W. S. FARNSWORTH.

SAFETY LOCKER.

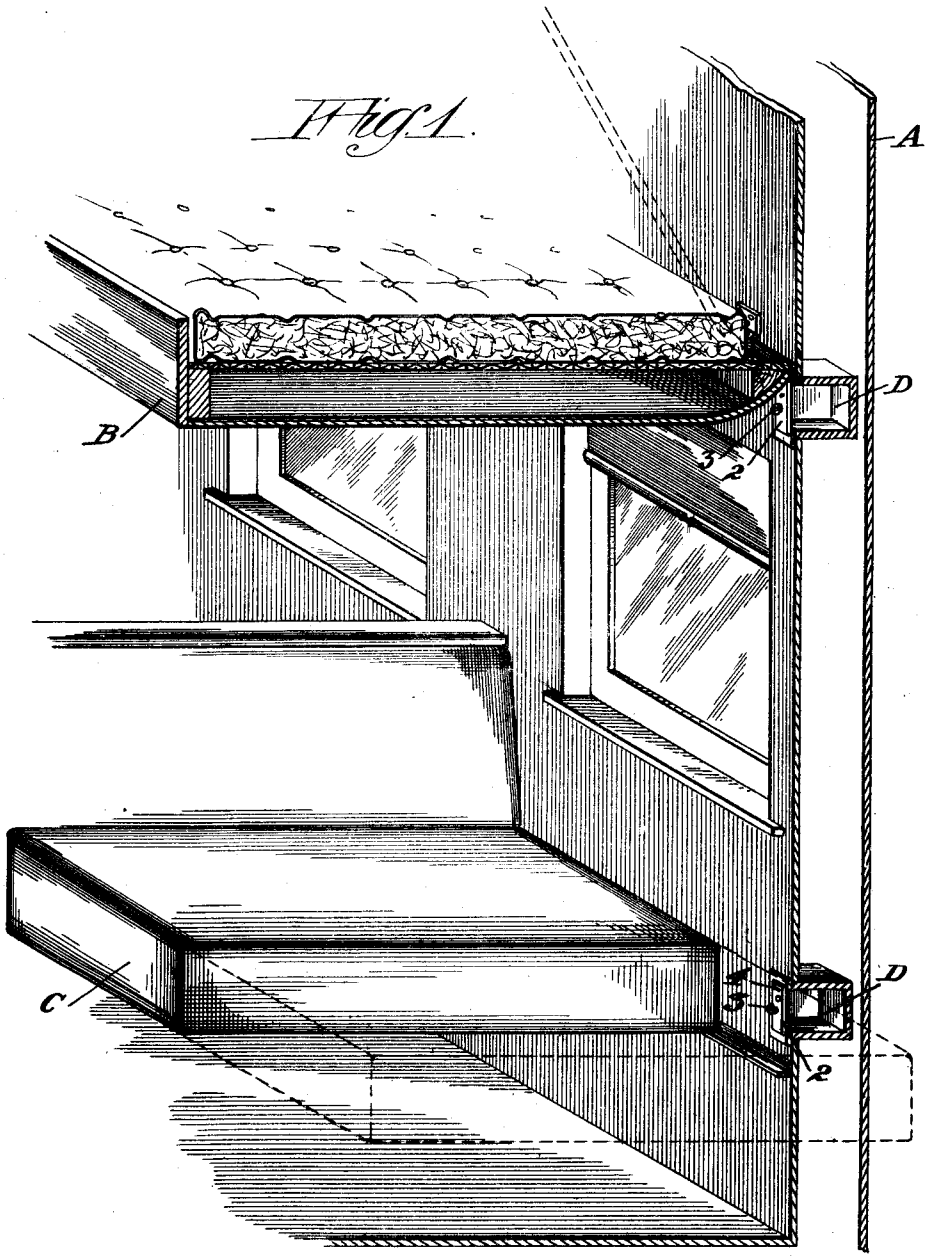
APPLICATION FILED OCT. 10, 1911.

1,060,241.

Patented Apr. 29, 1913.

2 SHEETS—SHEET 1.

Fig 1.



Witnesses.
Thos. Eastberg.
A. L. Berry.

Inventor.
Willis S. Farnsworth.
by G. H. Strong.
his Atty

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2 SHEETS—SHEET 2.

Fig. 2.

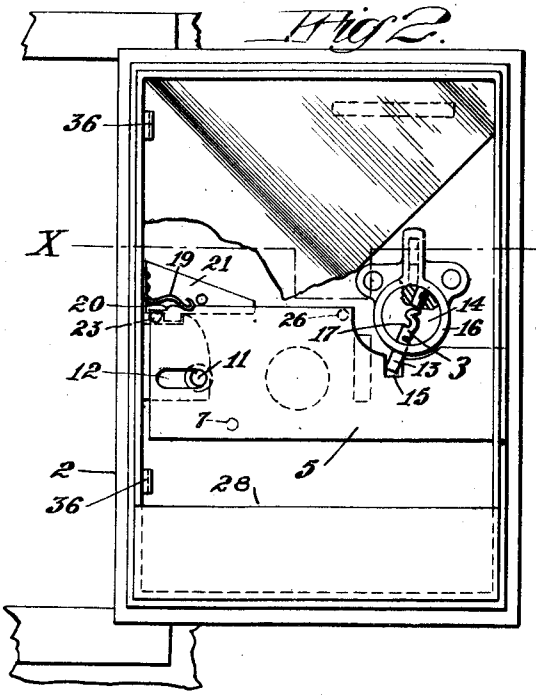


Fig. 3.

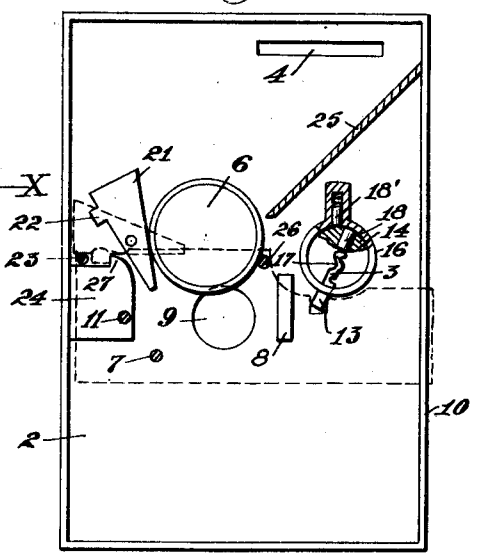


Fig. 6.

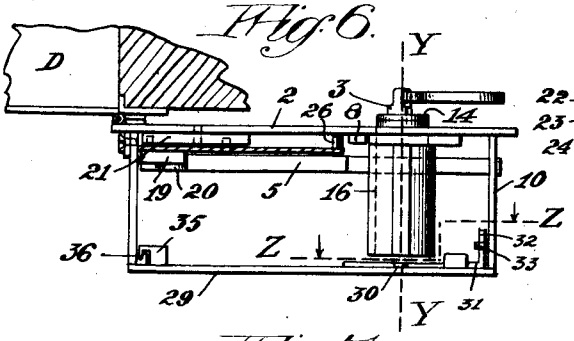


Fig. 4.

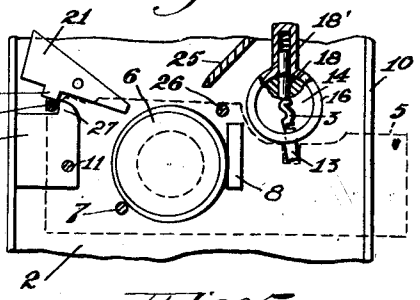


Fig. 7.

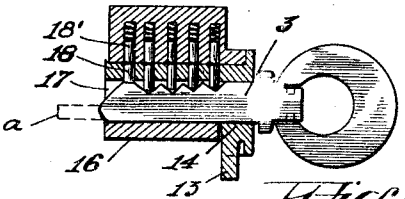


Fig. 5.

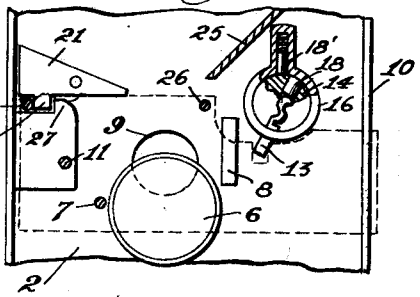
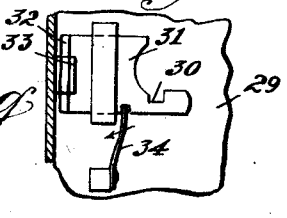


Fig. 8.



Witnesses.

Thos. Cushing

R. L. Berry

Inventor.

Willis S. Farnsworth.

by G. H. Strong.

his Attys.

UNITED STATES PATENT OFFICE.

WILLIS S. FARNSWORTH, OF PETALUMA, CALIFORNIA, ASSIGNOR TO COIN CONTROLLED LOCK CO., OF PETALUMA, CALIFORNIA, A CORPORATION OF CALIFORNIA.

SAFETY-LOCKER.

1,060,241. Specification of Letters Patent. Patented Apr. 29, 1913.

Application filed October 10, 1911. Serial No. 653,829.

To all whom it may concern:

Be it known that I, WILLIS S. FARNSWORTH, citizen of the United States, residing at Petaluma, in the county of Sonoma and State of California, have invented new and useful Improvements in Safety-Lockers, of which the following is a specification.

This invention relates to a locker and a closure therefor, and particularly pertains to a locker which is especially adapted for use in state-rooms, passenger coaches, sleepers, and the like.

It is the object of this invention to provide a locker which is particularly suited for the reception of money, jewelry and other valuable possessions of passengers on railroad trains, steamships, and the like, which is so constructed that access to the interior thereof can be accomplished only by the person who has deposited and locked his property therein, and which is designed to be placed in such relation to a seat or berth as to be obstructed thereby to further prevent access being had to the locker when the seat or berth is occupied or in position to be occupied.

A further object is to provide a closure or door for the locker and a lock thereon which is so constructed and arranged that the door can be closed and locked only after depositing a coin or other token, and in which the operation of the lock and the removal of a key therefrom is controlled by the coin.

Other objects of this invention together with the advantages to be derived from its use will be disclosed in the following specification.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a detail vertical section in perspective of a portion of a car showing the invention as applied. Fig. 2 is a view in elevation of the back of the locker door with parts broken away, showing the lock mechanism in its normal unlocked position with the bolt retracted and blocked against movement and the key positioned to prevent withdrawal. Fig. 3 is a similar view showing the bolt in dotted lines and illustrating the manner in which the bolt is released by the action of a coin. Fig. 4 is a detail depicting the positions occupied by the coin and the parts of the lock when the bolt, indicated in dotted lines, is in its advanced position. Fig. 5 is a view corresponding to Fig. 4 showing bolt in dotted lines in its retracted position. Fig. 6 is a horizontal section on the line X—X of Fig. 2. Fig. 7 is a vertical section on the line Y—Y of Fig. 6. Fig. 8 is a detail in elevation on the line Z—Z of Fig. 6.

In Fig. 1 of the drawings, A represents the side walls of a sleeping car commonly known as a "Pullman sleeper." B indicates the upper berth hingedly mounted on the wall A to swing in a vertical direction, and C represents the slidable seat which is converted into the lower berth. Formed in the walls A adjacent to the berth B and seat C are recesses or pockets D, which may be constructed in any suitable shape and manner and of any desired material; these recesses or pockets forming receptacles or lockers for containing money, jewelry, papers, or other valuables possessed by the passengers or occupants of the berth B and seat C. The recesses D open to the interior of the car and are provided with outwardly swinging hinged doors 2, and are so disposed in relation to the berth B and seat C as to be concealed or obstructed when the berth B is let down, as shown, and when the seat C is drawn out into the position indicated in dotted lines and converted into a berth. This location of the recesses or lockers D is important in that persons other than those having possession of the berths cannot gain access to the locker while the berth is in its "made up" position, thus rendering the locker a place of safety for valuables and preventing theft or robbery when the berths are occupied and insures that the articles placed in the lockers will not be purloined when the occupants of the berths are asleep. As a further means for preventing ingress to the interior of the locker by persons other than the one having possession thereof, the door 2 is provided with a peculiarly constructed lock, the key 3 of which is designed to be held in the lock against removal when the door 2 is open and unlocked until a coin or other

token has been deposited in a coin-receiving slot 4 in the door 2; the bolt of the lock being also prevented from being thrown to lock the door until the coin is deposited. When a coin is dropped in the slot 4 the key 3 and the lock bolt can be operated so that the door 2 may be locked in its closed position and the key withdrawn therefrom; the lock being so constructed, as will presently be described, that the key and bolt will be automatically reëngaged and held against movement when the key is inserted in the lock and the bolt thrown back so that the door 2 will open. This arrangement insures the collection of a toll for the use of a locker D and also prevents the keys being lost or stolen when the lockers are not in use, and admits of the locker being employed as a receptacle for the passengers' valuables when the berths are folded up in their closed positions.

The construction of the locker door 2 and the lock therefor is particularly shown in Figs. 2 to 8 inclusive; Figs. 2, 3, 4 and 5 showing the consecutive steps or positions assumed by the lock during one complete operation. In the views just mentioned, Fig. 2 shows the bolt, indicated at 5, in its normally retracted position with the key 2 blocked against operation and withdrawal; Fig. 3 shows a coin 6 when first deposited to release the bolt 5; Fig. 4 shows the bolt 5 advanced and the coin 6 as positioned on a stud 7 carried by the bolt 5 and against a vertically disposed rib 8 formed on the inner face of the door 2; the coin 6 when thus supported being arranged over a peek-hole or perforation 9 formed in the door 2 through which the genuineness of the coin can be determined when the door 2 is closed; and Fig. 5 shows the coin 6 as being released from the stud 7 when the bolt 5 is retracted to restore it to the position shown in Fig. 2.

The bolt 5 is of the variety commonly termed a "dread bolt" and is supported on the back of the door 2 a short distance from the face thereof by having its outer end disposed in a slot formed in the side wall of a housing 10 mounted on the back of the door 2; its inner end being held in place by means of a pin 11 on the door 2, which passes through a horizontally disposed slot 12 in the bolt 5. This bolt 5 is designed to be advanced and retracted by the oscillation of a lug 13 formed on the cylinder 14 of an ordinary cylinder lock, which lug extends into a notch 15 formed in the upper edge of the bolt 5. The cylinder 14 is supported in a casing 16 mounted on the back of the door 2 and is movable circumferentially therein; a slot 17 extending longitudinally through the cylinder for the reception of the key 2. Loose pins or tumblers 18—18′ are mounted in the cylinder 14 and casing 16, as shown in Fig. 7, and in the manner common to tumbler locks, which pins are adapted to be positioned by the insertion of the key 2 to admit of the cylinder 14 being turned and which prevent the cylinder being turned when the key is withdrawn by reason of the pins 18′ extending into the perforations in the cylinder 14 in which the pins 18 are mounted; the pins 18 being of such various lengths as to require a key having certain serrations or grooves formed on its edge which act, when the key is inserted in the slot 17, to raise the pins 18 so that their upper ends will be positioned flush with the outer periphery of the cylinder 14, and thereby permit of the cylinder 14 being rocked a sufficient distance to advance or retract the bolt 5. A spring 19 mounted on the housing 10 bears against a cam face 20 formed on the upper edge of the bolt 5 in such manner as to offer resistance to the movement of the bolt 5 and acts to insure the bolt 5 being thrown to the limit of its outermost or innermost position.

Pivotally mounted on the door 2 between the inner face thereof and the bolt 5 adjacent to the rear end of the latter, is a triangular shaped pawl 21 having a lug 22 projecting below its lower edge adjacent to the enlarged end of the pawl. This pawl 21 normally rests in the horizontal position shown in Figs. 2 and 5 by reason of its pivotal point being positioned eccentric to its center of gravity so that its enlarged end will normally tend to move in a downward direction; a pin 23 mounted on the bolt 5 adjacent to its inner end projecting beneath the pawl 21 to limit its downward movement. A plate 24 mounted on the door 2 also acts to retain the pawl 21 in a horizontal position. When the bolt 5 is in its rearmost position, as shown in Fig. 2 and indicated in dotted lines in Figs. 3 and 5, the pin 23 will extend beneath the pawl 21 adjacent to the back edge of the lug 22; the lug 22 acting as a stop or abutment to prevent the bolt 5 being advanced when the pawl 21 is in the horizontal position shown in Figs. 2 and 5.

Mounted on the rear of the door 2 is a coin chute 25 leading from the coin slot 4 downwardly to a point adjacent to the upper edge of the bolt 5 and opening to the space between the bolt 5 and the door 2 forward of the small end of the pawl 21 in such manner that when a coin is inserted in the slot 4 it will be caused to fall upon the outer end of the pawl 21 so as to rock it on its pivot and withdraw the lug 22 from in front of the pin 23, as shown in Fig. 3; a pin 26 projecting from the face of the bolt 5 into the path of travel of the coin 6 at such distance forward of the pawl 21 as to momentarily support the coin at this point.

The pin 26 acts in such manner as to prevent coins of a smaller diameter than that intended being used to operate the pawl 21, it being seen that coins of a sufficiently small diameter will pass between the pin 26 and pawl 21 when the latter is in the position shown in Fig. 3, and would not retain it in its disengaged position; the pawl 21 falling back to dispose the lug 22 in front of the pin 23 the moment the coin is released therefrom.

When the pawl 21 is retained in its uplifted position by the weight of a coin on its inner end, as shown in Fig. 3, the bolt 5 may be advanced by turning the cylinder 14 by means of the key 2 which has been previously positioned in the slot 17 in the cylinder. The bolt 5 on being advanced to its outermost position so as to engage a keeper on the casing of the locker D, withdraws the pin 26 from under the coin 6 so that the latter will drop downwardly and release the pawl 21 so that it will fall back into the position shown in Fig. 4; the lug 22 resting upon the pin 23 on the bolt 5. A shoulder 27 projecting from the upper edge of the plate 24 forms a stop for the pin 23 to prevent it passing to the opposite side of the lug 22 and insures the latter resting on the pin 23.

The coin 6 on being released falls upon the pin 7, as before mentioned, and is supported thereon by the vertical rib 8 where it is exposed to view through the peek-hole 9 until the door 2 is unlocked by retracting the bolt 5. The bolt 5 when advanced to its outermost position, which is limited by the pin 23 coming in contact with the shoulder 27 on the plate 24, disposes the slot 17 in the cylinder 14 in a vertical position so that the pins 18 and 18′ will be in alinement and thereby admit of the key 2 being withdrawn from the lock; the key 2 being previously prevented from being withdrawn from the cylinder by reason of the pins 18 extending into the notches formed on the key 2 and blocking longitudinal movement of the key when the cylinder is positioned with the pins 18 to one side of the pins 18′. The bolt 5 in being retracted moves the pin 7 from under the coin 6 so that the latter will fall into a coin receptacle 28 formed on the back of the door 2, and the same time the pin 23 moves from under the lug 22 on the pawl 21 so that the lug will again drop into position in front of the pin 23, thereby re-locking the bolt 5 in the retracted position against movement until another coin is employed to operate the releasing pawl 21. The door 2 may now be opened so as to give access to the interior of the locker.

The housing 10 on the back of the door is closed by means of a removable panel 29 so that the lock cannot be tampered with by unauthorized persons; this panel being adapted to be removed for the collection of the coins in the receptacle 28 by means of a master key corresponding to the key 2 but having an extended portion on its end, as indicated in dotted lines at *a* in Fig. 7, which is adapted to engage a notch 30 formed in a bolt 31 slidably mounted on the inner face of the panel 29, as shown in Fig. 8. The bolt 31 has its outer end bent at a right angle to the pawl 29, as indicated at 32, which is slotted to engage a lug 33 on the side wall of the housing 10; a spring 34 acting on the bolt 31 to normally retain it in engagement with the lug 33 when the panel 29 is in position on the back of the housing 10. The edge of the panel 29 opposite that on which the bolt 31 is mounted is provided with hooked members 35 which are adapted to engage correspondingly shaped projections 36 on the housing 10, as shown in Fig. 6.

From the foregoing it will be seen that I have provided a locker and a means for closing same, which is simple in operation and construction, and which, when used in conjunction with a berth, as previously described, produces a safe repository for valuables, and as such insures and protects a passenger against theft or robbery when traveling.

It is manifest that while I have described the invention as applied to a car, that it is equally applicable for use in state-rooms of steamships and in other places where seats and berths are employed.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. The combination with a Pullman berth, of a locker in the wall of the car substantially on a level with the berth when made up, said locker having a lock controlled door, and said berth being retained in guides and having a free movement toward and from the locked door, and covering and concealing the door when made up, whereby the door may be opened when the berth is at the limit of one movement and is incapable of being opened when the berth is at the limit of its other movement.

2. In a device of the class described in combination, a receptacle adapted to be secured to the framing of a vehicle body, a closure for said receptacle, a sleeping berth constructed to be moved to operative and inoperative positions, and means for supporting said sleeping berth in operative position to substantially cover said closure, rendering said closure inaccessible when said berth is prepared for sleeping.

3. In a safety receptacle for railway cars, a car body provided with an opening therein for the reception of valuables, a closure

for said opening, a device adapted to be formed into a sleeping berth, and means co-operating with said device to support the same whereby it forms a barrier rendering said closure inaccessible when said device is prepared for sleeping.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIS S. FARNSWORTH.

Witnesses:
JOHN H. HERRING,
CHARLES EDELMAN.