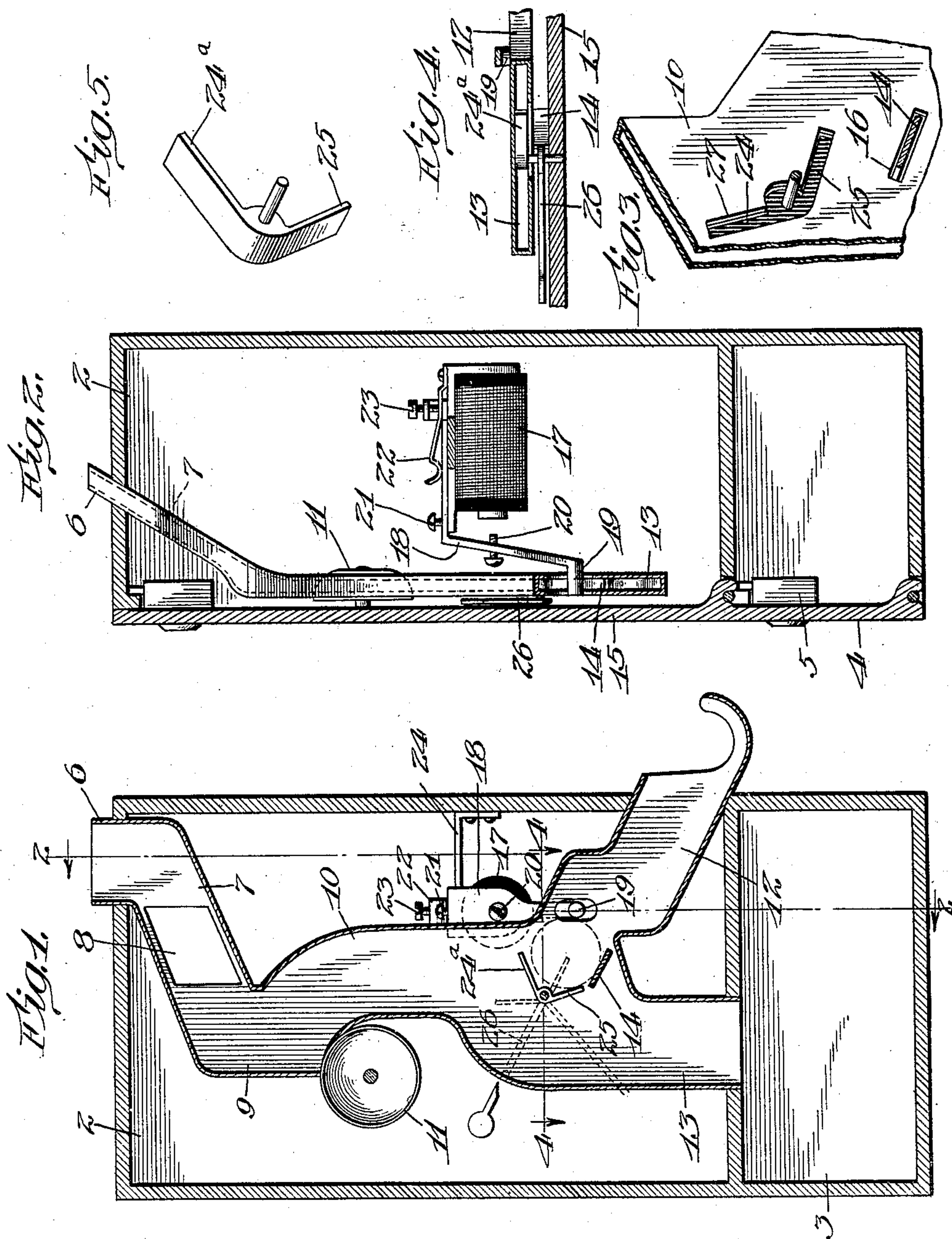


No. 886,499

PATENTED MAY 5, 1908.

J. HARRISON.
TELEPHONE TOLL BOX.
APPLICATION FILED JAN. 12, 1908.



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UNITED STATES PATENT OFFICE.

JAMES HARRISON, OF ST. LOUIS, MISSOURI.

TELEPHONE TOLL-BOX.

No. 886,499.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed January 12, 1906. Serial No. 295,793.

To all whom it may concern:

Be it known that I, JAMES HARRISON, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented 5 new and useful Improvements in Telephone Toll-Boxes, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

10 My invention relates to improvements in telephone toll boxes, my object being to provide a device which shall be simple in construction, easy to operate and which shall not readily get out of order.

15 In an application filed by me May 10, 1905, Serial No. 259,792, I have described and claimed the generic features of my invention and this application relates to an improvement therein and certain specific features 20 which have not been disclosed in the above entitled application.

I have illustrated the preferred embodiment of my invention in the accompanying drawings, in which:

25 Figure 1 is a side elevation of the pay station box with parts removed; Fig. 2 is a sectional elevation of the same taken at right angles to that shown in Fig. 1; Fig. 3 is an elevation in detail of the coin chute; Fig. 4 is 30 a detail sectional view taken on the line 4—4 of Fig. 1; and, Fig. 5 is a detail view of the movable lever mounted in the chute for guiding the coin.

In constructing my invention, I provide a 35 toll box 2 of the usual construction, the lower part thereof having formed therein a till or cash box 3, into which the deposited coins are dropped, and which may be provided with the usual door 4 and lock 5, arranged to be 40 opened only when it is desired to remove the coins. The coin race or chute as here arranged, consists of a flattened tube of the proper width and thickness to accommodate the coin of the size that it is desired to use. 45 The upper end 6 of the race leads to the upper end of the box to receive the coins.

The part 7 of the coin race is inclined longitudinally and sidewise as indicated in Figs. 1 and 2, so that as the coin is inserted at 6, it 50 rolls down the chute passing an opening 8 formed in the lower side of the wall of the tube, and of such a size as to permit a coin of less diameter than the standard coin intended to be used to drop out of the chute and 55 into the upper part of the box. The coin race then extends by the vertical portion 9 to

the off-set portion 10, at the lower edge of the junction of which portions a gong or any distinctive sounder 11 audible to the operator is located, with its edge projecting into an open- 60 ing in the edge of said race and in a position to be struck by the coin in descending through said race.

At the lower end of the portion 10 of the coin race a return or refunding chute 12 and 65 a depositing chute 13 branch in opposite directions. Immediately beneath the portion 10 a preferably stationary stop 14 is located in such a position and of such a form as to catch a coin passing downwardly through 70 the portion 10 of the race and direct the coin into the return chute 12. This stationary stop is preferably mounted upon the hinged door 15 of the toll box in such a manner that when the door is closed it projects through a 75 slot 16 in the coin chute, but when the door is opened, it is removed from position in the chute, leaving the same open in such a manner that the coin held upon said stop will drop down through the chute 13 into the till 80 3. A refunding magnet 17 is located at the back of the race and is provided with an armature 18, the lower end of which terminates in a pin 19 extending through an aperture in the side walls of the return chute 85 12 and in such a position to stop and hold in suspension any coin that may be resting on the stop 14. This magnet armature may be provided with an adjusting screw 20, a holding screw 21, with an operating spring 22 to 90 return it to normal position and with an adjusting screw 23 to vary the tension of the spring. The magnet may be supported from the side of the box on a bracket 24, or in any other desired manner. The magnet 95 is suitably connected in the electric circuit so as to be operated by current from the central office.

Pivotally mounted in the coin chute 10 at the point where the chute branches into the 100 depositing chute 13, and the return chute 12, is a V-shaped gate, the upper arm 24^a of which, when in normal position, substantially closes the entry to the chute 13 and the lower portion 25 is so arranged that when 105 the arm 24^a is moved to a vertical position, the lower arm 25 will be moved so that it extends in a position substantially parallel with the stop 14. A weighted lever 26 is connected to the V-shaped gate in such a 110 manner that when no coin is sustained in position by the pin 19 in the return chute 12,

the arms 24^a and 25 will assume the position shown in dotted lines in Fig. 1. The V-shaped gate is preferably pivotally mounted upon the door 15 of the toll box 2 in such a manner that when the door is closed it extends through a slot 27 formed in the chute, and when the door is opened, is removed from position in the chute. By mounting the lever and the stop 14 upon the door when the door is opened, for the purpose of repairing, or to gain access to the parts in the toll box, any coin which is sustained in suspension upon the stop 14 will be permitted to drop through the chute 13 into the toll box, thereby preventing the removal of the coin through the chute 12.

In operation, when a coin of the proper size is inserted in the top 6 of the race, it rolls through the portion 7, past the opening 8 and thence drops down the portion 9, striking the gong 11; it then falls through the portion 10 to the stop 14, striking the arms 25 and moving the gate into the position shown in full lines in Fig. 1 to close the chute 12 against the next coin inserted in the coin race. The coin is held at this point in suspension by the stop 19 of the refunding device, and the sound of the gong transmitted through the telephone indicates to the operator that the coin has been inserted. If the call is not completed the refunding magnet 17 is operated and the pin 19 withdrawn, permitting the coin to roll down the return chute 12 to the calling party. This releases the gate and the arm 26 thereof moves the same until the arm 24^a opens the chute 12 and the arm 25 is in a position to be engaged by the next coin. In case the call is completed in the usual manner, the coin remains suspended upon the stop 14 at the upper end of the chute and retains the arm 15 in such a position that it closes the chute 12 to the next coin, which is dropped into the device. The next coin which is dropped into the device will sound the gong in the usual manner, but after passing through the portion 10 will strike the arm 24^a of the gate and by it, be directed through the portion 13 of the chute into the till and be thus deposited.

By the use of the gate the first coin is positively prevented from passing directly into the till, as the passage 13 is closed by the upper arm 24^a of this gate. Another important advantage resulting from the use of this gate is that the gate prevents two thin well-worn coins from wedging each other in the coin race.

While a coin is referred to herein, the term is intended to be used in its broad sense to include slugs, token, etc., used in place of coins for the operation of such devices.

While the invention has been described with reference to the details of construction of one commercial form, and its specific ar-

range of parts, it is obvious that various arrangements and modifications may be made herein and that the same may be used in various places without departing from the spirit or principle of the invention.

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

1. In a coin collecting or pay station device for telephone exchanges, the combination with means for suspending the first coin in position to be refunded when desired, and means moved into position by said first coin for depositing the succeeding coins while the first coin remains in suspension.

2. In a coin collecting or pay station device for telephone exchanges, the combination with means for suspending the first coin in position to be refunded and means moved into operative position by said coin for automatically depositing the succeeding coins, while the first coin remains in suspension.

3. In a coin collecting or pay station device for telephone exchanges, the combination with means for suspending the first coin in position to be refunded, and means independent of the operator and automatically moved into operative position by said coin for depositing the succeeding coins, while the first coin remains in suspension.

4. In a coin collecting or pay station device for telephone exchanges, the combination with a coin race for the passage of coins through the device, of means for suspending the first coin in position to be refunded, and means automatically moved by said first coin in position to deposit the succeeding coins, while the first coin is suspended.

5. In a coin collecting or pay station device for telephone exchanges, the combination with a coin race, for the passage of coins through the device, of a suspending device in which the first coin tends to fall in its passage through said race, and means automatically moved to a position by said coin for depositing the succeeding coins.

6. In a coin collecting or pay station device for telephone exchanges, the combination with a coin race for the passage of coins through the device, of means for sustaining a coin in a suspended position in which the coins tend to fall as they pass through the race, means for refunding a coin held in suspension in said position, and means held in operative position by said suspended coin for directing the succeeding coins into the deposit channel.

7. In a coin collecting or pay station for telephone exchanges, the combination with a coin race for the passage of coins through the device, of a suspending device in which the coins tend to fall as they pass through the race, means for refunding a coin held in suspension in said position, and a directing means held in operative position by said sus-

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pended coin for directing the remaining coins into the depositing channel.

8. In a coin collecting or pay station device for telephone exchanges, the combination with a catch race for the passage of coins through the device, means for catching and holding the first coin in a suspended position, means moved into operative position by said coin for directing the remaining coins into a depositing channel, and means for refunding said suspended coins when desired.

9. In a coin collecting or pay station device for telephone exchanges, the combination with a coin race for the passage of coins through the device, of a stationary stop upon which the coins tend to fall, means for holding the first coin upon said stop, means moved into operative position by said coin for directing the remaining coins into the depositing channel, and means for refunding said suspended coin.

10. In a coin collecting or pay station device for telephone exchanges, the combination with a coin race for the passage of coins through the device, said race terminating at its lower end in a refunding chute and depositing chute, and means for suspending a coin in the refunding chute and means actuated by said coin for closing the chute against the succeeding coins and directing them into the depositing chute.

11. In a coin collecting or pay station device for telephone exchanges, the combination with a coin race for the passage of coins through the device, said race terminating at

its lower end in a refunding chute and a depositing chute, a stationary stop at the mouth of the refunding chute upon which the coins tend to fall in passage through the coin race a movable stop to hold a coin in suspension upon said stationary stop and means operated by said coin for closing said refunding chute against the succeeding coins and directing said succeeding coins into the depositing chute, and electromagnetic means under the control of the central office for withdrawing said movable stop to permit the suspended coin to be returned to the calling party.

12. In a coin collecting or pay station device for telephone exchanges, the combination with a coin race for the passage of coins through the device, said race terminating at its lower end in a refunding chute and a depositing chute, means for suspending a coin in said refunding chute, means automatically operated by said coin for closing said refunding chute against the succeeding coins and directing them into the depositing chute, said means being automatically operated to open said refunding chute when the coin suspended therein is refunded.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

JAMES HARRISON.

Witnesses:

H. FINLOW REEVES,
JOHN M. STUART.