

C. L. BUTLER.

DOOR CHECK.

APPLICATION FILED MAY 10, 1909.

941,493.

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Fig. 1

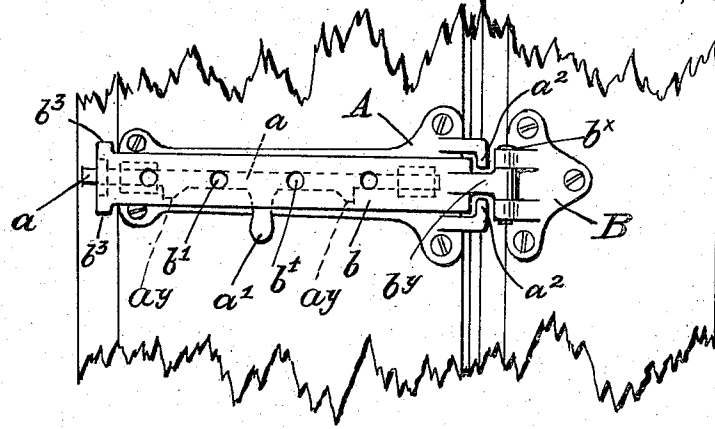


Fig. 2

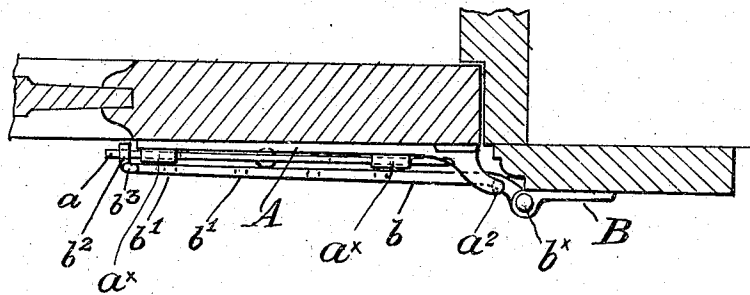
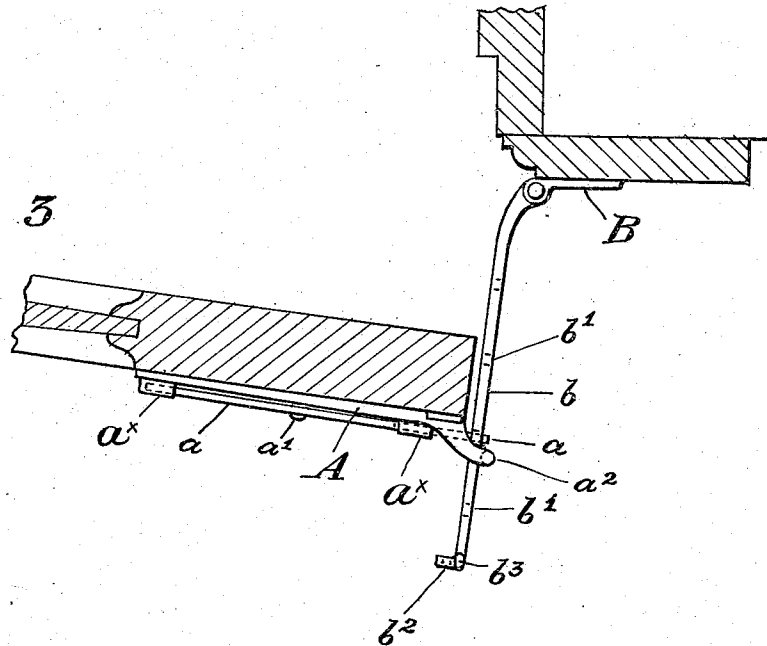


Fig. 3



WITNESSES:

[Signature]
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INVENTOR

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UNITED STATES PATENT OFFICE.

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DOOR-CHECK.

941,493.

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To all whom it may concern:

Be it known that I, COURTLAND L. BUTLER, a citizen of the United States, residing at Pittsburg, county of Allegheny, and State of Pennsylvania, have invented certain new and useful Improvements in Door-Checks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to door checks, especially to devices of this kind which can be adjusted in order to lock the door in any of a number of positions in which it is slightly open for ventilation or other purposes, the improved door check forming a safety device which will prevent the entrance of any unauthorized person into the room.

The main objects of the invention are to provide a construction of simple and convenient form embodying improved means for insuring the adjustment of the door in different positions; to furnish a simple locking mechanism in which the same bolt is used at opposite ends to lock the door in fully closed position or any of its adjusted positions; and to provide for the positive arrest of the door when it has reached a certain position though permitting the safety device to be easily placed out of operation when such is desired.

With these ends in view the door frame has pivoted thereto a locking lever which swings in lateral direction and is adapted to be placed over a bolt on the door, said lever having an opening to receive one end of the bolt when the parts are in the position indicated and thereby lock the door in completely closed position. By moving the bolt on the door in the opposite direction it can be caused to engage with any of a number of openings with which the locking lever is provided, such lever being swung laterally to permit the opening of the door to the desired extent and to cause the engagement of the bolt in the corresponding opening or perforation. The locking lever is provided at its free end with outwardly extending lugs which are adapted to abut against stops or lugs located near the edge of the door and embracing the locking lever, thus limiting the opening movement of the door, said lever being reduced in thickness near its pivoted end in order to pass freely between the lugs

carried by the door when the latter is in closed position, whereby the locking lever may be swung into inoperative position.

In the accompanying drawing:—Figure 1 is an elevation of a door check constructed in accordance with the invention, the door being shown as locked in fully closed position. Fig. 2 is a horizontal section through the door and door frame and showing the parts in the position indicated in Fig. 1, and Fig. 3 is a view similar to Fig. 2, but showing the door in one of its open positions.

According to this invention a plate A is suitably secured to the door in horizontal alinement with a plate B fixed to the door frame adjacent the free edge of the door. The plate A is provided with keepers a^x which serve to guide a bolt a that is limited in its movement with respect to the keepers by means of lugs a^y , as indicated by the dotted lines in Fig. 1. The bolt a is operated by a depending finger piece a^1 formed on the bolt intermediate of the length of the latter. The plate B has pivoted to it by means of an upright pin b^x a laterally swinging locking lever b , which, when the door is in fully closed position, is adapted to extend over the bolt a , said lever being provided at its free end with a lateral flange perforated at b^2 in order to receive one end of the locking bolt, as shown in Fig. 1, whereby the door is locked in closed position. The finger piece a^1 of the bolt extends below the locking lever when the parts are in this position, so that by a lateral movement of the bolt, said lever may be released.

In order to lock the door in a number of open positions the lever b is provided with a longitudinally extending series of openings or perforations b^1 , adapted to be engaged by the bolt when the door is partially opened. The opening movement of the door, when the free end of the locking lever is released by the bolt, causes said lever to be swung laterally into a position like that illustrated in Fig. 3, the locking lever being guided and held in close connection with the plate A by means of oppositely directed vertical lugs a^2 , which are formed integral with the plate A at the edge of the door and embrace the locking lever as shown in Fig. 3, said lugs confining the lever between them and the edge of the plate A.

When the door has been opened to the desired extent the bolt a is slid into one of the

perforations b^1 , whereby the door is locked in position and cannot be opened from the outside, though providing for the ventilation of the room. It will be noted that this locking of the door is effected by the right hand end of the bolt a , with reference to Fig. 1, whereas the locking of the door in fully closed position was effected by means of the left hand end of said bolt.

In order to limit the movement of the door and cause its arrest when the outer end of the swinging lever is reached, said lever is provided at its free end with vertically directed lugs b^3 which abut against the lugs a^2 of the door plate. However, although said lugs a^2 cause the guiding of the door with respect to the locking lever and also effect the arrest of the door they do not prevent the locking lever from being swung out of operation when it is not desired to use the safety device. To accomplish this end, the locking lever is provided near its pivot with a portion b^7 of reduced width which, when the door is fully closed, is opposite the lugs a^2 , so that the locking lever may be moved between said lugs into inoperative position against the door frame.

It will be noted that the improved device is formed of comparatively few parts, and that these parts may be readily manufactured and assembled. The fact that a sliding bolt of ordinary construction can be used to lock the door in both closed and open position is also an important feature of the invention. The locking action of this bolt is very positive and reliable and when the door is locked in one of its open positions it is securely held against the entry of unauthorized persons, though providing for proper ventilation.

Without limiting myself to the precise construction shown, I claim:—

1. The combination of a swinging member on the door frame, and a bolt on the door having both of its ends operative to lock said swinging member.

2. The combination of a laterally swinging member on the door frame, and a sliding bolt on the door arranged to lock the swinging member when the latter is placed over and alongside said bolt when the door is closed and also when said member is swung laterally and the door opened.

3. The combination of a laterally swinging locking lever on the door frame provided with a longitudinal series of perforations and an end perforation, and a horizontally sliding member on the door which locks the latter in closed position by engaging in said end perforation and which locks the door in open position by engaging in any of the other perforations.

4. The combination of a laterally swinging lever on the door frame having a perforated lateral flange at its free end, and a sliding bolt on the door which engages at one end in the perforation in said flange when said lever is placed over said bolt, the opposite end of the bolt being operative to engage said lever at intermediate points and thereby lock the door in open position.

5. The combination of a door and door frame, a laterally swinging device on one of said members, and a sliding device on the other member operative to engage and lock said swinging device with both ends and at different points in the length of said device.

6. The combination of a door plate fixed to the door and having vertically disposed lugs directed toward each other adjacent the edge of the door, a swinging lever on the door frame embraced by said lugs and guided between them and said door plate, and a bolt on the door plate to lock the lever in position.

7. The combination of a swinging lever on the door frame, a plate fixed to the door and having lugs directed toward each other near the edge of the door, said lugs embracing said lever and forming a guide for the same along the edge of the door, lugs or stops formed on the free end of said lever to coact with said first named lugs in limiting the movement of the door, and a device on the door plate which engages and locks said lever in a number of positions.

8. A door check comprising a sliding bolt adapted to be applied to the door, and a lever adapted to be applied to the door frame and having a longitudinal series of bolt receiving perforations and a perforated end-flange to receive the end of said bolt when the door is closed.

9. A door check comprising a pivoted lever adapted to be applied to the door frame, a door plate having lugs to embrace and guide said lever, and a sliding bolt on the door plate operative to engage and lock said lever at different points in the length thereof.

10. A door check comprising a pivoted perforated lever adapted for application to the door frame, a door plate, means on the door plate to guide and arrest the movement of said lever, and other means on the door plate operative to engage the perforations of the lever and thereby lock said lever in a number of positions.

In testimony whereof I affix my signature, in presence of two witnesses.

COURTLAND L. BUTLER.

Witnesses:

J. B. IRWIN,
WILLIAM F. DIETZ, Jr.