Nov. 21, 1967 R. D. AMUNDSEN 3,353,743

SELF-LOCKING COIN BOX

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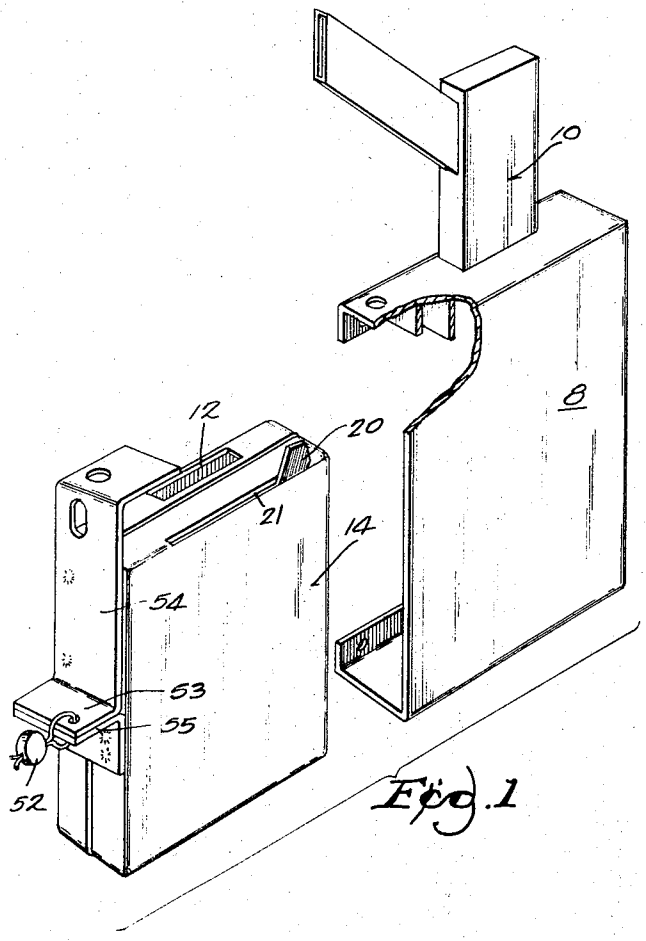


Fig. 1

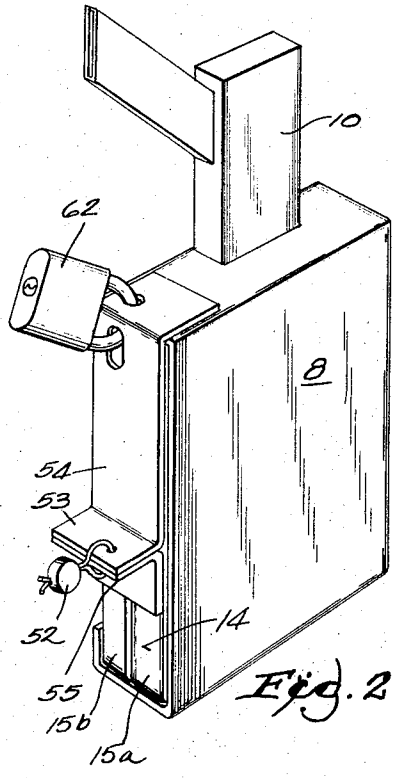


Fig. 2

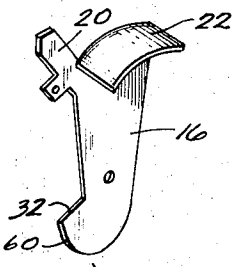


Fig. 4

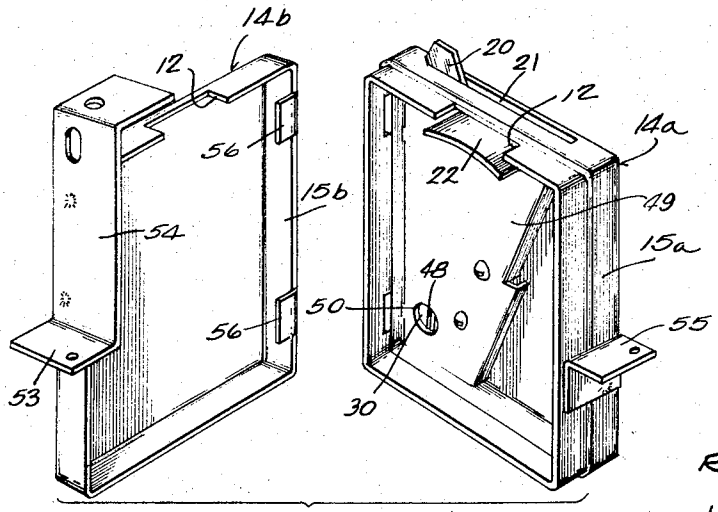


Fig. 3

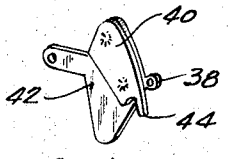


Fig. 5

INVENTOR
RALPH D. AMUNDSEN

BY Wheeler, Wheeler & Wheeler
ATTORNEYS

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Fig. 6

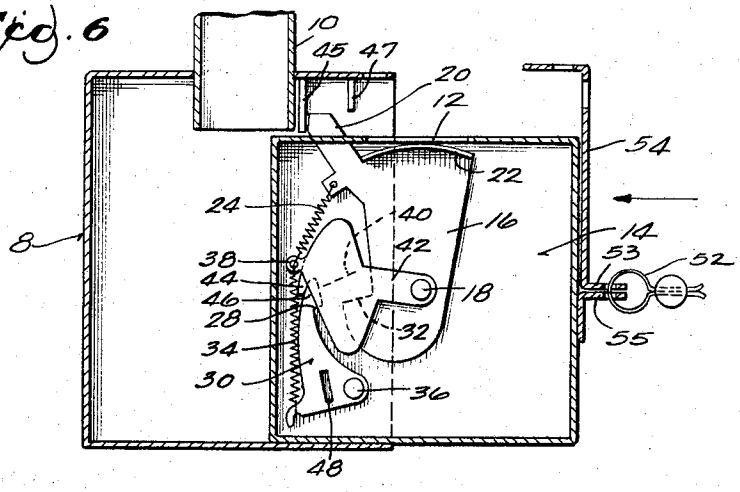


Fig. 7

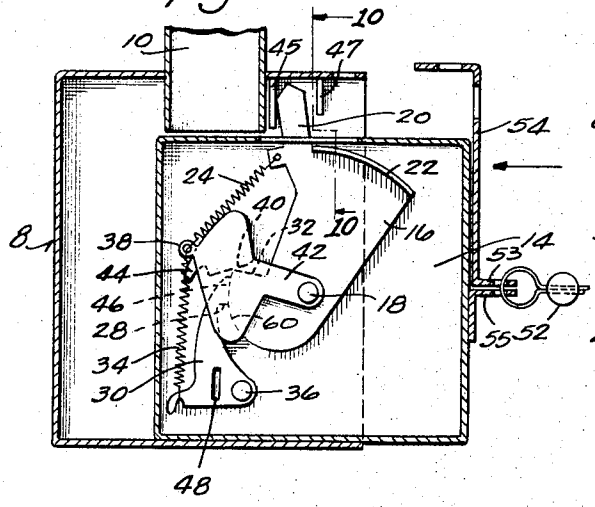


Fig. 8

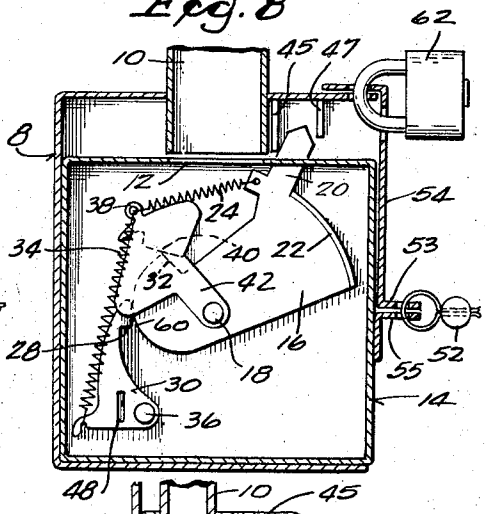


Fig. 9

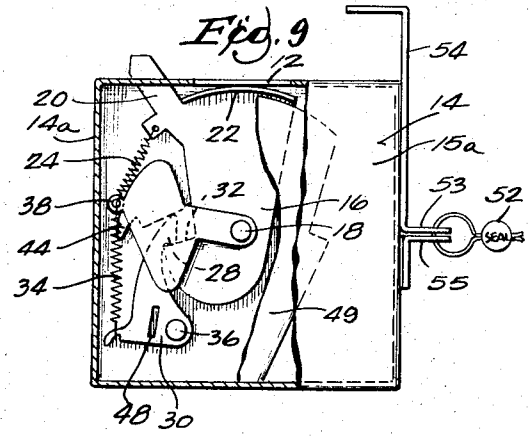
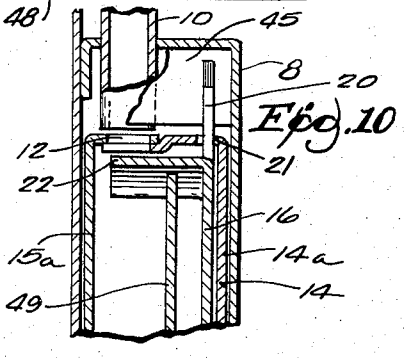


Fig. 10



INVENTOR
RALPH D. AMUNDSEN
BY Wheeler, Wheeler & Wheeler
ATTORNEYS

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SELF-LOCKING COIN BOX

Ralph D. Amundsen, La Crosse, Wis., assignor to La Crosse Cooler Company, La Crosse, Wis., a corporation of Wisconsin

Filed Dec. 30, 1965, Ser. No. 517,577
1 Claim. (Cl. 232—15)

This invention relates to a self-locking coin box.

The coin box is used in a coin-operated machine of any kind. At least one coin slot extends into the registering slot of the coin box in the compartment. The box may have several chambers for which separate slots are provided. The instant embodiment is concerned with only one. Within the box there is a lever with a locking flange which normally closes the coin slot. For introduction of the box into the compartment in which it is located for use, a detent must first be cocked to release the locking lever, the arrangement being such that as the coin box is pushed into position, the locking lever is forced aside to open the coin-receiving slot of the box. This operation, however, releases the detent so that when the box is withdrawn from the compartment, the locking lever automatically closes and is re-engaged by the detent so that the contents are secured against pilfering.

In the drawings:

FIG. 1 is a view in perspective showing in mutually separated positions a tray box and a coin-receiving compartment, portions of the latter being broken away.

FIG. 2 is a view in perspective showing the coin box locked in the compartment.

FIG. 3 is a view in perspective showing in mutually separated positions front and rear sections of the coin box.

FIG. 4 is a detail view in front perspective of the coin slot locking lever.

FIG. 5 is a detail view in perspective of the detent lever as viewed from the rear.

FIG. 6 is a diagrammatic view in transverse vertical section through the coin box with its inner cover plate removed, and also showing in section the receiving compartment into which the coin box has been partially introduced.

FIG. 7 is a view similar to FIG. 6 showing the coin box in an advanced position in the receiving compartment.

FIG. 8 is a view similar to FIGS. 6 and 7 showing the coin box fully introduced into, and locked in, the receiving compartment.

FIG. 9 is a view of the coin box partially in front elevation and partially broken away to a section which exposes the mechanism in its locked position.

FIG. 10 is a fragmentary detail view taken in section on the line 10—10 of FIG. 7 and materially enlarged, portions of the receiving compartment being broken away.

The box-receiving compartment **8** has a coin tube **10** opening through its top wall to register with the coin slot **12** of a coin box **14** when the box is in the compartment **8**. The coin box **14** of the present exemplification comprises two hingedly and detachably connected parts, a rear section **14***a* and a front section **14***b* as separately illustrated in FIG. 3. The two sections are of tray-like construction, having side wall margins **15***a* and **15***b* respectively, these being formed for telescopic assembly as will be apparent from FIGS. 3 and 10. A locking lever **16** pivoted on any suitable pintle such as rivet **18** has an arm **20** which projects through slot **21** in the top of the box. An arcuate flange **22** projecting laterally from this lever is adapted in the position of the parts shown in FIGS. 3, 6 and 9, to close the coin-receiving slot **12**. This protects the contents for transportation. In the retracted position of the lever

16 shown in FIG. 8, the flange **22** is withdrawn from the coin slot **12**, leaving the slot open for the entry of coins from chute **10** into box **14**. This is the position of the parts when the box is in a coin-operated machine to receive coins. A tension spring **24** biases the locking lever **16** toward the closed position of FIG. 9. The lever is normally locked in the closed position of FIG. 9 by engagement of the hook **28** of latch lever **30** over a shoulder **32** with which the locking lever **16** is provided. A tension spring **34** subjects the latch lever **30** to bias in a direction to engage its hook **28** with shoulder **32**. Lever **30** is fulcrumed at **36**. The springs **24** and **34** may respectively be connected to a floating anchorage **38** on a detent arm **42** which may be pivoted on the pintle **18**. Welded to the detent lever **42** is a plate **40** having a notch **44** adapted to engage and detain the pointed extremity **46** of the latch lever **30** for the purpose of holding the latch lever "cocked" in the retracted position in which is shown in FIG. 6.

Adjacent the chute **10**, a yoke or the like provides laterally spaced surfaces at **45** and **47** in positions to be engaged by the beveled extremity of the finger **20** at the end of the locking lever **16**.

When the latch lever **30** is cocked by engagement of its extremity **42** in the notch **44**, the arm **20** of the locking lever **16** is partially inclined to the left as viewed in FIG. 6. Cocking is effected by inserting a screwdriver or the like into the slot **48** of latch lever **30**, and using it to oscillate the detent lever counterclockwise from the advanced position of FIG. 9 to the cocked position of FIG. 6. The moving parts are covered by an inner plate **49** having an opening **50** which exposes slot **48** only when casing part **14B** is opened by removal of seal **52** and hingedly swinging part **14B** aside on its fingers **56** or wholly removing it as shown in FIG. 3. Normally, the seal **52** secures the flange **53** of casing section bracket **54** to the complementary flange **55** on casing section **14A**.

FIG. 7 shows the coin box **14** partially inserted into the receiving compartment **8**, the extremity of arm **20** being engaged with surface **45**, whereby the lever **16** has been at least partially oscillated in a clockwise position from the cocked position of FIG. 9 toward the position of FIG. 8 in which the slot **12** is open to receive coins from chute **10**.

In the course of its clockwise oscillation, the lever **16** will have its shoulder **32** engaged with the plate **40** to oscillate the detent lever **42** clockwise about pintle **18** for the release of latch lever **30**. When the extremity **46** of the latch lever **30** clears the notch **44**, the detent lever will be oscillated clockwise by its spring **34** and will bear against a cam surface **60** provided marginally on lever **16** below the shoulder **32** (FIGS. 7 and 8). The release of the latch lever from its cocked position leaves the locking lever **16** entirely free for counterclockwise oscillation except in so far as it is restrained by engagement of its arm **20** between the opposing surfaces **45** and **47**. In the final position of the coin box with its coin slot **12** open as in FIG. 8 it is anchored to the receiving compartment in any appropriate manner, as by padlocking its bracket **54** to compartment **8** (FIG. 8).

When it is desired to deliver the coin box in locked condition to an appropriate accounting office, the padlock **62** is released and the coin box is simply withdrawn from the compartment **8**. In the course of such withdrawal, the bias of spring **24** will oscillate the locking lever **16** in a counterclockwise direction, this movement being made positive by engagement of the arm **20** with surface **47** in the course of coin box withdrawal. By the time the arm **20** can pass beneath the surface **47**, the slot **12** of the coin box will be closed by the flange **22** of the locking lever and, when this occurs, the latch lever hook **28** becomes reengaged with shoulder **32** of the locking lever.

In this position of the parts, the slot cannot be opened except by manipulation of the latch lever 30 as above described.

I claim:

A portable coin box self-locking on removal of a receiving compartment into which the coin box may be inserted, said coin box comprising a container having mating sections having complementary portions together providing a coin admission slot, one section having a slot for the lock-lever-actuating finger hereinafter mentioned, the latter section having a wall portion and a partition spaced therefrom disposed in a plane in said slots, a lock lever disposed between said wall and partition and provided at an upper free end with the aforesaid actuating finger, a flange fixed to the lock lever near the finger and projecting across the partition to a position in which it is registrable with the coin admission slot, the lock lever being provided with a fulcrum upon which it is movable between a first slot-obstructing position and a second position in which the slot is open, the lock lever being provided at its lower end with a cam margin terminating in a shoulder, a latch lever disposed between the partition and the said wall and provided with a fulcrum and having an upper free end provided with a hook releasably engageable with said shoulder for holding the lock lever in said first position in which said flange obstructs the coin admission slot, means for biasing the lock lever and the latch lever toward the respective positions in which the hook is engaged with said shoulder, the latch lever having means to which the partition provides access for manipulation of the latch lever into position to its bias to release its hooked end from said shoulder, said means being accessible only on separation of said sections, and a detent for holding the latch lever cocked in a position in which the hook at its free end is precluded from engagement with said shoulder, said detent comprising a third lever mounted between the partition and said wall and having a notch in which the hook at the end of the latch lever is releasably engageable, the shoulder of the lock lever being engageable with the detent lever to release the latch lever from the detent lever when the lock lever is displaced against its spring bias from its said slot-obstructing position, the said compartment having means engaged by the finger upon insertion of the coin box for the oscillation of the lock lever to its last mentioned position and for thereby releasing the latch lever from its cocked position as aforesaid so that, upon return of the lock lever to a slot-obstructing position, the latch lever hook will engage the shoulder to obstruct the slot.

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FRANCIS K. ZUGEL, *Primary Examiner.*