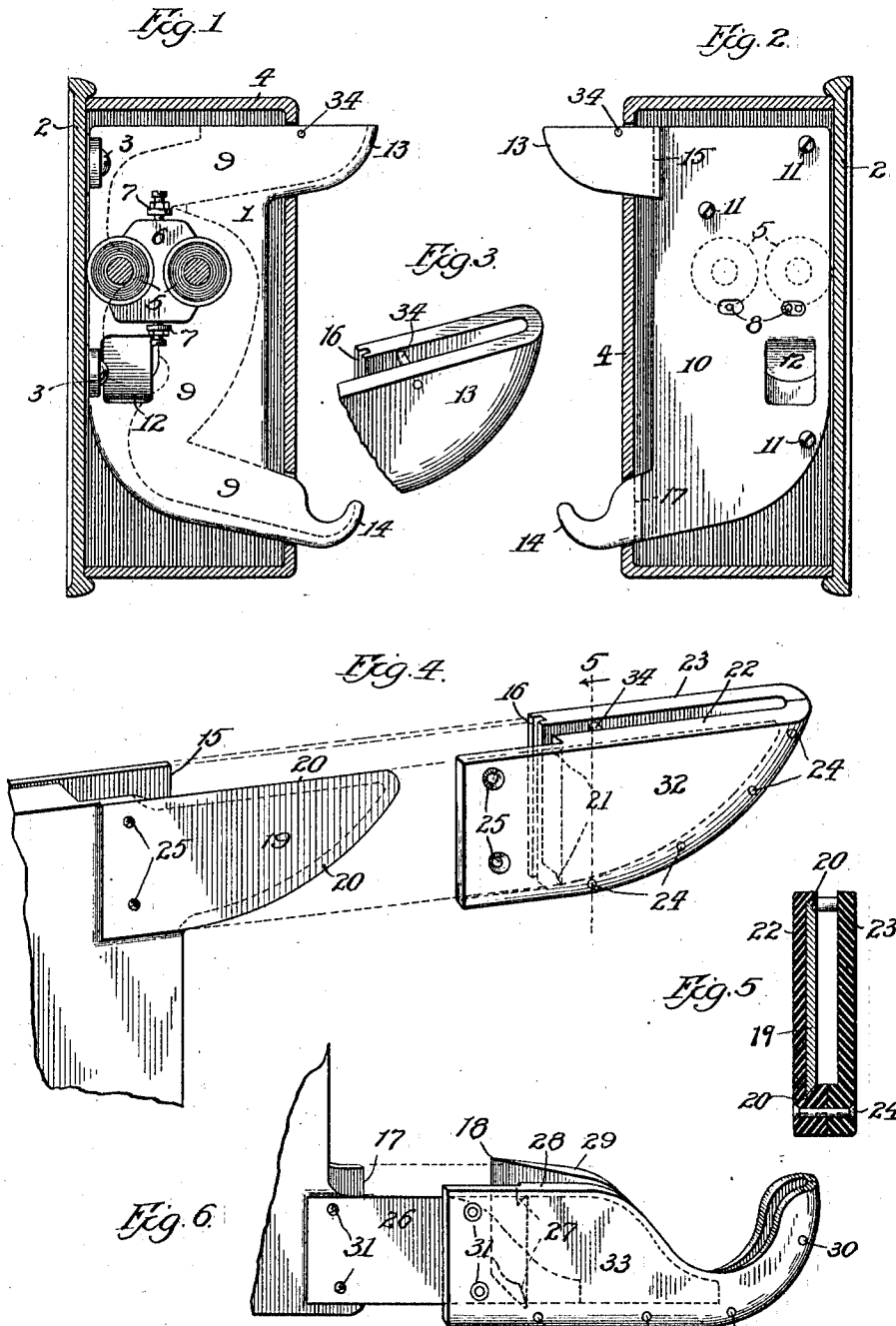


G. L. KLINE.
COIN COLLECTOR.
APPLICATION FILED FEB. 8, 1909.

1,059,374.

Patented Apr. 22, 1913.



Witnesses:
For Davison,
McBrelland Young

Inventor:
George Leonard Kline
By John L. Roberts
Attg.

UNITED STATES PATENT OFFICE.

GEORGE LEONARD KLINE, OF ST. LOUIS, MISSOURI.

COIN-COLLECTOR.

1,059,374.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed February 8, 1909. Serial No. 476,641.

To all whom it may concern:

Be it known that I, GEORGE LEONARD KLINE, citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Coin-Collectors, of which the following is a full, clear, concise, and exact description.

My invention relates to coin collectors, and more particularly to toll boxes for telephone pay stations. Its objects are, first to provide an improved coin chute whereby coins are less liable to become clogged therein, and second to provide means of insulating exposed portions of the coin chute to avoid the liability of shocks by users of the device.

In certain forms of coin collectors with which I am familiar, by reason of the coin slot or entrance plate and the return cup or exit plate being secured to the cover, the coin chute is not continuous, and it is necessary, but difficult, in assembling and in the use and repair of such devices, to obtain a perfect alinement of the openings in the cover with the entrance and exit of the coin chute in the frame within the cover. The coin chute of my device is continuous throughout, and the possibility of the coin being obstructed in its passage into or out of the cover is avoided. I secure this continuous coin chute by providing the frame which forms the coin chute within the cover with projecting members extending through slots in the cover, the said members forming the coin slot or entrance and the return cup or coin exit.

Sometimes in the use of toll boxes for telephone pay stations a current having a potential of 110 volts is employed to operate the controlling magnets and thus to control the disposition of the coin after it is inserted in the coin slot. Such a current is of sufficient strength to cause shocks to the users of the device if they should touch a part of the mechanism, such as the frame, that is a part of the controlling circuit. It is advisable, therefore, in such cases to insulate all exposed parts of the mechanism. To this end my invention also comprises a structure in which the coin slot and return cup may be made of insulating material while at the same time being secured to and reinforced by the metal frame, which, as stated, is part of the controlling circuit.

As illustrative of my invention, I have shown in the accompanying drawings my improvements applied to a well known type of toll box for telephone pay stations, which is fully described in patent to C. E. Scribner, No. 728,309, issued July 29, 1901.

Figure 1 is a side elevation showing my device with the cover and a portion of the mechanism in section. Fig. 2 is a similar view from the opposite side. Fig. 3 is a detail perspective view of the coin slot or entrance broken away from the frame. Figs. 4, 5 and 6 are views of a modification, Fig. 4 showing the coin slot in detail with the parts thereof separated, Fig. 5 the coin slot in section on line 5 of Fig. 4, and Fig. 6 the return cup in detail and partly withdrawn from the frame.

Referring first to Figs. 1 and 2, the coin collector comprises a frame 1, preferably of metal, secured to a back plate 2 by screws 3, 3. A box cover 4, which is preferably of metal also, incloses the frame and mechanism and fits snugly to the back plate from which it may be removed for the inspection of the inclosed mechanism. The mechanism need not be described in detail, as it is well known. It comprises, however, an electromagnet 5, with an armature 6 pivoted in the frame at 7, 7, and arranged normally to stop and hold the coin by means of the pins 8, 8, until current is directed through the magnet to deposit the coin in a coin receptacle in the lower part of the cover or to refund it to the user.

A coin chute is formed in the side of the frame by a zigzag groove 9, 9, over which a plate 10 is secured by screws 11. A deflecting plate 12 formed out of the plate 10 and passing diagonally through an opening in the frame 1 is adapted to throw the coin into the coin receptacle when released by the magnet 5 for that purpose.

In the well known form of coin collector heretofore referred to, the cover is provided with a coin slot for the entrance of coins at the upper part thereof and a return cup at the lower part, these parts being secured to the cover in the manner of an escutcheon. The entrance and exit of the coin chute proper formed in the frame within the cover are intended in that type to come into alinement with the coin slot and return cup on the cover. Much difficulty, however, has been experienced with such structures be-

cause, in assembling, the cover is not always placed in the same position with respect to the back plate and frame, and because, in the use and repair of the parts, the frame may become warped or bent out of place with respect to the cover. The result is that a coin when placed in the slot will sometimes become lodged at the entrance to the coin chute or when the operator attempts to return the coin to the user it will become lodged just inside the cover at the exit. To avoid these troubles I have provided for the frame of my device projecting members 13, 14, with slots or openings in the cover into which they fit and through which they extend. The coin chute formed in the frame within the cover is extended through these members, the coin slot or entrance being thus formed at 13 and the return cup or exit at 14. I may form the coin slot and return cup as an integral part of the frame. That is, the two sides of the coin chute at the entrance and at the exit are cast of a single piece of metal with the frame itself, or otherwise formed with or secured to the frame. The plate 10 which forms the outer side of the coin chute within the cover fits, at its edge 15, into a groove 16 in the outer side of the coin slot or entrance. In a similar manner, the edge 17 fits within the tapered edge of the outer side of the coin chute at the exit. This tapered edge is best shown at 18, Fig. 6. The purpose of this construction is to avoid obstructions at the edges 15 and 18 to the free passage of the coin at the entrance and exit of the coin chute. The pin 34 serves to limit the size of the coin which may be inserted in the slot.

In the modification of my invention shown in Figs. 4, 5 and 6, I have provided a construction which permits the use of metal for the frame within the cover and insulating material for the coin slot and return cup which extend through the cover, while at the same time the coin slot and return cup are reinforced by extending webs of the metal frame. The extending web 19 for the coin slot is preferably an integral part of the frame, having beveled edges 20 and adapted to fit the groove 21 in the inner face of the inner side 22 of the coin slot 32. The side 22 and the outer side 23 may be of fiber or other suitable insulating material, and may be held together by rivets 24. When assembled the coin slot is fitted over the web 19 and secured thereto by screws or rivets at the holes 25.

A similar construction, as shown in Fig. 6, may be adopted for the return cup 33. A web 26 is adapted to fit a groove 27 in the inner side 28, which is secured to the outer side 29 by rivets 30, and when the two parts are assembled they are secured together by screws or rivets at the holes 31.

It will be noted that by the construction

of my coin collector I provide a coin chute the sides of which are continuous from the slot where the coin is inserted to the point where it is held under the control of the magnet, and from that point to the return cup where it may be refunded to the subscriber. There are no obstructions at the entrance or exit to the coin chute, and when the cover is assembled over and incloses the frame and coin mechanism, any irregularities due to variation in process of manufacture or to its use or repair will and must necessarily be adjusted. Furthermore the box cover may be removed for the inspection of the mechanism, and when so removed the coin chute is intact from its entrance to its exit, so that the complete mechanism may be tested and operated. Upon replacing the cover the apparatus may be expected to perform its functions as when under test with its cover removed. Any slight irregularities in alinement between the projecting members, forming the entrance and exit of the coin chute, and the openings in the front wall of the cover, will be compensated for when the cover is put in place by the bending or giving from one side to the other of the frame or its projecting members.

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

1. In a coin collector, a back plate; a cover having openings therein for the projections of a coin chute mounted thereon; coin mechanism mounted within said cover; and a coin chute comprising a frame forming one side of the chute within the cover and both sides of the chute without the cover, and a plate mounted on said frame and forming the other side of the chute within the cover.

2. In a coin collector, a back plate; coin mechanism mounted thereon; a cover having openings therein through which the coin slot and refund cup of a coin chute project; and a coin chute comprising a frame and a plate, said frame forming one side of the chute within the cover and both sides of the coin slot and refund cup, and said plate forming the other side of said chute within the cover.

3. In a coin collector, a back plate; a coin mechanism mounted thereon; a cover having openings therein through which the coin chute projects; and a coin chute comprising a frame forming one side of the chute within the cover and both sides of the chute without the cover, and a plate mounted on said frame and forming the other side of the chute within the cover.

4. In a coin collector, the combination with a frame and a cover therefor, of a member secured to the frame and projecting through an opening in the cover, and a plate secured to the frame within the cover, the

said member having two sides forming an entrance to the coin chute and the said frame having a groove forming with said plate a continuation of said coin chute.

5 5. In a coin collector, the combination of a frame, a member secured thereto, and a plate, the said frame and plate forming the sides of a coin chute leading to said member, the said member having two sides forming
10 an opening to the coin chute, and the edge of said plate overlying the edge of one of the sides of said member.

6. In a coin collector, the combination of a frame, a member secured thereto, a plate
15 forming with the frame a coin chute, and a cover for the frame and plate having an opening through which said member extends, the said member having two sides forming an opening to the coin chute, and
20 the edge of said plate overlying the edge of one of the sides of said member.

7. In a toll box for telephone pay stations, the combination, with a metal frame forming a part of a coin chute, of a web extending therefrom, a coin slot member of insulating material having a groove into which
25 the web is adapted to fit, the said coin slot member and frame forming a continuous coin chute, and a cover for the frame having

an opening through which said member extends. 30

8. In a toll box for telephone pay stations, the combination with a metal frame and coin mechanism secured thereto, of a cover for said frame and mechanism, a member of insulating material secured to the frame and
35 extending through an opening in said cover, the said frame and member forming a continuous coin chute leading from the outside to the mechanism within the cover. 40

9. In a toll box for telephone pay stations, the combination with the metal frame having a web extending therefrom, a member of insulating material having two sides forming an opening to a coin chute and a
45 groove in one of the sides into which said web is adapted to fit, the said frame having a coin chute leading to said member, and a cover for said frame having an opening through which said member extends. 50

In witness whereof I hereunto subscribe my name this 4th day of February, A. D. 1909.

GEORGE LEONARD KLINE.

Witnesses:

F. R. MOTT,
JOS. J. MASON.