A. J. GRIMECK.

DOOR BOLT LOCK.

APPLICATION FILED SEPT. 6, 1918.

1,293,414. Patented Feb. 4, 1919.

FIG. 1.

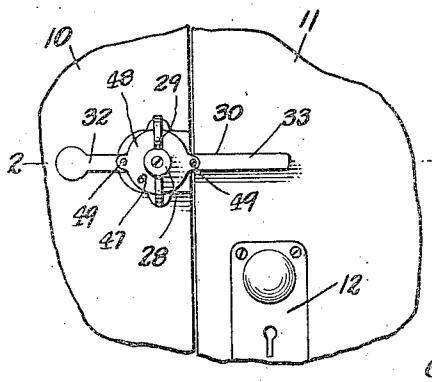


FIG. 2.

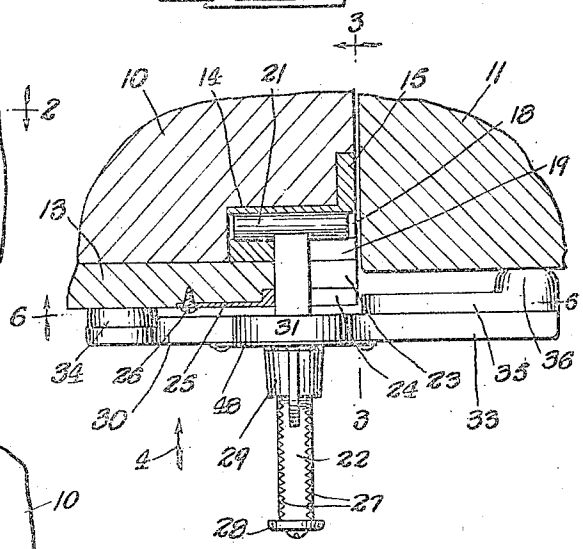


FIG. 3.

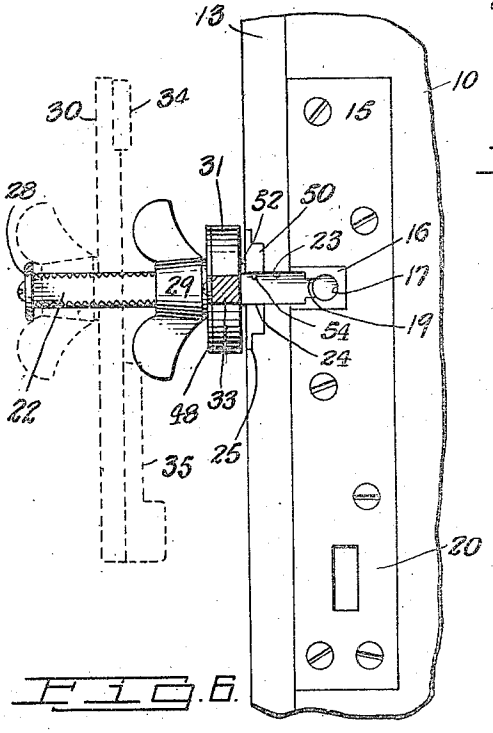


FIG. 4.

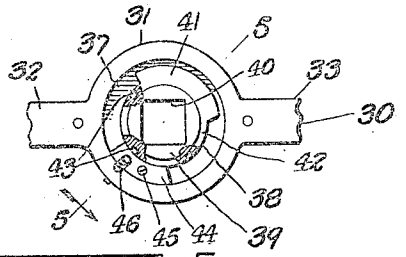


FIG. 5.

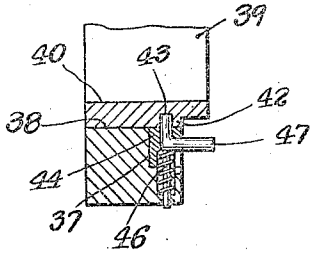
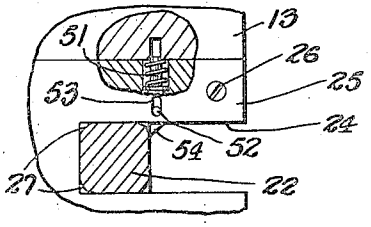


FIG. 6.



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DOOR BOLT-LOCK.

1,293,414. Specification of Letters Patent. Patented Feb. 4, 1919.

Application filed September 6, 1918. Serial No. 252,838.

To all whom it may concern:

Be it known that I, ANDREW J. GRIMECK, a citizen of the United States, and residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Door Bolt-Locks, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to bolt locks for doors designed to be connected with the inner side of the door frame and to operate in connection with the inner face of the door and which is independent in operation from the usual key-operated locks employed in connection with doors, and the object of the invention is to provide a bolt lock with means whereby it may be quickly attached to and detached from the door frame; a further object being to provide a lock of the class specified which may be moved into a vertical as well as a horizontal position and locked in each of such positions; and a further object of the invention is to provide a device of the class specified which is simple in construction and operation and efficient in use.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is an inside view of a part of a door frame and door and showing my improved bolt lock in operative position;

Fig. 2 a partial section on the line 2—2 of Fig. 1 and on an enlarged scale;

Fig. 3 a partial section on the line 3—3 of Fig. 2;

Fig. 4 a face view of the bolt which I employ showing parts removed and in section, and looking in the direction of the arrow 4 of Fig. 2;

Fig. 5 a partial section on the line 5—5 of Fig. 4 and on an enlarged scale; and

Fig. 6 a partial section on the line 6—6 of Fig. 2 on an enlarged scale and with part of the construction broken away.

In the drawing I have shown at 10 a part of one side of a door frame and at 11 a part of a door having the usual or any desired form of key lock construction 12. The door frame 10 is preferably provided with a finishing or facing strip 13 as shown in Figs. 2 and 3.

In the practice of my invention, I provide the door frame 10 at a predetermined distance above the usual lock mechanism in said frame and the door with a recess 14 in which is mounted a vertical face plate 15, having an inwardly directed rectangular portion 16 provided with a cylindrical bore 17, which opens in the direction of the door as shown at 18. The bore 17 also opens forwardly as shown at 19 in Figs. 2 and 3. The vertical face plate 15 may extend downwardly to form a latch or bolt plate 20 of the lock 12, as shown in Fig. 3, but this is not essential as the plate 15 may be independent of the latch or bolt plate usually employed.

The bore 17 in the rectangular portion 16 forms a socket adapted to receive a cylindrical cross head 21 on one end of a square shaft 22, the shank of which passes through the opening at 19, and also through an opening 23 in the facing strip 13 and a corresponding opening 24 in a face plate 25 secured to the facing strip 13 by screws 26.

The outer end portion of the square shaft 22 is threaded at the corner portions thereof as shown at 27, and a washer 28 is secured to the end of said shaft and serves to limit the outward movement of a winged nut 29, which is mounted to move longitudinally of the shaft 22.

Slidably mounted on the shaft 22 between the winged nut 25 and the cross head 21 is a bolt 30, comprising a central cylindrical portion 31 having oppositely directed arms 32 and 33, the arm 33 being longer than the arm 32, as clearly shown in Fig. 2. Secured to the end portion of the arm 32 is a cylindrical rubber block 34, and secured to the inner face of the arm 33 is a rubber strip 35, the end portion of which is provided with an enlarged head 36 and the block 34 and enlarged head 36 are adapted to bear respectively on the door frame and door when the bolt is moved inwardly upon the shaft 22 by the winged nut 29, and when said bolt is in a horizontal position.

The outer face of the cylindrical portion 31 of the bolt is recessed as shown at 37, and said recessed portion is provided with a bore 38 in which is mounted a sleeve 39 having a central rectangular aperture 40

through which the shaft 22 passes, and the sleeve 39 is provided with an enlarged cam portion 41, which operates in the recess 37, and the reduced portion 42 of said sleeve is provided with a plurality of spaced apertures 43. An arc-shaped block 44 is secured within the recess 37 as shown in Fig. 4 by a screw 45, and a tensionally controlled pin 46 is mounted in said block and adapted to be moved inwardly and outwardly through the head 31 of the bolt as well as said block by means of a forwardly directed finger piece 47 to engage and disengage said pin with the recesses 43. This construction as will be seen serves to lock the bolt in a horizontal or vertical position, and when in a horizontal position the bolt may be moved to a vertical position by simply releasing the pin 46, and the weight of the longer arm 33 will cause the bolt to move into vertical position.

The front face of the cylindrical portion 31 of the bolt 30 is inclosed by a sheet metal plate 48 secured thereto by screws 49.

The front plate 25 is provided with an enlarged portion 50 which extends around the recessed portion 24 of said plate, and mounted in the top of said enlarged portion is a spring actuated pin 51 having an outwardly directed finger piece 52 which passes through and operates in an elongated slot 53 by means of which the beveled end portion 54 of the pin may be moved inwardly out of engagement with the shaft 22 to permit of the removal of said shaft, or the cylindrical cross head end 21 thereof from the bore 17. The pin 51 forms a catch device for locking the shaft 22 in position, as will be readily understood, while the spring-operated pin 46 serves to lock the bolt 30 in different positions, and it will be noted that the cam portion 41 of the sleeve 39 coöperates with the block 44 to limit the rotary movement of the bolt in both directions.

With my improvement by simply providing the door frame, or one side thereof, with a recess having a metallic portion inserted therein to form a socket, a bolt similar to the bolt 30 mounted on the shaft 22, having the cross head 21 and winged nut 29, may be carried around by its owner from place to place and used in connection with such door frames as are provided with the socket piece to permit of the locking or bolting of the door with said device.

This device is particularly designed for use by those traveling from place to place on business or otherwise and stopping at hotels or other rooming houses, but it will be understood that it may also be used in connection with private houses and apartment houses, and the owner or owners of such houses may permanently secure the shaft 22 to the door frame, or make the bolt device a permanent feature of the house.

The use of the bolt device shown and described will be readily understood from the foregoing description when taken in connection with the accompanying drawing and the following statement.

In attaching my improved bolt device to the door frame prior to bolting the door, the bolt 30 is first moved outwardly upon the shaft 22 by moving the winged nut 29 outwardly, as indicated in dotted lines in Fig. 3, after which the cylindrical cross head 21 of said shaft is passed into the bore 17 of the socket piece when the door 11 is in its open position, it being understood that the bolt 30 would be in the vertical position shown in Fig. 3 in dotted lines. The door 11 is then closed and the bolt 30 swung into horizontal position by releasing the pin 46 from the recess 43 which retained it in a vertical position, after which the winged nut 29 is moved inwardly on the shaft 22 to force the block 34 and enlarged head 36 against the door frame and the door respectively, and this locks and bolts the door against opening.

Another advantage of my improved bolt construction will appear in that the door might be opened ajar, or to a slight extent by moving the bolt 30 inwardly on the shaft 22 when in its horizontal position, which will permit of the swinging of the door inwardly to a slight extent, this may be used by the housewife when opening the door to peddlers, beggars and the like, and will prevent the entrance of such people if not desired, and while I have shown details of construction for carrying my invention into effect, it will be understood that my invention is not limited to these details, and various changes therein and modifications thereof may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A device of the class described, comprising a shaft, a cross head on one end of said shaft, a bolt mounted to move longitudinally of the shaft, and means carried by said bolt for locking it against rotation when in different positions on said shaft.

2. A bolt lock for doors comprising a shaft one end of which is mounted in the door frame, a tensionally operated device for securing said shaft against displacement in said door frame and by the releasing of which said shaft may be detached from the door frame, a bolt rotatably mounted on and adapted to be moved longitudinally of said shaft, and means carried by said bolt for locking it against rotation on said shaft.

3. A device of the class described, comprising a square shaft, a cross head on one

end of said shaft, a bolt mounted on said shaft and adapted to swing into vertical and horizontal positions, means for locking said bolt in each of such positions, and means mounted on said shaft for moving said bolt longitudinally of said shaft.

4. A bolt lock for doors consisting of a socket in the door frame of a door, a shaft provided with a cross head adapted to be placed in said socket, said shaft extending inwardly at right angles to the door frame, a bolt mounted on said shaft, means for locking said bolt in vertical and horizontal positions, and means for moving said bolt longitudinally of the shaft.

5. A bolt lock for doors consisting of a socket in the door frame of a door, a shaft provided with a cross head adapted to be placed in said socket, said shaft extending inwardly at right angles to the door frame, a bolt mounted on said shaft, means for locking said bolt in vertical and horizontal positions, means for moving said bolt longitudinally of the shaft, said bolt being provided with oppositely directed arms one of which is adapted to operate in connection with the door frame and the other with the door when said bolt is in a horizontal position.

6. A bolt lock for doors consisting of a socket in the door frame of a door, a shaft provided with a cross head adapted to be placed in said socket, means for retaining said shaft and cross head in said socket, said shaft extending inwardly at right angles to the door frame, a bolt mounted on said shaft, means for locking said bolt in vertical and horizontal positions, said bolt being provided with oppositely directed arms having cushioning members on the end portions thereof which are adapted to bear on the door frame and door when said bolt is in a horizontal position, and means on said shaft for moving said bolt longitudinally thereof.

7. A bolt lock for doors consisting of a socket in the door frame of a door, a shaft provided with a cross head adapted to be placed in said socket, means for retaining said shaft and cross head in said socket, said shaft extending inwardly at right angles to the door frame, a bolt mounted on said shaft, means for locking said bolt in vertical and horizontal positions, said bolt being provided with oppositely directed arms having cushioning members on the end portions thereof which are adapted to bear on the door frame and door when said bolt is in a horizontal position, means on said shaft for moving said bolt longitudinally thereof, and means on the inner end of said shaft for retaining said last named means and said bolt on said shaft.

8. A device of the class described, comprising a square shaft, a cross head on one end of said shaft, a bolt mounted on said shaft and comprising a cylindrical portion having oppositely directed arms, a sleeve mounted in said cylindrical portion and through which said shaft passes, a spring controlled pin mounted in said cylindrical portion and coöperating with a plurality of apertures in said sleeve to lock said bolt against movement when in vertical and horizontal positions and a winged nut mounted on said shaft and adapted to move said bolt longitudinally thereof.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 3rd day of Sept., 1918.

ANDREW J. GRIMECK.

Witnesses:
C. E. MULREANY,
H. E. THOMPSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."