To all whom it may concern:

Be it known that I, GEORGE A. LONG, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Toll-Collecting Boxes, of which the following is a specification.

This invention relates to toll-collecting boxes primarily designed for telephone pay-stations, although limited to no specific use.

In the prior art known to me these boxes may be robbed with comparative ease, and the object of my invention is the provision of such a box provided with safe-guards which eliminate all danger of peculation, and ensure that when the collector withdraws a box from its receptacle the contents thereof will be preserved intact when delivered to the party having the key for unlocking the box to remove the deposits.

Other objects of the invention will hereinafter be set forth.

In the accompanying drawings, Figure 1 is a perspective view of a telephone pay-station to which the improvement is applied. Fig. 2 is a section on line 2—2 of Fig. 3; Fig. 3 is a section on line 5—5 of Fig. 2; Figs. 4, 5 and 6 are horizontal sections of the toll-box showing in plan various positions of the safe-guard mechanism; and Figs. 7 and 8 are detail views hereinafter described.

Like numerals designate similar parts throughout the several views.

Referring to the drawings, the numeral 1 designates the support to which the telephone-casing 2 is secured, and 3, a compartment in said casing, 4, the transmitter, 5, a cover for said compartment, said cover having a lock 6, and 7 the receiver suspended upon the usual hook 8.

In the casing 2 are the usual coin-chutes 9 provided at the top with numerals to indicate the value of the coin deposited, and common signal-devices (not shown) of any desired kind, and below the table 10 is the calling signal 11.

Designated in a general way by the numeral 12 is the toll-receiving box containing my improvements, and in the detachable top 12' of which is a slot 13 through which the coins deposited in the chutes 9 enter said box. On the underside of the top of the box is a slide or shutter 14 provided with a finger-opening 15 by which it may be manipulated, and with longitudinal slots 16 in its sides, through which pass guide-studs 17 in the top of said box. A V-shaped projection 18 constitutes a part of the slide or shutter, and when shifted its point enters a slot 12 in a flange 12 depending from the detachable top or cover 12', and subserves a purpose hereinafter stated. At one of its side edges the slide or shutter is provided with projecting lugs 19 and 20 pivoted at 21 to the under side of the top is a lever 22 having at one end a latch 23 and at its opposite extremity a second latch 24. From the second latch 24 the lever is laterally extended as at 25, and is provided with a projecting cam-shaped arm 26 for accomplishing a result hereinafter set forth. On the side opposite the lever 22 the edge of the slide or shutter is provided with ratchet-teeth 27 for cooperation with a pawl 28 pivoted to the underside of the cover.

Springs 29 and 30, respectively, tend to force the lever 22 and pawl 28 inward, and a coiled spring 31 secured at one end to a perforated lug 32 of the wall of the casing, and at its opposite extremity to a pin 33 on the slide 14 tends normally to force said slide downward upon its guide-pins unless restrained from such action in the manner hereinafter described. Part 26 of the lever 22 projects through a slot 34 in the end wall of the box, said part being disposed below the top of the slot, so that no interference with the lever may occur when said lever is in its normal position.

To prevent the entrance of a wire or other tool through the slot 34 a guard-flange 35 projects inwardly from the wall in which said slot is formed, so that there can be no interference with, or re-setting of the parts by unauthorized persons.

A lid or cover 36 closes the box, and is provided with a lock 37 having a special key in possession of a representative of the treasurer's office of the company.

A stationary cam 38 is formed on the inner side of the casing, and is provided with an inclined surface 39 and a locking-surface 40. In the operation of the invention it will be understood that two persons are necessary in the manipulation of the coin-receiving boxes,—i.e.,—the collector, who has a key fitting the lock of the cover 5, and the casing 2, who removes the box, and replaces it by another, and (2), the representative of the treasurer's office who has a different key for
unlocking the lid 36 to said box, who takes the contents therefrom, and then resets the safety devices to the positions represented in Fig. 4 by pulling the slide 14 longitudinally until the latch 23 of lever 22 snaps behind the catch-lug 19, of said slide, and the tooth of the pawl 28 passes below the catch-teeth 27. As the coin-box or drawer is pushed into its casing the lever 22 will be forced against the stress of spring 29 by cam 38, thus causing the latch 24 of said lever to be driven under the catch-lug 20 of said slide or shutter 14, and as the part 26 of said lever rides upon the stationary cam of the casing, and as it conforms to the part 40 thereof it will be seen that during the time the box 12 is within the casing the lever 22 will be locked against the stress of spring 29 with its catch-lug under the lug 20 of slide 14, thus holding said slide in the position represented in Fig. 5 with the slot 13 open in readiness to receive the coins passing through the chutes 9. When the day arrives for removing the box and replacing it with the slide 14, the collector 25 unlocks the cover 5 of the casing by his special key, and then pulls said box therefrom, and as the box is withdrawn the part 26 leaves the cam 38 and permits the lever 22 to be forced by spring 29 to the position illustrated in Fig. 6, thus releasing the slide 14 and permitting it to be shut by spring 31, the V-shaped nose of said slide entering the slot in flange 12, and preventing deflection of said slide, and the pawl 28 snapping over the top of said slide, as shown in Fig. 6. Should an obstruction be placed in the slot 13 to prevent the full of slide 14, then said slide will stop at a point where the nose of pawl 28 will be opposite the catch-teeth, and will snap into one of said teeth and prevent the slide from being pulled longitudinally to uncover the coin-slot. By providing the projection or nose 18 with sloping sides, as shown it will deflect a wire or other tool, and will prevent tampering with the devices on the under side of the cover of the box.

From what has been stated it will be seen that a system of safety-devices is provided which will resist all efforts of nefarious persons to obtain access to the contents of the coin-box.

Changes may be made in various details of the safe-guard devices, the invention not being limited to the precise construction illustrated and described.

It will be understood that the invention may be employed with various coin-controlled mechanism other than telephones, it being unlimited in respect to use.

Having thus described the invention, what I claim is:

1. The combination of a coin-receptacle having an opening, an automatically-operable shutter for said opening, and mechanism for holding the shutter in a retracted position, and operable to release the shutter to permit an advancing movement thereof and to also prevent full advancing movement of said shutter, said mechanism being also operable to release the shutter to permit a further advancing movement thereof.

2. The combination with a casing having a coin-receiving slot, of a receptacle insertible into said casing and also having a coin-slot, an automatically-closable shutter located in the receptacle for the slot therein, a device for locking said shutter in an open position, and means outside the receptacle for operating said device, the receptacle having an opening by which said operating means can obtain access to said device.

3. The combination, with a casing having a projection, of a coin-receptacle provided with a slot through which the coin is passed; an automatically-closable shutter for said slot; a movable device mounted in the receptacle, for locking the shutter in a position away from the slot; said receptacle having an opening to receive a part of said movable device and said part coating with the projection of the casing to release the shutter, and permit it to move longitudinally to an intermediate point, and also serving finally to release said shutter when the coin-receptacle is withdrawn from the casing.

4. The combination, with a coin-receptacle having an opening, of an automatically-closable shutter for closing said opening; a device housed by the receptacle for locking said shutter in its open position and accessible exteriorly of the receptacle; and means on the casing for actuating said device to release said shutter.

5. The combination, with a casing having a cam, said casing being provided with a slot, of a coin-receptacle insertible in the casing; an automatically-closable shutter; and a device in the coin-receptacle for locking said shutter in one position and adapted to be actuated by the cam to release the shutter.

6. A receptacle having a coin-receiving opening combined with a shutter having different stages of movement; a device for locking the shutter in its different stages of movement; and means for tripping said device at different times.

7. The combination of a casing having a coin-receiving opening, a coin-receptacle insertible into said casing and also having a coin-receiving opening; a shutter for the second opening, mechanism in the coin-receptacle for causing a step-by-step advancing movement of said shutter, and exteriorly accessible, and means supported by the casing, cooperative with said mechanism to cause one step of the shutter when the receptacle is introduced into said casing and a second step thereof when said receptacle is removed from said casing.
8. The combination, with a coin-box, having an opening, and a slotted flange adjacent to said opening, of a shutter having a V-shaped projection adapted to enter the slot in the flange; a latch for said shutter; means for tripping said latch; and means connected to the shutter for forcing the V-shaped projection thereof into the slot of the flange.

9. The combination, with a coin-box having an opening and a slotted flange adjacent to said opening, of a shutter having a V-shaped projection adapted to enter said slot in the flange; a latch for said shutter; means for tripping said latch; means connected to the shutter for forcing the V-shaped projection thereof into the slot of the flange; and a pawl movably mounted on the casing, and having a tooth serving to lock the shutter when in its closed position.

10. The combination, with a coin-box having an opening and a slotted flange adjacent to said opening, of a shutter having a V-shaped projection adapted to enter said slot in the flange; a latch for said shutter; means for tripping said latch; means connected to the shutter for forcing the V-shaped projection thereof into the slot of the flange; and a pawl movably mounted on the casing, and having a tooth serving to lock the shutter when in its closed position; and a ratchet-tooth on a part of the shutter with which the pawl will engage should the movement of the shutter be obstructed, and will prevent an opening movement of said shutter.

11. The combination, with a casing having a coin-receiving slot, of a receptacle adapted to enter said casing, and also having a coin-receiving slot; an automatically-closable shutter for the coin-receiving slot of the receptacle; means for locking said shutter open, and a device carried by the casing for releasing said locking means.

12. In coin-controlled apparatus; the combination, with a receptacle having an opening, of a shutter having a finger-grasp; a spring for normally forcing said shutter to a position to obstruct the opening; a latch for holding the shutter against the stress of the spring; a casing; means within the casing for tripping the latch; a pawl for locking the shutter in its closed position; and ratchet teeth on the shutter for engaging the pawl when the shutter is in an intermediate position.

13. In coin-controlled apparatus, the combination, with a receptacle having an opening, of a shutter in said receptacle having a finger-grasp, of a spring for normally forcing said shutter to a position to obstruct the opening; a latch for holding the shutter against the stress of the spring; a casing; means within the casing for tripping the latch; a pawl for locking the shutter in its closed position; and ratchet teeth on the shutter for engaging the pawl when the shutter is in an intermediate position.

14. In coin-controlled apparatus, the combination, with a receptacle having an opening and a shutter having a finger-grasp, of a spring for normally forcing said shutter to a position to obstruct the opening; a latch for holding the shutter against the stress of the spring; a casing; means within the casing for tripping the latch; a pawl for locking the shutter in its closed position; and ratchet teeth on the shutter for engaging the pawl when the shutter is in an intermediate position.

15. The combination, with a casing having a coin-receiving slot, of a receptacle adapted to enter said casing, and also having a coin-receiving slot; a shutter; a catch on said shutter; a lever pivoted to the receptacle, and having a latch for engaging the catch, said lever having an arm provided with a head adapted to engage the cam-shaped projection of the casing when the coin-receptacle is entered in said casing, thereby to release the shutter.

16. The combination, with a casing having a coin-slot, and a cam in said casing, of a receptacle also provided with a coin-slot; a shutter having a pair of catches; a lever pivoted in the receptacle and having a pair of latches; means for forcing the shutter longitudinally except when held by the latches; and a device on the pivoted lever, and adapted to engage the cam of the casing to operate said lever.

17. The combination, with a receptacle having a coin-receiving slot, and a slotted flange projecting from one wall of said slot; of means for actuating the shutter; and a V-shaped projection on the shutter adapted to enter the slot in the flange.

18. The combination, with a receptacle having a coin-receiving slot, of a shutter provided with ratchet teeth on one edge; a latch for said shutter; and a pawl adapted to enter said ratchet-teeth, and prevent movement of the shutter should it be stopped by an obstruction placed in the coin-receiving slot.

19. The combination, with a receptacle having a coin-slot, of a shutter having ratchet-teeth; a pair of catch lugs on said shutter; a movable lever having a pair of latches adapted to engage said catch-lugs; means for normally causing the shutter to close the coin-receiving slot; and means for tripping the lever.

20. The combination, with a casing having a coin-receiving slot, and provided with a slotted projection having a guard, of a movable shutter; a latch for said shutter, said latch having an arm projecting through the slot of the projection; and means for tripping the latch.

21. The combination, with a coin-receptacle having a slot, a shutter for said slot, and a pair of catch-lugs, of a pivoted spring-actuated lever having an arm; a slotted projection on the casing through which the arm passes; a guard-flange on said projection; a
spring for normally closing the shutter; and means for tripping the pivoted lever.

22. The combination, with a slotted casing of a shutter and with means for latching the same in an open position, of means for tripping the latch; and a pivoted lever operable independently of the latching means and having a pawl adapted to snap over the shutter, and to lock it in its closed position.

23. The combination, with a coin-receptacle having a slot, of a shutter slideable upon a wall of said coin-receptacle; a latch for holding said shutter away from the slot; a pivoted, spring-actuated lever having a pawl adapted to snap over the shutter; a spring for normally closing the shutter; and means for tripping the latch.

24. In coin-controlled apparatus, the combination, with a casing having a cam, of a slotted receptacle; a shutter slideable upon the under side of the top of said receptacle, and having a pair of catches; a pivoted, spring-actuated lever having a pair of latches, and a laterally-projecting arm; a slotted projection through which the arm passes; a head on the arm located within the exterior walls of the slot at a point not flush with the side of the casing, said arm being adapted to be engaged with the cam; a spring for normally closing the shutter; and a lock for said shutter when closed.

25. The combination, with a casing having a coin-slot, of a cam rigid with said casing; a slotted coin-receptacle; a shutter slideable upon a part of said coin receptacle, and having a pair of catches; of a slotted projection; a pivoted spring-actuated lever having a pair of latches, and provided with an arm passing through the slotted projection of the receptacle, said arm having a head adapted to engage the cam of the casing; a finger-grasp on the shutter; means for normally forcing the shutter to close the coin-receiving opening in the receptacle; and a lock for said shutter when closed.

26. In combination, with a toll-receiving box having a coin-slot, a sliding shutter on the inner side of the cover of said box, and adapted, when closed, to prevent a coin from passing through said slot; a spring for closing the shutter; a latch for locking the shutter in an open position; and a device for locking the shutter when in a closed position.

27. In combination, with a toll-receiving box having a coin-slot, a sliding shutter on the inner side of the cover of said box, and adapted, when closed, to prevent a coin from passing through said slot; a spring for closing the shutter; a latch for locking the shutter in an open position; a device for locking the shutter when in a closed position; a casing for receiving the box; and means in the casing for automatically tripping the latch.

28. The combination of a receptacle having an opening, a shutter for said opening and having means operatively associated therewith for positively advancing the same, and mechanism for fastening the shutter in a retracted position, and operable to release and afterward to prevent a full closing or advancing movement of, said shutter, said mechanism being enclosed by the receptacle and being accessible exteriorly thereof.

29. The combination of a receptacle having a coin-opening, a shutter for said opening, and having means operatively associated therewith for positively advancing the same, and mechanism for holding said shutter in a retracted position, operable to release and afterward to prevent a complete advancing movement of, the shutter, said mechanism being also operable to again release the shutter, being inclosed by and accessible exteriorly of the receptacle.

30. The combination of a receptacle having a coin-opening, a shutter for said opening, and a member for holding the shutter in a retracted position, said member having a movement in one direction to release and also prevent complete advancing movement of the shutter, and having a movement in the opposite direction to again release the shutter.

31. The combination of a receptacle having a coin-opening, a shutter for said opening and having means operatively associated therewith for constantly advancing the same, and a member pivotally mounted in the receptacle for holding the shutter in a retracted position, said member being adapted to swing in one direction to release and also prevent complete advancing movement of the shutter and having a swing in the opposite direction to again release the shutter.

32. The combination of a receptacle having a coin-opening, a shutter for said opening and having means operatively associated therewith for constantly advancing the same, and a member located in said receptacle and accessible exteriorly thereof, said member serving to hold the shutter in a retracted position and having one stage of movement to release the shutter and also prevent its full advancing movement, and having a second stage of movement to release said shutter whereby the latter may further advance.

33. The combination of a casing having a coin-receiving opening, a coin-receptacle insensible into said casing and also having a coin-receiving opening adapted to register with that in the casing, a shutter inclosed by the coin-receptacle for the opening therein, and controlling mechanism in the coin-receptacle for causing a step by step motion of the shutter, said mechanism being accessible exteriorly of the receptacle, and means supported by the casing and adapted to effect the operation of said controlling mechanism to secure one step of the shutter at approximately the time the said openings register.
and for causing a further step of the shutter when the receptacle is removed.

34. The combination of a coin-receptacle having an opening, a shutter for said opening, a lever mounted in the receptacle for holding the shutter in a retracted position, and having two stages of movement one to release the shutter and prevent its full advancing stroke, and the other to release the shutter to permit further advancing movement thereof, and spring means acting against said movable member to secure the second movement thereof.

35. The combination of a coin-receptacle having an opening, a shutter for said opening, and a movable member mounted in the receptacle for holding the shutter in a retracted position, said member having two stages of movement one to release the shutter and prevent its full advancing stroke, and the other to release the shutter to permit

36. The combination of a coin-receptacle having an opening for the passage of coin, a shutter in the receptacle for said opening, mechanism inclosed by the receptacle for causing a step by step movement of the shutter, said mechanism being accessible exteriorly of the receptacle, and means inclosed by the receptacle for positively preventing retractive movement of the shutter at the completion of its steps of operation.

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

GEORGE A. LONG.

Witnesses:
Wm. H. Blodgett,
F. E. Anderson.