

E. B. STONE AND C. E. JOHNSON.
DOOR AND LOCK THEREFOR.
APPLICATION FILED DEC. 27, 1917.

1,362,514.

Patented Dec. 14, 1920.

Fig. 2.

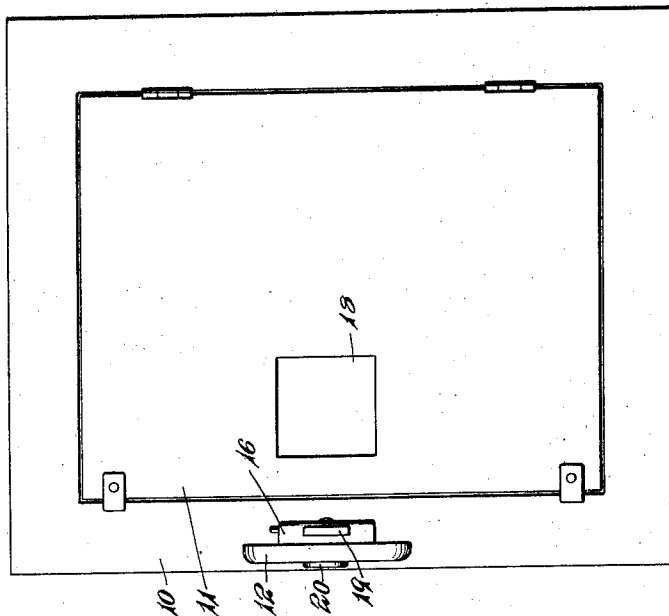


Fig. 1.

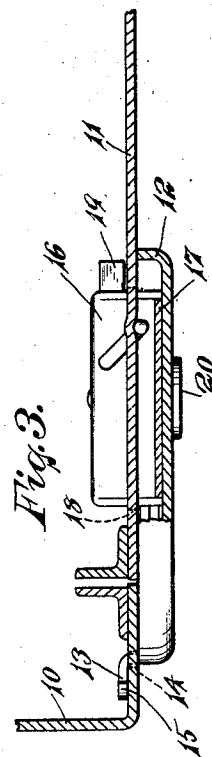
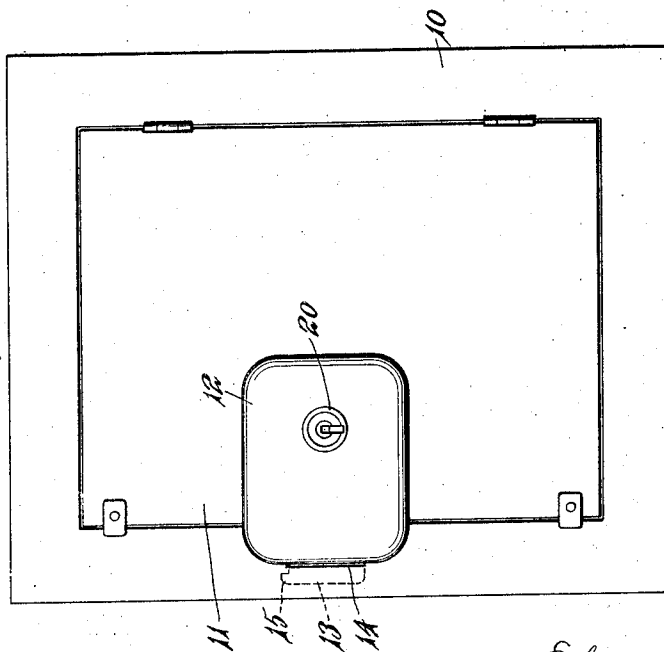


Fig. 3.

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DOOR AND LOCK THEREFOR.

1,362,514.

Specification of Letters Patent.

Patented Dec. 14, 1920.

Application filed December 27, 1917. Serial No. 209,057.

To all whom it may concern:

Be it known that we, ELMER B. STONE, and CHARLES E. JOHNSON, each a citizen of the United States, and a resident of New Britain, in the county of Hartford and State of Connecticut, have invented a new and Improved Door and Lock Therefor, of which the following is a specification.

Our invention relates more especially to the class of locks employed for securing doors and similar devices, and an object of our invention, among others, is to provide a removable lock that may be applied to different doors, and that may be readily applied to doors or similar devices especially constructed to receive it; and a further object of our invention is to so construct a lock that the door casing shall be rigidly united, whereby the bolt may not be surreptitiously disengaged from its keeper.

One form of device embodying our invention and in the construction and use of which the objects herein set out, as well as others, may be attained, is illustrated in the accompanying drawings, in which—

Figure 1 is a face view of a door frame and door showing the latter locked in place with our improved lock.

Fig. 2 is a similar view showing the lock case swung to one side to release the door.

Fig. 3 is a view in cross section through a portion of the door and frame showing our improved lock secured thereto, the scale being enlarged.

Our improved lock, while not confined to any particular use, is especially applicable in securing the doors of lockers, such as are provided in gymnasiums and similar places, and in which the lock cases are adapted to be removed from the lockers and employed to secure the doors of other lockers, such change taking place to secure the doors of larger lockers that are temporarily occupied to receive clothing and the like, while the doors of small lockers from which equipment has been taken are left temporarily unsecured.

In the accompanying drawings the numeral 10 indicates a door frame and 11 a door of a locker, which parts are preferably constructed of comparatively thin sheet metal. These parts being composed of thin sheet metal it is important that they be strength-

ened as much as possible and to this end our improved lock provides means to prevent disengagement of the locking bolt from its keeper by springing the door and frame apart, the case being so attached that such separation and springing of the parts is prevented. In accomplishing this result we provide a lock plate 12 preferably dish-shaped, having a bent flange 13 extending from one edge thereof and adapted to pass through a slot 14 through the door frame 10. This bent flange has a nose 15 adapted to underlie the door frame and by reason of this structure the door of the locker may be opened without removing the lock from the frame, the latter being swung upon the bent flange as a pivot to a position to permit the door to be opened, as shown in Fig. 2 of the drawings, the nose 15 preventing disengagement of the lock plate from the door frame. It will be understood that the nose, flange, and slot are so constructed that by tipping the lock plate, when inserting the flange through the slot, the nose may be passed through the slot in position to engage the back of the frame, as shown in Figs. 1 and 3, the plate being thus removably held in place.

A lock case 16 is secured to the back face of the lock plate within the edges of the dish-shaped structure and is provided with outturned flanges 17 to receive screws or other devices for securing the lock case to the lock plate in a manner common to lock construction. An opening 18 is formed through the door 11 and of a shape and size approximately that of the lock case 16, so that the latter may be readily passed through the opening, as shown in Fig. 3 of the drawings, in which position the lock will be held by means of its bolt 19 which, when thrown, passes behind the door as shown in Fig. 3 of the drawings. It will be seen that when the lock plate is thus secured to the door with the flange 13 engaging behind the door frame and the plate extending across the gap or crack between the edges of the frame and door, they will be so rigidly secured together that it will be impossible to spring them apart sufficiently to permit removal of the lock plate. The case 16 contains a slotted barrel 20 to receive keys preferably of the notched type and by means

of which the bolt 19 may be operated in a manner that will be readily understood by those skilled in the art, such a mechanism being shown in our copending application of Serial Number 97,316, filed May 13th, 1916, and from which copending application the present case has been divided out.

In accordance with the provisions of the patent statutes we have described the principles of operation of our invention, together with the device which we now consider to represent the best embodiment thereof; but we desire to have it understood that the device shown is only illustrative and that the invention may be carried out by other means.

Our invention, as hereinbefore mentioned, is peculiarly applicable to structures in which the lock may be removed from the door of one locker that may permanently contain articles to the door of another locker that is used to temporarily contain articles, as of wearing apparel, and in the drawings herein the frame and door of one of such lockers is represented in Fig. 1 while a like frame and door of a second locker is represented in Fig. 2.

It will be noted that our improved lock case is operatively detachably secured to the door frame, its use contemplating the removal of the lock from one structure and its attachment to another structure, and the principal advantages of the lock are present when so used.

We claim—

1. A portable lock plate for securing two members together and comprising a single rigid member having securing means at one edge to removably and independently secure said plate rigidly and firmly in place in the regular operation of the locking device and to prevent movement of said member when so secured, and means cooperating with said securing means for locking the other edge of said plate in position.

2. A portable lock plate for securing two members together and comprising a single rigid member having a projection rigidly secured at one edge to removably and independently secure said end rigidly and firmly in place in the regular operation of the locking device and to prevent movement of said member when so secured, and means cooperating with said projection for locking the other edge of said plate in position.

3. A door frame member, a door member, a portable lock plate comprising a single rigid member having securing means at one edge for removable attachment to one of said members to secure said edge firmly and rigidly in place in the regular operation of said locking device before attachment of the other edge thereof to independently secure said edge against movement when so secured, said plate being arranged to extend

across the joint between said members, and means cooperating with said securing means for locking said other edge of the plate in position on the other of said members.

4. A door frame, a door, a portable lock plate comprising a single rigid member having securing means at one edge for removable attachment to the door frame in the regular operation of the locking device and before attachment of the other edge thereof to the door, said securing means rigidly and firmly securing said edge against movement when so secured to independently secure said edge, said plate being arranged to extend across the joint between said door and frame, and means cooperating with said securing means for locking the other edge of said plate in position on said door.

5. A door frame member, a door member, a lock plate having means at one edge for removable attachment to one of said members, said plate being arranged to extend across the joint between said members, a lock case secured to said plate and arranged to pass through an opening in the other of said members, and lock mechanism in said case and including a bolt to secure the opposite edge of said plate in position and also thereby to retain the other edge of the lock plate in locked engagement.

6. A door frame member, a door having an opening therein, a lock plate having means at one edge for removable attachment to said frame, said plate being arranged to extend across the joint between said frame and door, a lock case secured to the plate in position to pass into the opening in the door, and lock mechanism located in said case and including a bolt to engage the back surface of the door to lock the plate in place and also thereby to retain the other edge of the lock plate in locked engagement.

7. A door frame having an opening, a door, a lock plate having means for removably hinging it within the opening in said frame whereby it may be swung to open position, and means cooperating with said hinging means for securing the other side of said plate.

8. A door frame having an opening, a door having an opening, a lock plate having means for removably hinging it within the opening in said frame and arranged to extend across the joint between said frame and door, a lock case secured to the plate to pass through the opening in the door, and a lock mechanism located in said case and including a bolt to engage the back surface of the door to lock the plate in place and also thereby to retain the other edge of the lock plate in locked engagement.

9. A door frame having an opening, a door, a lock plate having a projection with a nose to pass through said opening to engage the nose with the back surface of said

frame whereby said plate may be swung to open position, and means cooperating with said projection for securing an edge of the plate in place.

5 10. A door frame having an opening, a door having an opening, a lock plate having a projection with a nose to pass through said opening in said frame to engage the nose with the back surface of the frame, said plate being arranged to extend across 10 the joint between the door and frame, a lock case secured to said plate and arranged to pass into the opening in said door, and lock mechanism located in said case and including a bolt to engage the back surface 15 of the door.

11. A door frame having means to removably receive a lock plate, a door having an opening, a lock case secured to the back of said frame and formed to fit said opening 20 and to extend therethrough, a bolt in said case positioned to extend past the edge of said opening and back of the door when the lock plate is in place, and means for operating the bolt. 25

12. A door with its frame, each having an opening therein, a lock structure including a projection and a case arranged to removably engage said openings and a bolt arranged 30 to engage the back of the door when said plate is in place and the bolt is in its locking position, and means for operating the bolt to secure both edges of the lock in place.

35 13. A door and a door frame, each having openings, a portable lock plate including a lock case secured thereto to fit one of said openings in placing the lock in position, lock mechanism in said case and including a bolt adapted to lock the parts 40 when the plate is in proper position, and means for operating the bolt.

14. A portable lock arranged to be removably placed in position in a door in the 45 regular locking operation, lock mechanism comprised in said lock and carried thereby and including a member arranged by its

movement to secure one edge of said lock against removal from the door, and means for rigidly and firmly securing the opposite 50 edge of said lock against movement when so secured.

15. In a locking device, a plurality of lockers each being suitably constructed to receive said locking device, said locking 55 device consisting of a lock comprising a complete locking unit constructed only to be detachably secured to one edge of said lockers, means for securing said lock, and means for rigidly and firmly securing the opposite 60 edge of said lock against movement when so secured.

16. A frame member, a door member, a lock plate, means for operatively detachably, but rigidly and firmly, securing one 65 edge of said plate against movement to one of said members when so secured, and a lock mechanism comprising a locking member carried by said plate for securing another edge thereof to another of said mem- 70 bers.

17. A door member, a door frame member, a lock plate, lock mechanism supported on said plate and comprising a locking 75 bolt, means for operating the lock mechanism to project said bolt from said case, and means to receive said projected end of said bolt that is farthest from the crack between the door and frame to secure said plate in place. 80

18. A door frame member, a door member, a lock plate, means for operatively securing one edge of said plate to the frame member, and a locking mechanism within the case secured to said plate and comprising mechanism for projecting a bolt from 85 that edge of said case that is farthest from the meeting edges of the door and frame member to engage the back of the door and thereby secure said plate to the door mem- 90 ber.

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