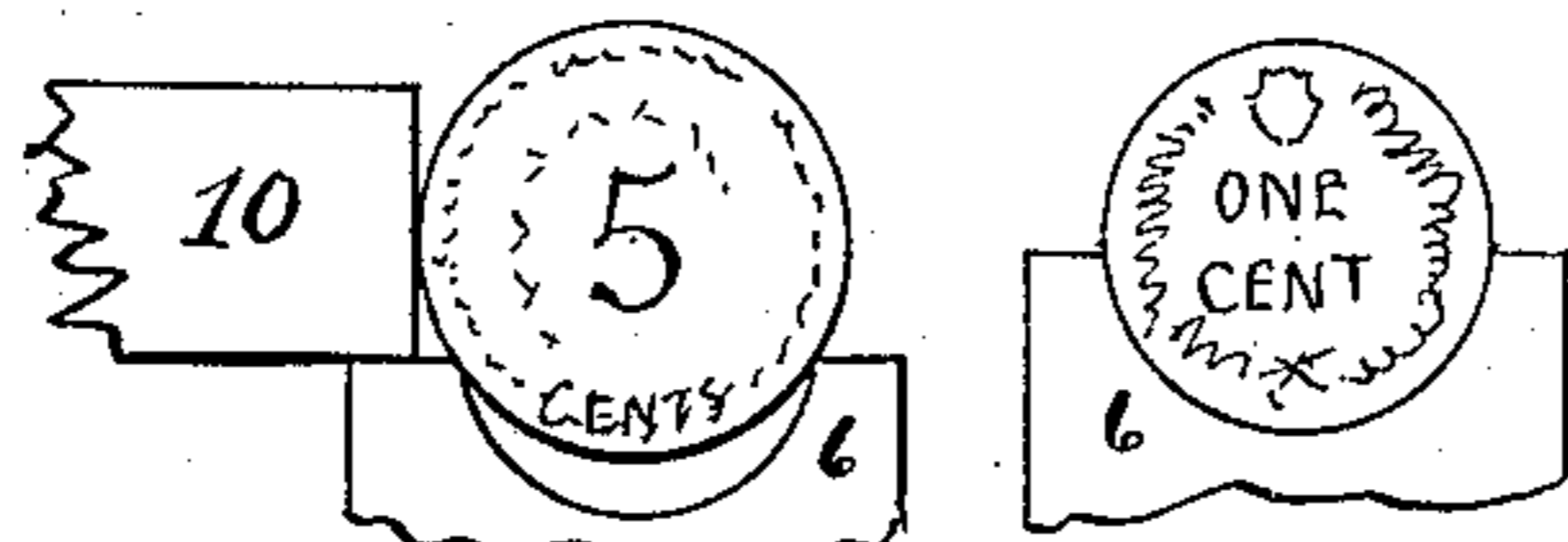


Fig. 6.

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UNITED STATES PATENT OFFICE.

VIRGIL A. KREPPS, OF KENSICO, NEW YORK.

COIN RECEIVER AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 486,111, dated November 15, 1892.

Application filed October 24, 1891. Serial No. 409,668. (No model.)

To all whom it may concern:

Be it known that I, VIRGIL A. KREPPS, a citizen of the United States, residing at Kensico, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Coin Receivers and Registers; 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 a coin receiver and register, being especially adapted for use in receiving and counting fares.

The object of the invention is to dispense with tickets in such systems as the elevated railways, where under the present practice an attendant is employed to sell tickets and another attendant to see that such tickets are deposited by the passenger in a box provided at the entrance to the platform. The ticket system is not only a source of great expense in the aggregate, but also results in delays to the passenger, which may be avoided by the use of my invention.

In carrying out my invention I provide a box into which may be thrown by the passenger on entering the platform one or more fares, as may be necessary for the admission of one or more persons, the machine providing for the proper reception and disposal of the coins, whether placed in it singly or in groups. The coins drop in the machine to a position where they may be dropped one at a time by an attendant into a tube communicating with an office in which is another employé to receive the fares and make change when necessary.

The invention comprises a receiver or hopper of peculiar construction adapted to feed the coins in proper sequence to the registering apparatus irrespective of the number which may be deposited in it at a time.

It comprises, also, means for instantly freeing the hopper of obstructions in case any obstructive matter may be thrown into it.

It comprises, also, means for opening the conduit which connects the receiving-hopper with the registering mechanism throughout its entire length, so that in case it becomes choked with small coins or foreign matter it can be readily cleared.

It comprises, also, means for preventing

any coin, except one of the proper denomination, from operating the registering mechanism.

It comprises, also, means for throwing the coin to the cashier when the register is actuated.

It comprises, also, means for ejecting a coin of a wrong denomination into a place from which it can be removed by the attendant and returned to the passenger who improperly deposited it and means for preventing a coin of the proper denomination from being dropped into the same receptacle.

It embodies, also, details of structure, which will be hereinafter more fully described, and definitely indicated in the appended claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view of a coin receiver and register embodying my invention. Fig. 2 is a sectional view on the plane indicated by the line *xx* of Fig. 1. Fig. 3 is a bottom view of a portion of the operative mechanism, the lower box being removed, the mechanism for ejecting the foreign matter from the hopper being shown in open position. Fig. 4 is a detail view showing the bottom of the hopper when closed. Fig. 5 is a detail view of a lock for maintaining the hopper closed, and Fig. 6 shows a detail of the coin-ejecting apparatus and the structural features which permit of the actuation of the register by a coin of a proper denomination only.

The apparatus is mounted at the entrance to the platform if it is used on an elevated railway and adjacent to the cashier's room, a tubular conduit 16, Fig. 2, leading from the apparatus to a table or receptacle within the cashier's reach.

The apparatus comprises an open hopper 1, within which is a series of inclined shelves 2 3, arranged to deflect the coins in the direction indicated by the arrows, a third deflecting-shelf 4 being mounted in the throat of the hopper, as indicated in dotted lines in Figs. 2 and 3. If by any possibility two coins should fall upon shelf 4 at the same time, in sliding from the shelf they will strike the side of the throat and one be retarded, so that they will enter the coin-conduit in proper sequence. The coins, if more than one is deposited at a time, pass over the inclined shelves and in

sliding and falling acquire slightly different speeds, so that on reaching a point where the throat of the hopper communicates with the conduit 5 they will follow one another in a row and slide by gravity down this inclined conduit and come to rest against a plate 6. The shelf 4 is of particular service in throwing the coins into the conduit in proper order. Being placed in the narrow throat of the hopper the coins are deflected against the opposite wall, and the opening being just large enough to admit the required coin a proper delivery is insured. This plate is arranged to slide in ways 7 7' and is normally held in the position shown in Fig. 3 by springs 8 8'. A stem secured to the plate and connected with the knob 9 on the outside of the apparatus is provided for a purpose presently to be described. The edge of the plate 6, against which the coin bears after sliding through the conduit, is curved, as illustrated in the drawings, the curve being of a shorter radius than the coin, so that if a coin of a proper denomination rests against it the coin will bear only against the upper edges of the wall, as illustrated on the left of Fig. 6; but if a smaller coin be dropped into the box such coin will lie against the bottom of the recess, as illustrated at the right of Fig. 6. At one side of the point at which the coin comes to rest is a slide 10, moving in ways, as illustrated in Fig. 3, and held in a retracted position by springs 11 11', to which is connected a stem and button 12 on the outside of the apparatus. If a coin of the proper denomination rests against the plate 6 and the button 12 be pushed inwardly, as will be clearly understood from an inspection of Fig. 6, the coin will slide from the plate 6 over into the channel 13 and be forced into contact with a sliding plate 14, a lip 15 preventing the coin from dropping into the tube 16, which communicates with the cashier until the coin is pressed beyond the plate 29, when the register will be actuated and the coin drop into the receptacle 16, which communicates with the tube leading to the cashier. When the knob 12 is pushed in and the coin forced, as just described, against the plate 14, the latter slides in ways 17 18 and operates a crank-arm 19, connected to the axis of a registering device 20. The operating mechanism of this register or counter is not illustrated for the reason that any register on the market may be used for the purpose. The numbering-disks on the register are exposed through a glass plate on the top of the box, as illustrated at 21 in Fig. 1. The axis of the register is made to operate a bell 22 each time the plate 14 is shifted. This is accomplished by means of a tongue 23, secured to the shaft, which when the latter is rocked comes in contact with a lug 24 and throws back the hammer, a spring mounted on the axis upon which the bell-hammer is pivoted forcing the latter to strike the bell. A removal of the hand from knob 12 permits the latter to be restored to its normal position, as

indicated in Fig. 3, and a hook 25, formed on the end of a wire mounted on the slide 10, restores the counting shaft or axis of the register to its normal position. If a coin of the wrong denomination be inserted in the instrument, it will be impossible to push in the knob 12, and the attendant will be instantly apprised of the fact that the wrong coin has been deposited. As the coin is smaller in diameter than that of the required denomination, since a larger coin will not pass through the coin-conduit, it will lie full within the circular groove in the end of plate 6, as indicated at the right of Fig. 6, and in this position it will be impossible to dislodge it by pushing on the knob 12. If it be of a greater size, it will be stopped in the hopper and can be removed by the attendant pulling out knob 33, allowing it to drop upon shelf 35, whence it will slide upon door 27 and can be removed. In either case the inability to operate the register will indicate to the attendant that an improper coin has been put into the instrument. The coin can be seen, also, through a glass panel 37 over the top of the coin-conduit. He will then either pull out the knob 9, if a small coin has been paid, thus withdrawing the plate 6 and permitting the coin to drop into a receptacle 26 beneath the apparatus, whence it may be withdrawn by tilting the door 27, controlled by a crank-shaft 28 on the outside of the instrument, or pull out knob 33, as above described.

It should be noticed that the register can only operate when a coin of the proper denomination is inserted within the apparatus and that only a coin of the proper denomination can be ejected from the machine and transmitted through a tube connected therewith to the cashier, and that when a coin of an improper denomination passes through the conduit 5 it can be withdrawn without difficulty and returned to the depositor. Without the presence of a proper coin the register will not count, since the slide 10 cannot be pushed in to a sufficient depth to throw the crank-shaft 19 unless a coin be interposed between it and the slide 14.

To avoid any possibility of obstruction of the coin-conduit 5, the bottom thereof is formed of a slide 29, moving in suitable ways formed by a plate 30, secured to the frame of the apparatus. The bottom of the hopper 1 is provided with a movable section, as indicated at 31 in Fig. 2, to which is secured a sliding arm 32, (see Fig. 3,) on which is mounted a knob 33 on the outside of the apparatus. This movable section is indicated at 36 in Figs. 3 and 4, being shown in open position in the former and in closed position in the latter. When the knob 33 is pulled out, the section 36 moves with it, thus opening the bottom of the hopper and permitting any obstructions to fall out. The sliding arm 32 is notched, as indicated in Fig. 5, and a latch 33, controlled by a button 34, is arranged in co-operative relation thereto, so that the section of the hopper

when closed can be locked in position. As shown in Fig. 3, the section has been withdrawn, and in this position any obstructive matter which may be in the hopper—as, for example, a coin so large that it would not pass through the coin-conduit 5—will drop upon the inclined partition 35, and can be removed by tilting the door 27, as hereinbefore described. The movable section of the hopper has attached to its bottom a flat piece of metal 36, which forms a continuation of the slide 29 when the hopper is closed and the apparatus in working order, as indicated in Fig. 4. If a coin or other matter gets locked in the coin-channel 5, the slide 29 can be withdrawn as far as necessary, or entirely, if needed, when all matter can fall away into the chamber 26 and be removed. The slide can then be restored to its proper position, and the apparatus will then be in readiness for further service.

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

25 1. A coin receiver and register comprising a vertical hopper for receiving coins, said hopper being provided with oppositely-inclined shelves for tossing the coins, and an inclined conduit leading to the registering mechanism and communicating with the bottom of the hopper, an auxiliary shelf or spur being mounted in the path of the coins opposite the junction of the bottom of the conduit and the hopper.

35 2. A coin-receiver comprising a hopper and coin-conduit communicating therewith, means within the hopper for feeding the coins one at a time to the conduit, the bottom of the hopper being provided with a movable section, and means for permitting a coin or obstructive matter to fall within access of the operator when said section is open.

45 3. A coin-receiver comprising a receptacle for the coins, a coin-conduit connecting therewith, said conduit being provided with a slid-

ing bottom extending throughout its length, whereby the entire conduit may be opened for the removal of obstructions.

4. A coin-receiver comprising the hopper 1, coin-conduit 5, provided with a glass panel on top, and a slide 29 on the bottom, extending the entire length of the conduit, as and for the purpose described. 50

5. A coin receiver and register comprising a receiving-hopper, a coin-conduit, a coin-stop 55 6 at the bottom of the conduit, recessed as described, ejecting-slide 10, slide 14, connected with the register, and an opening between the slide, into which the movable coin may drop when the ejector is withdrawn. 60

6. In a coin receiver and register, the combination of a coin-conduit, a sliding stop 6 at the bottom thereof, a receiving-chamber below the stop to receive coins of the wrong denomination, the stop being provided with a recess of shorter diameter than a coin of the required denomination for the purpose described, ejecting-slide 10, guideway 13, and register-arm 19, actuated by a coin forced into the guideway, an opening being provided 70 through which the coin may drop after the register is actuated.

7. In a coin-receiver, the combination of a hopper and a coin-conduit connected therewith, the hopper having inclined shelves for feeding the coins one at a time to the conduit and being provided with a movable section at the bottom, and the conduit having a removable bottom 29, provided with a recess under the hopper normally closed by a projection on the movable section of the hopper, whereby the bottom of the hopper may be thrown wide open for the removal of obstructive matter. 75 80

In testimony whereof I affix my signature in presence of two witnesses. 85

VIRGIL A. KREPPS.

Witnesses:

A. RICHARDS,
C. W. TOWN.