Nov. 18, 1930. E. J. FISHER 1,781,920

SAVINGS BANK

Filed Oct. 8, 1929

Fig. 1

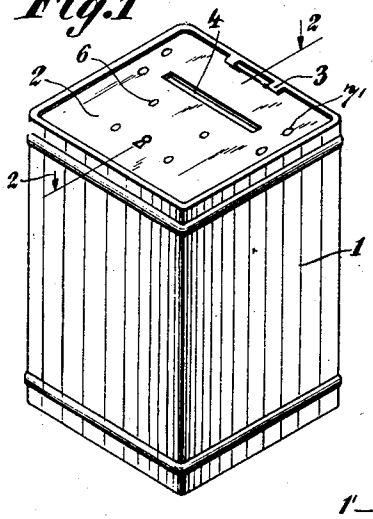


Fig. 2

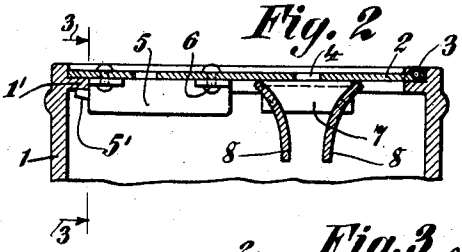


Fig. 3

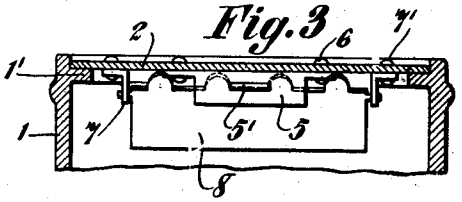


Fig. 5

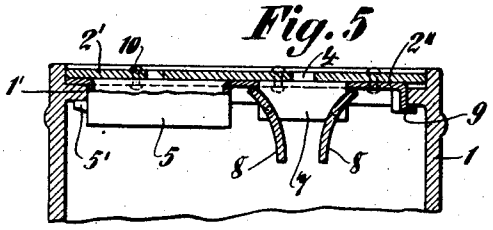


Fig. 4

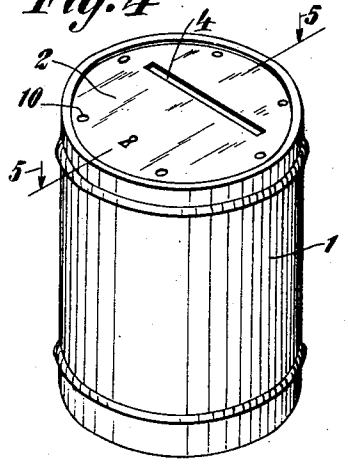


Fig. 6

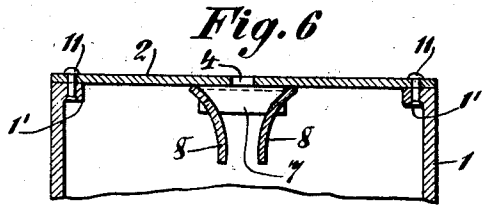


Fig. 7

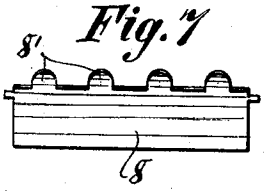


Fig. 8



Fig. 9

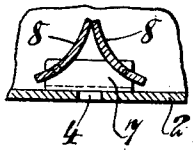
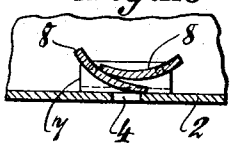


Fig. 10



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Patented Nov. 18, 1930 1,781,920

UNITED STATES PATENT OFFICE

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SAVINGS BANK

Application filed October 8, 1929. Serial No. 398,126.

My invention relates to receptacles having an opening at the top for the admission of specified articles thereinto and provided with means for making the removal of these articles through this opening difficult if not impossible. More specifically, the invention is for savings banks having a cover with a slot therein for the ingress of coins which may not be readily removed through this slot because of a guarding mechanism actuated by gravity.

While it is an object of the invention to produce such a receptacle or savings bank in a simple and rugged manner, at little cost, the main object is to provide an efficient guard for the opening or slot. The improvement consists, broadly, in so forming the guard that it will block the passage through the opening or slot, when the receptacle or savings bank is inverted, owing to the action of gravity on the guard, without fail and promptly. This I have accomplished by bringing the centers of gravity of the elements constituting the guard close to the opening or slot, as will become clear after perusal of the specification which follows and inspection of the drawing annexed hereto.

In the drawing, Figure 1 is a perspective view of a rectangular receptacle with a hinged cover and provided with locking means. Figure 2 is a cross section taken along the line 2—2 of Figure 1. Figure 3 is a cross section taken along the line 3—3 of Figure 2. Figure 4 is a perspective view of the preferred form of my invention, the receptacle (which may be of any form, rectangular, cylindrical, barrel shaped, or designed to suit any purpose) having a removable top cover of special construction, including a locking device. Figure 5 is a cross section taken along line 5—5 of Figure 4. Figure 6 is another modification of my invention, shown only partially and in cross section, the top cover in this case being non-removable, means for removing the contents of the receptacle being provided elsewhere therein, at the bottom or at the side, not shown. Figure 7 is a detail of one of the plates constituting the guard. Figure 8 is a similar detail, the difference between the plates in Fig. 7 and Fig. 8 being that, in Figure 7, some of the metal has been removed from the top end of the plate to lower the center of gravity, this being the preferred form of the guard plates. Figure 9 is a detail showing, in cross section, the position of the guard plates when the receptacle is turned upside down, this position of the plates being due to the action of gravity. Sometimes, instead of the plates meeting, as in Figure 9, they may overlap, as shown in Figure 10.

Referring to the figures in detail, and more specifically to Figures 1, 2 and 3, 1 is a rectangular receptacle provided with a top cover 2 hinged to the receptacle at 3 and having a slot 4 for the admission of coins. A lock containing chamber 5 is secured to the cover 2 by any suitable means, such as, for instance, rivets 6. The spring actuated bolt 5′ is operated in the usual manner by means of a key inserted in the key hole provided on top of the lock chamber. The walls of the receptacle 1 have a flange 1′ at the top designed to have the cover 2 rest thereon. The cover is removably held in place and locked in position by the bolt 5′ projecting under the flange 1′. When the key is turned in the key hole, the bolt is withdrawn, releasing the cover at the end opposite the hinge. Lugs or brackets 7 are secured to the underside of the cover 2 by means of rivets 7′, at the ends of the slot 4. These lugs or brackets 7 constitute bearings for the two plates 8 which are pivoted therein for rotation about axes which are above their centers of gravity when the receptacle is in its upright position. Portions of the metal are cut away from the top end of the plates 8 to form extensions 8′ of the plates proper, in order to bring the centers of gravity lower. The plates are bent, as may be seen in Figure 2, in such a manner as to present their convex sides to the slot. This is an important feature of the invention, as will be later explained.

Passing now to the preferred form of the invention, illustrated in Figures 4 and 5, the receptacle 1 is shown as of cylindrical shape, although the construction is in no way limited to this or any other particular shape of the container. It has a similar flange 1′ at the top of the wall, but the cover is not hinged as

in the preceding illustration. The cover is removable as a whole. Instead of the single layer for the top, the cover in this case is made up of two layers, 2′ and 2″, which will be referred to as the top layer and bottom layer. The two layers are secured to one another by means of rivets 10. The cover is held in place and locked in position by the lugs 9 projecting from the lower layer 2″ underneath the flange 1′, and the bolt 5′ of the lock 5, also projecting underneath the flange 5′, while the upper layer 2′ is wide enough to cover the flange 5′ on top. To remove the cover, the bolt 5′ is withdrawn, as in the case illustrated in Figs. 1–3, and the cover is then easily slipped out of the receptacle. In practice, the bottom and the walls of the lock chamber 5 are stamped out of the plate constituting the lower layer 2″, the top layer 2′ acting also as the top of the lock chamber. Likewise, the lugs 9 are stamped out of the layer 2″, and so are the lugs 7 which form the bearings for the guard plates 8. In this manner, all means for attaching the various parts of the mechanism underneath the cover are eliminated and all that is needed is to rivet the two layers 2′ and 2″ together, as shown. This makes a very simple, permanent and cheap construction. The construction of the guard plates is the same as before.

In the modification illustrated in Figure 6, the cover, being permanently secured to the walls of the container, needs no lock. It consists of a single layer, as in the case illustrated in Figures 1 to 3. The cover is secured to the container in any convenient manner, as, for example, by means of rivets 11 attaching the cover to the flange 1′. If it is desired to remove the articles introduced into the container, some independent means must be provided, such as a removable bottom, for instance. No means is shown here because this feature constitutes no part of the invention.

Guard plates have been used before to prevent the egress of the coins from the coin receptacle, but, as far as I am aware, the plates were either flat, i. e. plane surfaces, or curved in such a manner as to present a concave side to the slot. The result was that the centers of gravity of the plates were unduly removed from the slot, whereas they should be as close as possible, in order to precipitate the action of blocking the egress of the coins, as is the case in the present invention in which the plates present their convex sides to the slot. It should be noted that, when one tries to remove the coins from the receptacle, the receptacle is turned upside down, upon which the guard plates or tumblers, as they are sometimes called, fall over the slot and prevent the removal of the coins. Now, the closer are the centers of gravity of the plates to the slot, the quicker and the more certainly will the plates tumble into either one of the two positions shown in Figures 9 and 10. In the present invention, this much desired result is secured by the fact that the plates are bent away from the slot (i. e. present a convex surface to the slot), the center of gravity of each plate being approximately at the apex of curvature, i. e. as near to the slot as possible.

In the above description and in the drawing, for the purpose of illustration only, the receptacles are shown as being savings banks, and the openings in the top as slots for the admission of coins, but it must be clear that the invention is not limited to banks or slots, and that any receptacle and any shape of opening may be used with the construction, in principle, as shown, the form of opening being made to suit the shape of the article introduced into the container.

I claim:

1. In a receptacle provided with an opening at the top for the admission of specified articles thereinto, a guard for said opening comprising two plates mounted within said receptacle under said opening for limited rotation about axes which are above the centers of gravity of said plates when said receptacle is in its upright position and having transversal cross sections curved away from said opening.

2. In a receptacle provided with an opening at the top for the admission of specified articles thereinto, a guard for said opening comprising two plates mounted for rotation within said receptacle under said opening about axes situated above the centers of gravity of said plates when said receptacle is in its upright position and having transversal cross sections curved away from said opening, said plates being adapted to abut said top while being sufficiently far apart to permit the ingress of said specified articles, when said receptacle is in its upright position, and to meet or overlap under the action of gravity when said receptacle is turned upside down.

3. A receptacle having a cover with an opening therein for the ingress of specified articles, bearings on the underside of said cover, and a guard for said opening comprising two separate plates mounted in said bearings to rotate about axes situated above the centers of gravity of said plates when said receptacle is in its upright position and having transversal cross sections curved away from said opening, said plates being adapted to abut the undersurface of said cover while being sufficiently far apart to permit the ingress of said specified articles, when said receptacle is in its upright position, and being deep enough to meet or overlap under the action of gravity when said receptacle is turned upside down.

4. A receptacle having a cover with an opening therein for the ingress of specified articles, bearings on the inner side of said cover disposed adjacent said opening, a guard

for said opening comprising two separate plates mounted in said bearings for rotation about axes situated above the centers of gravity of said plates when said receptacle is in its upright position and having transverse cross sections curved away from said opening, and extensions on said plates adapted to abut the undersurface of said cover when said receptacle is in its upright position.

5. A savings bank having a cover with a slot therein for the entry of coins and a guard for said slot comprising two plates mounted within said bank under said slot for rotation about axes situated above the centers of gravity of said plates when said bank is in its upright position and having transverse cross sections curved away from said slot, said plates being adapted to abut the undersurface of said cover when said bank is in its upright position and to meet or overlap under the action of gravity when said bank is turned upside down.

6. In a savings bank having a removable cover with a slot therein for the entry of coins and provided with means for locking and unlocking said cover, bearings on the underside of said cover disposed adjacent said slot, a guard for said slot comprising two separate plates mounted in said bearings for rotation about axes situated above the centers of gravity of said plates when said bank is in its upright position and having transverse cross sections curved away from said slot, and extensions on said plates adapted to abut said cover when said bank is in its upright position.

7. A savings bank having a removable cover comprising a top layer and a bottom layer joined together, said top layer having a slot for the ingress of coins and said bottom layer being provided with a slot registering with the slot in said top layer, a portion of said bottom layer being formed into the bottom and side walls of a lock chamber having said top layer for its top, lugs on said bottom layer adjacent the ends of the slot therein, a guard for said slots comprising two separate plates pivoted in said lugs above the centers of gravity of said plates and having transverse cross sections curved away from said slots, and extensions on said plates adapted to abut the undersurface of said bottom layer when said bank is in its upright position.

In testimony whereof I have affixed my signature.

EDWARD J. FISHER.