March 9, 1926. 1,575,641

K. RUMRICH

CABIN DOOR CHECK

Filed July 10, 1924

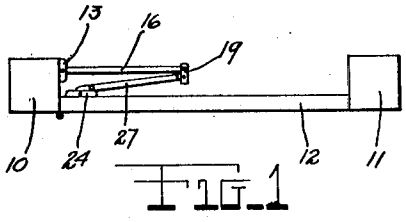

FIG. 1

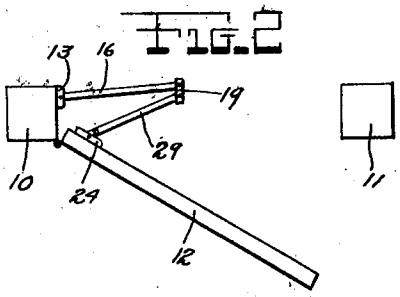

FIG. 2

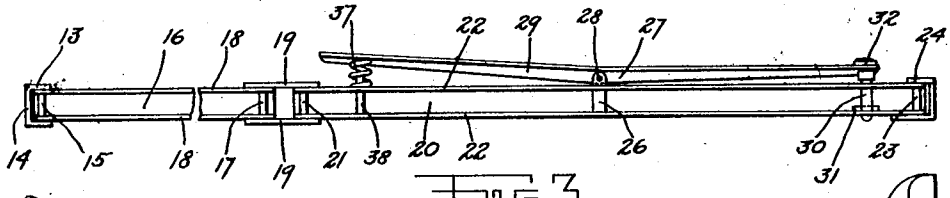

FIG. 3

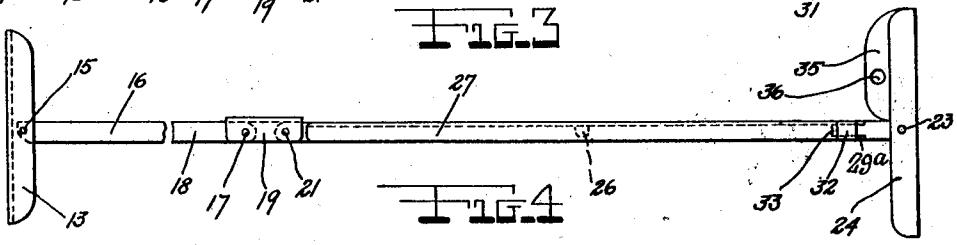

FIG. 4

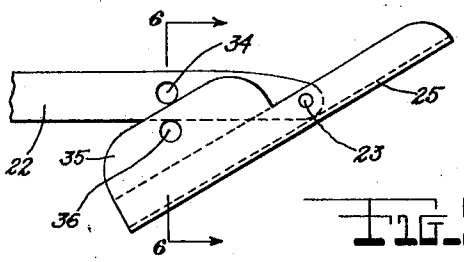

FIG. 5

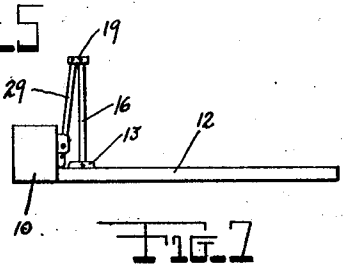

FIG. 7

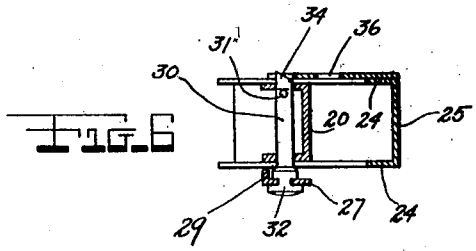

FIG. 6

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UNITED STATES PATENT OFFICE.

KARL RUMRICH, OF NEW YORK, N. Y.

CABIN-DOOR CHECK.

Application filed July 10, 1924. Serial No. 725,099.

To all whom it may concern:

Be it known that I, KARL RUMRICH, a citizen of Germany, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Cabin-Door Checks, of which the following is a specification.

The main object of this invention is to provide a device especially applicable to cabin doors and has for its main purpose to provide a check for limiting the outward swing of the door.

Another object is to provide a device as mentioned which is attached to the door post at one end, its opposite end being attached to the door, the device being divided intermediate its length to permit a hinge action which allows the door to be swung open. A novel means is constructed on one of the door check members whereby the door is automatically locked in closed position as said door swings closed.

These and other objects will become apparent in the description below, in which characters of reference refer to like-named parts in the drawing.

Referring briefly to the drawing, Figure 1 is an elevational view of a hinged door, the latter being shown in closed position between the door timbers. This view shows the device applied to said door and its position when said door is closed.

Figure 2 is a view similar to Figure 1, showing the door in partly opened position.

Figure 3 is a side elevational view of the door check and lock completely extended.

Figure 4 is a top plan view of Figure 3.

Figure 5 is a top plan view of one of the ends of the device, showing the cooperating means for locking the door when in closed position.

Figure 6 is a cross sectional view taken on line 6—6 of Figure 5, showing the locking plunger in engageable position.

Figure 7 is a view similar to Figure 1, showing the device mounted on the door in a different manner.

Referring in detail to the drawing, the numerals 10 and 11 indicate vertical door posts in which a door 12 is framed, the latter being hinged to the door post 10. To the door post 10, which supports the hinges carrying the door 12, is mounted in a horizontal plane a U-shaped channel bracket 13 which has a flat face 14 seated on the surface of the door post and is retained permanently in place by screws or the like not shown. Intermediate the length of the channel bracket 13, a pin 15 passes thru both blocks, and on this pin, a channel arm 16 is mounted. The end of the arm 16 pivots about the pin 15 thru 180 degrees. The opposite end of the arm 16 has a pin 17 rigidly mounted thereon and its both ends project outwardly from the sides 18 of the arm 16 and register in a pair of aligned holes formed in the sides 19 of a U-shaped block, the sides of said block being spaced-apart enough to permit the entrance of the sides 18 of the arms 16. An additional arm 20 which is of shorter length but of similar outline and dimension as the block 16, is also provided with a pin 21 at one end, the ends of said pin projecting above the surfaces of the sides 22, and the projecting ends of these pins are anchored in holes formed in the sides 19 of the block. The opposite end of the arm 20 has a pin 23 mounted therein whose ends also project above the sides 22 and register in openings formed intermediate the length of a U-shaped bracket having parallel sides 24 and a connecting plate 25, the latter being secured to the surface of the door 12 near its pivoted edge. Approximately centrally of the arm 20, a stud 26 is mounted thereon by passing said stud thru one of the walls 22 and securing the end of said stud in the opposite wall 22. The upper end of the stud projects outwardly from the face of the wall 22 and serves as a fulcrum for a lever 27 which is angular in cross section. This lever is pivotally mounted on the stud by passing a pin 28 thru the stud and the rib 29 of the lever 27. A short distance inward from the end of the arm 20 having a bracket 24 attached thereto, a plunger 30 passes thru the walls 22 of the arm and is slidably mounted therein. Said plunger has a small pin 31 passing diametrically therethru adjacent one of the walls 22 and limits the downward movement of said plunger so it cannot move beyond a predetermined position. The plunger passes thru one of the walls 22 and has an enlarged head 32 thereon on which shoulders are formed, said shoulders receiving the forked end 33 of the lever 27. The opposite end of the plunger which extends from the remaining wall 22 of the arm 20 has an inclined end 34, the bottom of the incline lying in the opening of the wall 22 thru which the plunger passes, while the upper end of said inclined portion

extends upwardly therefrom. One of the walls 24 of the bracket attached to the arm 20 has an extending ear 35 thereon and in this ear, an opening 36 is provided which is adapted to register over the opening in the arm in which the plunger 30 is slidable. The opening 36 on the ear 35 swings about the pin 23 as an axis and when aligned with the arm 20 is directly superimposed over the hole in which the plunger 30 is slidable. So that the inclined end 34 of the plunger 30 normally projects from the wall 22, a spring 37 is provided. This spring is mounted on a stud 38 which projects upwardly beneath the free end of the lever 27 between which lever and the adjacent wall 22 of the arm 20, the spring 37 is mounted. One end of the arm 29 is formed at 29^a to provide means for receiving a slidable plunger 32.

In installing the device, the bracket carried on the arm 16 is mounted on the frame posts of a door and the arm is permitted to extend outwardly parallel to the door, as illustrated in Figure 1. The bracket connected to the arm 20 is permanently secured to the inner face of the door near its point of swing.

In using the device, the door is opened after the rear end of the lever 27 is depressed. In depressing this end of the lever, the opposite end is lifted, consequently lifting the plunger 30 out of the opening 36 in the ear 35 after which the door 12 may be swung about its hinges. As the door closes, the parts assume the position shown in Figure 1 and the ear 35 rides over the side 22 of the arm 20 depressing the inclined surface 34 of the plunger 30, and when the door is completely closed, the opening 36 in the ear being directly superimposed over the hole in which the plunger 30 is slidable, the latter will again be urged outwardly so that the inclined portion 34 will again register in the opening 36, thus locking the door in the closed position as shown in Figure 1. To disengage the plunger or lift the same out of the opening 36, the opposite end of the lever 27 is depressed, as previously stated.

I claim:—

1. A device of the class described comprising a pair of arms pivotally connected to each other by a block, brackets pivotally mounted on the opposing ends of said arms, a lever mounted on the side of one of said arms, a plunger adapted to be lifted by said arm, and means cooperating with said lever for engaging a bracket on the same arm to lock said arm against rotation.

2. A device of the class described comprising a pair of arms pivotally mounted in a block at adjacent ends, channelled brackets pivotally mounted on the opposing ends of said arms, a stud on one arm, a lever pivoted intermediate its length on said stud, a forked end on said lever, a plunger slidable in said arm cooperating with the forked end of said lever, said plunger being adapted to engage the bracket on the same arm for locking said arm against rotation, and means for urging the plunger into engagement with the bracket.

3. A device of the class described comprising a pair of arms pivotally mounted in a block at adjacent ends, brackets pivotally mounted on the opposing ends of said arms, a stud on one arm, a lever pivoted intermediate its length on said stud, a forked end on said lever, a plunger slidable in said arm cooperating with the forked end of said lever, said plunger being adapted to engage the bracket on the same arm against rotation, a spring between the lever and the arm and adapted to lift one end of said lever to lower the plunger, means for anchoring said spring in place, and means on said plunger for permitting rotation of the bracket on the arm to a position parallel with the arm.

4. A device of the class described comprising a pair of arms pivotally mounted in a block at adjacent ends, brackets pivotally mounted on the opposing ends of said arms, a stud on one arm, a lever pivoted intermediate its length on said stud, a forked end on said lever, a plunger slidable in said arm cooperating with the forked end of said lever, one end of said lever having an inclined surface, the inclined surface sloping toward the back of the arm, an ear on one of said brackets having an opening therein registerable with the inclined end of the plunger, said ear being adapted to slide over the arm to a position parallel to the latter and depress the plunger until the opening registers with said plunger.

In testimony whereof I affix my signature.

KARL RUMRICH.