

Jan. 17, 1933.

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1,894,823

COIN RECEPTACLE

Filed Sept. 11, 1930

FIG. 4

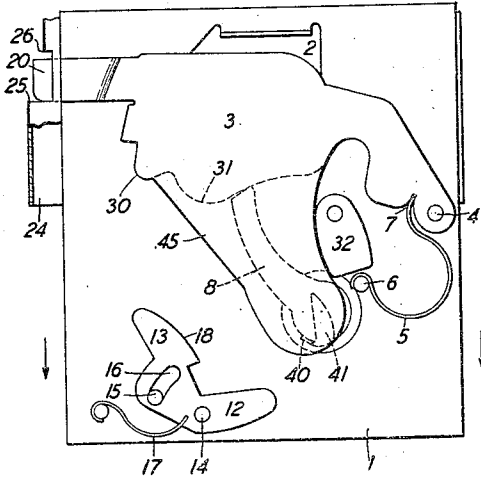


FIG. 3

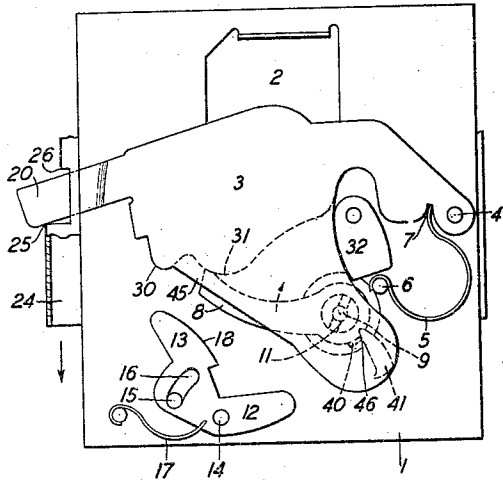


FIG. 2

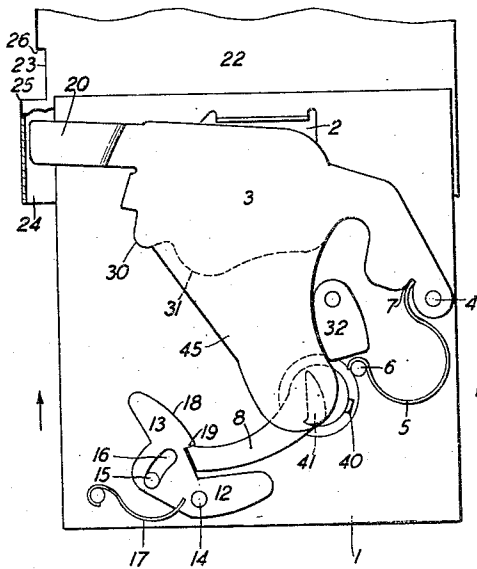
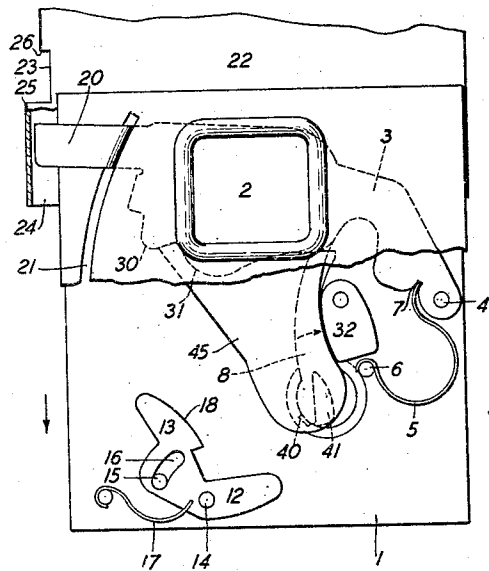


FIG. 1



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COIN RECEPTACLE

Application filed September 11, 1930. Serial No. 481,162.

This invention relates to coin receptacles and more particularly to self-locking detachable cash boxes for use with coin collectors for telephone systems but is not limited exclusively for such use.

The object of this invention is to provide a positive and simple locking device which operates upon the withdrawal of the coin receptacle from its housing to close and lock the coin opening therein.

In accordance with the above object this invention provides an improvement in a coin receptacle of the type shown in Patent 1,121,063 to W. O. Beck, December 15, 1914 which describes and claims a coin receptacle having a cover provided with a coin receiving opening, a closure therefor and a lock controlled by the closure. The lock comprises a lever which is caused to follow the closure and lock it in its closed position by the action of a spring only. If for any reason the lever becomes fouled or fails to operate the closure will remain unlocked when the coin receptacle is removed from the housing.

A feature of the present invention provides an arrangement whereby the locking lever if fouled is engaged by the closure and caused to positively follow it into locked position as the coin receptacle is withdrawn from its housing.

Specifically the closure and locking lever are each provided with projections which upon the release of the locking lever when the coin receptacle is inserted in its housing describe the same path, the projection on the closure following that of the lever and engaging it if necessary to cause the lever to positively follow the closure upon the withdrawal of the receptacle from its housing.

The above objects are attained by the mechanism illustrated in the accompanying drawing in which:

Fig. 1 is a plan view of the coin receptacle cover, part of the upper wall being broken away to show the position of the various elements when the coin receptacle is locked upon the removal from its enclosed casing;

Fig. 2 is a plan view of the cover, with the entire upper wall removed, showing the posi-

tion of the elements as the coin receptacle is about to be inserted in its casing;

Fig. 3 is a plan view of the cover with the entire upper wall removed to show the position of the elements when the coin receptacle is partially withdrawn from the casing; and

Fig. 4 is a plan view of the cover with the entire upper wall removed showing the position of the elements when the coin receptacle is nearly withdrawn from the casing.

The coin receptacle (not shown) is accompanied by a cover 1 which is provided with a coin opening 2 through which coins deposited in the coin collector pass on their way to the coin receptacle. Within the cover 1 is located a mechanism for closing the coin receiving opening 2 when the coin receptacle is without its casing in the coin collector. This mechanism comprises a pivoted shutter 3 adapted to rotate about a pivot 4. A spring 5 engaging a notch 7 in the shutter 3 and held at its other end by a pin 6 tends to force the shutter 3 over the coin receiving opening 2. The spring 5 serves the purpose of insuring the closing of the opening 2 when the coin receptacle is not in service, and thus prevents foreign substances from entering the cash box. It is not essential to the operation of the mechanism and may be omitted. When the shutter 3 is over the opening 2, it may be locked in this position by a pivoted member or locking lever 8 pivoted at 9 and under the tension of a spring (not shown) which tends to rotate it in the direction of the arrow shown in Figs. 1 and 3. The locking lever 8 may be manually retracted from the position shown in Fig. 1 to the position in Fig. 2 by means of a key or other suitable means (not shown) which is adapted to engage a key slot 11 (see Fig. 3) accessible only from the under side of the cover. As shown in Fig. 2 the locking lever 8 is held in its retracted position by means of a pawl 13. The pawl 13 is pivoted at 14 and is limited in its movement by a pin 15 engaging the edges of a slot 16 thereon. A spring 17 tends to keep the rear edge of the slot 16 in contact with the pin 15 as shown in the accompanying figures. When the locking lever 8 is manually retracted against the pressure of

its spring (not shown) the free end thereof will engage the surface 18 of pawl 13 thereby retracting the latter against the pressure of its spring 17. After the free end of the locking lever 8 has passed the surface 18, the spring 17 will again advance the pawl 13 until a hook portion 19 thereof engages the end of the locking lever 8 as shown in Fig. 2. The locking lever 8 is thereupon held retracted or in unlocked position until released as hereinafter described.

The pivoted shutter 3 is provided with an arm 20 which extends upwardly from the inside of the cover 1 to the outside thereof through a slot 21 and then laterally beyond the edge of the cover 1 as shown in Fig. 1. Integral with or attached to the inclosing casing (not shown) is a retaining member 22 which through engagement with the cover 1 holds the coin receptacle within the casing. At one side the retaining member 22 is provided with an opening 23 through which the arm 20 may extend. The opening 23 is partially closed by a laterally extending pocket 24 of the retaining member 22. The rear edge 25 of the pocket 24 is adapted to engage the arm 20 when the cash box is being withdrawn from the retaining member 22 to rotate the shutter 3 to a position before the opening 2. Shutter 3 is likewise provided with a projection 30 which is adapted when the shutter 3 is rotated about its pivot 4 on withdrawal from before the coin receiving opening 2, to engage the surface 18 of the pawl 13. The further turning of the closure 3 rotates the pawl 13 about its pivot 14 until the hook 19 releases the locking lever 8 which thereupon advances to a position against the projection 31 of the shutter 3 as shown in Fig. 3. As the coin receptacle is withdrawn the shutter 3 is returned by force of spring 5 so as to cover the opening 2. The locking lever 8, due to the pressure of its spring (not shown), will follow the shutter 3 and when the opening 2 is completely covered will assume an approximately perpendicular position relative thereto resting against the stop 32. The shutter 3 is thereupon locked over the coin receiving opening 2 until the locking lever 8 is manually retracted. A shield 45 is attached by welding or other means to the closure 3 in order to prevent tampering with the locking lever 8.

The above described mechanism is substantially the same as that shown and described in the above mentioned Patent 1,121,063 to W. O. Beck. In the improved device which is the subject of this invention should the locking lever spring (not shown) for any reason fail to cause the locking lever 8 to follow the shutter 3 to the locking position there are provided means which will insure such an action. Projection 40 which is attached by welding or other means on the upper side of the locking lever 8 extends up-

ward to the under side of the shield 45 which is attached to the shutter 3. The cam-like projection 41 is attached to the under side of the shield 45. These projections are so shaped and positioned with respect to each other that the shutter 3 is not permitted to close unless the locking lever 8 follows it for practically its entire length of travel to its closed position. A projection 12 on the pivoted pawl 13 is provided to so position the projections 40 and 41 with respect to each other that projection 40 will be engaged by projection 41 when the shutter is being closed.

The construction and adjustment of the various elements are such that in the ordinary operation of this device when the coin receptacle is inserted into the casing through the appropriate opening (see Fig. 2) the portion 20 of the pivoted shutter 3 passes inside the pocket 24 and projects through the opening 23. On further insertion the projection 20 engages the rear end of the opening 23 at 26 and if the cash box is forced into place in the direction shown by the arrows in Fig. 2, the shutter 3 is removed from before the opening 2 by means of the end 26. As the cash box is being moved within the casing, the shutter 3 being removed from over the opening 2, projection 30 is caused to engage the pawl 13 at 18 and release the locking lever 8. On withdrawal of the coin receptacle as shown in Fig. 3, the edge 25 bears against the arm 20 and forces the shutter 3 over the opening 2. As the shutter proceeds to this position the locking lever 8 follows it by reason of its spring (not shown). The arm 20 of the shutter 3 and the pocket 24 are so proportioned that the arm 20 projects too far through the opening 23 (see Fig. 3) to allow the cash box to be removed from the retaining member 22 unless the shutter 3 has been removed to a position (see Fig. 4) such that the locking lever 8 assumes approximately a perpendicular position relative thereto. When the coin receptacle is removed from its casing the elements are in the position shown in Fig. 1.

Ordinarily the device operates as above described but occasion arises when the force of the locking lever spring (not shown) for some reason is insufficient to force the locking lever 8 to follow the shutter 3 to its closed position. Assuming that such a condition exists the operation of the mechanism is as follows. As shutter 3 is being removed from before the opening 2 by means of the end 26, on insertion of the coin receptacle into its casing projection 30 is caused to engage the pawl 13 at 18 thus forcing the latching pawl 13 away from the end of the locking lever 8 and releasing it at 19. At the same time projection 12 moves downward against lever 8 and forces it to rotate about its axis. This slight amount of rotation results in so

positioning the projection 40 that it will be engaged by the cam-like projection 41 when the shutter is being closed. On withdrawal of the coin receptacle as shown in Fig. 3 the edge 25 bears against the arm 20 and forces the shutter 3 over the opening 2. The cam shaped projection 41 which was placed in a position to the rear of projection 40 by means of projection 12 on the pawl 13 and out of contact with it engages the latter projection at 46. As the closure 3 is further forced over the opening 2 by means of the edge 25 bearing on arm 20 as the coin receptacle is being withdrawn, the projection 41 by its shape and position on shutter 3 forces the projection 40 aside. This causes the locking lever 8 to rotate about its pivot 9 and follow the shutter 3. The cam shaped projection 41 is so shaped and placed with respect to projection 40 that it causes the locking lever 8 to follow closely the shutter 3. Upon further withdrawal the elements assume the position shown in Fig. 4. The coin receptacle has almost been withdrawn from its casing and the arm 20 is in such a position that it is about to pass inside the pocket 24. The cam-like projection 41 has forced the projection 40 and consequently the locking lever 8 about its pivot 9 so that the latter is now in such a position that it will lock the shutter 3 over the opening 2. Thus these projections insure positive locking of the shutter 3 in front of the opening 2 before the coin receptacle can be removed from its casing. Upon removal, the coin receptacle may be opened by an authorized person after which the mechanism is manually set for reinsertion into the enclosed casing as hereinbefore described.

What is claimed is:

1. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, a locking lever for locking said shutter in closed position and means on said shutter to compel said locking lever to follow said shutter for substantially its entire length of travel from its open to its closed position.

2. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, a locking lever for locking said shutter in closed position, a projection on said lever, and means on said shutter engaging the projection on said lever to compel said lever to follow said shutter for substantially its entire length of travel from its open to its closed position.

3. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, locking means for said shutter comprising a lever, a lug projecting at right angles from the face of said lever and means on said shutter to engage said lug and compel said

locking lever to follow said shutter for substantially its entire length of travel from its open to its closed position, said means consisting of a cam.

4. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, means for locking said shutter in closed position said means comprising a lever adapted to follow said shutter to its closed position and means on said shutter adapted to rotate said locking lever to lock said shutter.

5. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, locking means for locking said shutter in closed position, and a cam on said shutter adapted to engage said locking means and compel said means to follow said shutter for substantially its entire length of travel from its open to its closed position.

6. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, a pawl adapted to follow said shutter from its open to its closed position and means on said shutter adapted to follow said pawl when said shutter is moving to its closed position.

7. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, a pawl adapted to follow said shutter from its open to its closed position and means on said shutter adapted to follow and engage said pawl when said shutter is moving to its closed position.

8. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, a locking lever for locking said shutter in closed position, a projection on said lever, a projection on said shutter engaging the projection on said lever to compel said lever to follow said shutter for substantially its entire length of travel from its open to its closed position and means for so positioning said projections that they will properly engage.

9. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening and means for locking said shutter in its closed position, said means comprising a lever, a projection on said lever, a cam on said shutter adapted to engage said projection and means under the control of said shutter for so positioning said projection on said lever with respect to said cam that they will properly engage.

10. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, a locking lever for locking said shutter in closed position, means for holding said locking lever in unlocked position, means on said shutter to release said locking lever from

said holding means, and means integral with said holding means and under the control of said shutter to give said locking lever an initial start toward said shutter on being released from said holding means.

11. A coin receptacle comprising a box, a cover therefor having a coin receiving opening therein, a shutter for said opening, a lever pivoted at one end, the free end of said lever being adapted to engage said shutter and lock it in closed position, a projection on the pivoted end of said lever and a cam on said shutter to engage said projection and rotate said lever into locking position with said shutter.

In witness whereof, I hereunto subscribe my name this 5th day of September, 1930.

FREDERICK A. HOYT.