No. 696,194. Patented Mar. 25, 1902.

A. C. ROGERS.

SAFETY DEVICE FOR COIN RECEPTACLES.

(Application filed Feb. 21, 1901.)

(No Model.) 2 Sheets—Sheet 1.

FIG. I.

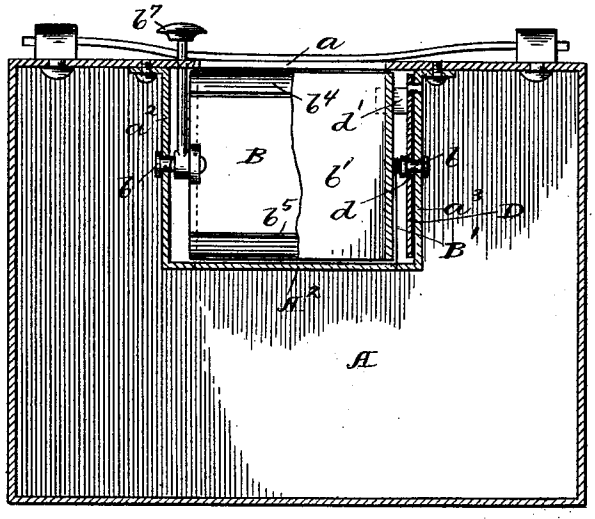


FIG. II.

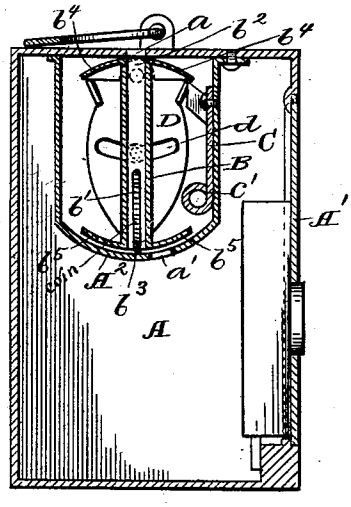


FIG. IV.

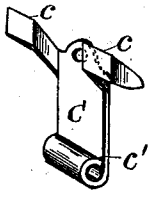


FIG. V.

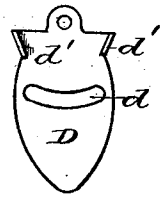
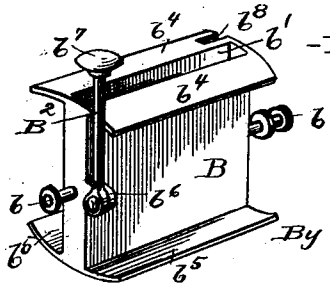


FIG. III.



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FIG. VI.

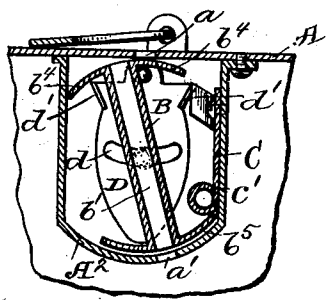


FIG. VII.

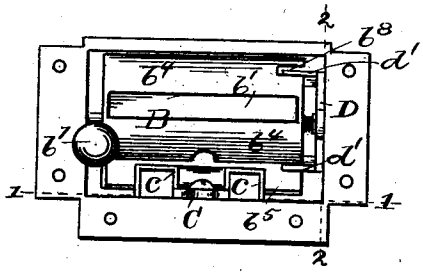


FIG. VIII.

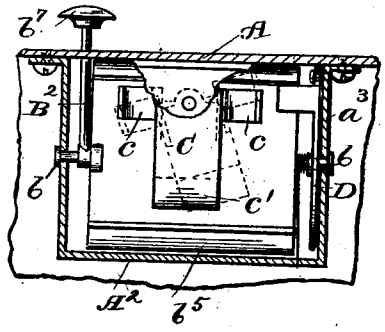


FIG. IX.

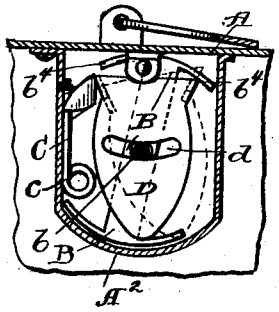
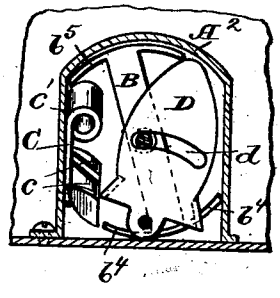


FIG. X.



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UNITED STATES PATENT OFFICE.

ARTHUR C. ROGERS, OF COLLINWOOD, OHIO.

SAFETY DEVICE FOR COIN-RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 696,194, dated March 25, 1902.

Application filed February 21, 1901. Serial No. 48,243. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. ROGERS, a citizen of the United States, and a resident of Collinwood, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Safety Devices for Coin-Receptacles, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to safety devices for application to coin-receptacles for preventing the removal of coins from the latter in any manner excepting that especially provided. Said invention consists of means hereinafter fully described, and particularly pointed out in the claims.

The annexed drawings and the following description set forth in detail one mode of carrying out the invention. The described means, however, constitute but one of various ways in which the principle of the invention may be used.

In said annexed drawings, Figure I represents a longitudinal partial cross-section of a coin-receptacle to which my invention has been applied. Fig. II represents a transverse section of such receptacle. Fig. III represents a perspective view of the coin-conveyer and parts connected therewith employed in my invention. Fig. IV represents a perspective view of one of the locking-pawls employed in said invention, and Fig. V represents a second such pawl. Fig. VI represents a detail transverse section illustrating the coin-conveyer in a position different from that illustrated in Fig. II. Fig. VII represents a plan view of the safety device detached from the coin-receptacle. Fig. VIII represents a partial broken longitudinal section of the coin-receptacle, showing the safety device partly in section and partly in elevation, such section being taken upon the plane indicated by line 1 1, Fig. VII. Fig. IX represents a section taken upon the line 2 2, Fig. VII. Fig. X represents a section similar to that shown in Fig. IX, illustrating the device in an inverted position.

The receptacle A is provided with a lateral opening for the authorized removal of coins, said opening being closed by means of a door A′, having a lock for securing same. The top plate of the receptacle A is provided with a longitudinally-placed receiving-slot a, adapted to receive the coins which it is desired to deposit in said receptacle. Immediately below, surrounding said slot and secured to the lower surface of said plate, is a casing A^2, provided in its lower portion with a discharge slot or opening a'.

Hung upon trunnions b, pivoted in bearings formed in the lateral walls a^2 and a^3 of the casing A′, is a coin-conveyer B, formed with a coin-duct b', passing completely therethrough, so as to form a separate receiving and discharge opening b^2 and b^3, respectively, in said conveyer. Said conveyer is so located as to permit the registration of its discharge and receiving openings with the discharge and receiving openings a and a', respectively, of the coin-receptacle, as will hereinafter appear. Said openings a and a' are in planes located in a manner such as to prevent simultaneous communication of said duct with both such openings—that is, to effect the closure of one conveyer-opening during the registration of the other with the contiguous receiver-opening, as shown in Figs. II and VI. The closing of one or the other of the openings of the conveyer is determined by the position of the latter according as it is oscillated. Laterally of each conveyer-opening are provided flanges b^4 and b^5, which are adapted to obstruct the receiving and discharge openings a and a' of the receptacle at such times as their respective contiguous openings are out of communication with their contiguous receptacle-openings. Said conveyer is held normally in the position illustrated in Fig. VI by a spring B′ of any suitable construction, in which the receiving-openings of the receptacle and conveyer are shown out of communication with each other, thereby normally presenting a closed receiving-opening in the said receptacle, as illustrated. Formed upon the conveyer near its lateral central portion is a lug b^6, to which is secured the lower end of an operating-stem B^2, whose upper end extends through a suitably-located aperture in the upper plate of the receptacle, such upper end being provided with a button b^7, adapted to

receive the pressure of the hand. By means of such stem and pressure exerted upon its upper end it is seen that the coin-conveyer may be oscillated upon its trunnions, the spring B′ effecting one stroke of such oscillation. The flanges b^4 and b^5 are made of a length such as to permit the desired length of oscillatory stroke without contacting the casing A^2.

Pivoted upon the inner surface of the front wall of the casing A^2 is a freely-swinging pawl C, having two laterally-extending wings c and a downwardly-extending weighted arm C′. Said pawl is located in a manner such that when the receptacle is in a normal—that is, a substantially horizontal position—the location of the wings will be such as to fall below and out of the path of movement of the upper contiguous flange b^4, as shown in Fig. VI. Such pawl does not in consequence obstruct the oscillation of the coin-carrier when said receptacle is in its normal position. The location of said pawl is, further, such that upon the occupation of the receptacle of a non-normal or tilted position, which will effect the swinging of said pawl upon its pivot as a result of the action of gravity, one of the lateral wings c will be caused to project itself into the path of oscillatory movement of the flange b^3 referred to, and thereby prevent the movement of the coin-conveyer upon its trunnions, such obstructing position being illustrated in Fig. X, in which the receptacle is illustrated as occupying its extreme non-normal or inverted position. In order, however, to cause said pawl to become operative, the inclination of the receptacle must take place in a plane which is substantially not perpendicular to the plane of oscillation of the pawl, as is readily understood.

Laterally of the coin-receiver and hung upon a pivot secured near the upper portion of the inner surface of the lateral wall a^3 of the casing A^2 is hung a second pawl D, having a plane of oscillation substantially at right angles to that of pawl C. Said pawl D is provided with a segmental slot d, provided for the passage of the contiguous trunnion, so as to prevent the interference of the latter with the oscillation of the said pawl, and two wings d', located so as not to intersect the path of oscillation of the upper flange b^4 of the coin-receiver when the receptacle is in its normal position. The location of said wings is, however, such that upon the occupation of said receptacle of a non-normal position one of said wings will be projected into the path of oscillation of said conveyer, the construction illustrated showing an arrangement whereby one wing may be caused to project itself into the path of the end of flange b^4 on one side of the coin-duct and the other be caused to project itself into a slot b^8, located in said flange on the other side of said duct, as shown in Fig. VII. Said pawl D is hung similarly to pawl C, whereby it is caused to freely swing by the action of gravity upon the inclination of the coin-receptacle in a plane other than that perpendicular or substantially perpendicular to the plane of oscillation of said pawl D. It is therefore seen that the tilting or inclination of the coin-receptacle in any plane or direction will effect the oscillation of one or the other of the locking-pawls C or D, thereby automatically effecting by the action of gravity upon said pawls the locking of said conveyer against movement.

In normal operation the receptacle occupies a substantially horizontal position and the conveyer occupies the position illustrated in Fig. VI. When it is desired to deposit a coin in the receptacle, the stem B^2 is depressed, thereby turning the conveyer upon its trunnions, bringing the receiving-opening of the coin-duct into communication with the receiving-slot of the receptacle, and simultaneously effecting the closure of the discharge-opening of said duct, thereby preventing communication of the latter with said receptacle. The coin is then dropped into the receiving-opening of the receptacle, through which it passes into the receiving-opening of the duct, dropping therefrom to the lower or discharge portion of the latter and resting upon the obstructing portion of the contiguous lower casing-wall, Fig. II. Upon the release of the stem the spring B′ returns the conveyer to its initial position, thereby effecting the closure of the receiving-opening of the duct and the receiving-slot of the receiver and bringing the discharge-opening of the duct and the discharge-opening of the receiver into communication with each other, whereby the coin is permitted to drop from the conveyer into the receptacle. In the event of an attempt to remove coins from the interior of the receptacle through the coin-conveyer by means of inverting or inclining the receptacle from its normal position one or both of the locking-pawls, depending upon the direction of inclination, will assume an operative position in which it or they will engage the conveyer, preventing the movement thereof required to bring the receiving-opening of the duct into communication with the receiving-opening of the receptacle, and hence the communication of the interior of the receptacle with the exterior thereof. Such prevention of movement is maintained as long as the receptacle occupies its non-normal position. The relative positions of the locking-pawls and the coin-conveyer when the pawls are in their operative position are shown in Figs. VIII and IX, such position of the pawls being indicated in said figures by dotted lines. Any coin which by manipulation, such as shaking or inverting the receptacle, may have been inserted in the conveyer while the receptacle is in a non-normal position will while the receptacle is being moved into the normal position in

order to effect the inoperativeness of the locking device be discharged back again into the receptacle. The relative positions of the receiving and discharging slots of the receptacle and the conveyer are such as to prohibit the introduction into and withdrawal from the receptacle of any instrument for the purpose of removing or abstracting coins other than through the opening therefor provided. It is hence seen that the construction above described is such as to prevent the extraction of coins from the receptacle through the medium of the coin-conveyer.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any one of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention—

1. The combination of a coin-holding receptacle having a coin-receiving opening, a coin-conveying duct movable into and out of communication with said opening, means for automatically locking said duct against such movement, and means for preventing the discharge of a coin from said duct during the communication of said opening with said duct.

2. The combination of a coin-holding receptacle having a coin-receiving slot, a coin-conveying duct having a receiving and a discharge opening and movable into and out of communication with said slot, means for automatically locking said duct against such movement, and means for obstructing the discharge-opening of said duct during the communication of said receiving-opening with said slot.

3. The combination of a coin-receptacle having a receiving-slot, a movable coin-conveyer provided with a coin-duct passing therethrough and having a separate receiving and discharge opening respectively located at opposite ends of said conveyer, means for moving said conveyer into and out of communication with said slot, and a lock for securing such conveyer against such movement.

4. The combination of a coin-receptacle having a receiving-slot, a movable coin-conveyer having a coin-duct passing therethrough and provided with a separate receiving and discharge opening respectively located at opposite ends of said conveyer, means for moving said conveyer into and out of communication with said slot, and gravity-operated means for locking such conveyer against movement and arranged in a manner such as to cause it to be operative when said receptacle is in a non-normal and inoperative when said receptacle is in a normal position.

5. In a safety device for coin-receptacles, the combination with a movable coin-conveyer of two automatically-operating locking devices having different planes of movement and adapted to engage and secure said conveyer.

6. In a safety device for coin-receptacles, the combination with a movable conveyer, of two oscillatory devices having oscillatory paths in intersecting planes, each said path intersecting the conveyer-path.

7. In a safety device for coin-receptacles, the combination with a movable conveyer, of two oscillatory, freely-swinging pawls each having a path of oscillation intersecting that of said conveyer, and each adapted during such intersection to prevent movement of the latter.

8. The combination of a coin-receptacle having receiving and discharge openings, a movable coin-conveyer provided with a coin-duct passing therethrough and having separate receiving and discharge openings respectively located at opposite ends of such conveyer, such openings adapted to register with the receptacle-openings respectively, the latter openings being in planes located in a manner such as to effect the closure of one conveyer-opening during registration of the other with a receiver-opening.

9. The combination with a coin-holding receptacle having a coin-receiving opening provided with a casing secured upon its interior, having a discharge-opening and surrounding said receiving-opening, of a positively-operated oscillating coin-conveyer mounted in said casing and provided with a coin-duct passing therethrough and having a separate receiving and discharge opening respectively located at opposite ends thereof, said conveyer adapted to be moved into communication with said receptacle and casing openings in a manner such as to effect the closure of one conveyer-opening during registration of the other with either the receiver or casing opening.

10. In a coin-holding device, the combination with a coin-holding receptacle having a coin-receiving opening and provided with a casing secured upon the interior provided with a discharge-opening and forming an inclosed chamber surrounding and inclosing said receiver-opening, of a coin-conveyer pivotally mounted therein and provided with means for positively oscillating same, such oscillation being such as to effect a registration of the conveyer receiving-opening with the receptacle-opening during non-registration of the conveyer discharge-opening with the casing-opening, and to effect the registration of the conveyer discharge-opening with the casing-opening during non-registration of the conveyer receiving-opening with the receptacle-opening.

11. In a coin-holding device, the combination of a coin-holding receptacle having upon its interior an inclosed chamber provided with a receiving and discharge opening commu-

nicating respectively with the exterior and interior of the receptacle, a coin-conveyer pivotally mounted within such chamber and having a coin-duct provided with a separate receiving and discharge opening and provided with means for its positive oscillation, and gravity-operated means having a path of oscillation intersecting that of said conveyer so as to be capable of locking same against oscillation when the receptacle is tilted.

Signed by me this 14th day of February, 1901.

ARTHUR C. ROGERS.

Attest:
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A. E. MERKEL.