T. McCARTHY.

CAR DOOR LOCK.

APPLICATION FILED JULY 26, 1911.

1,027,265.

Patented May 21, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

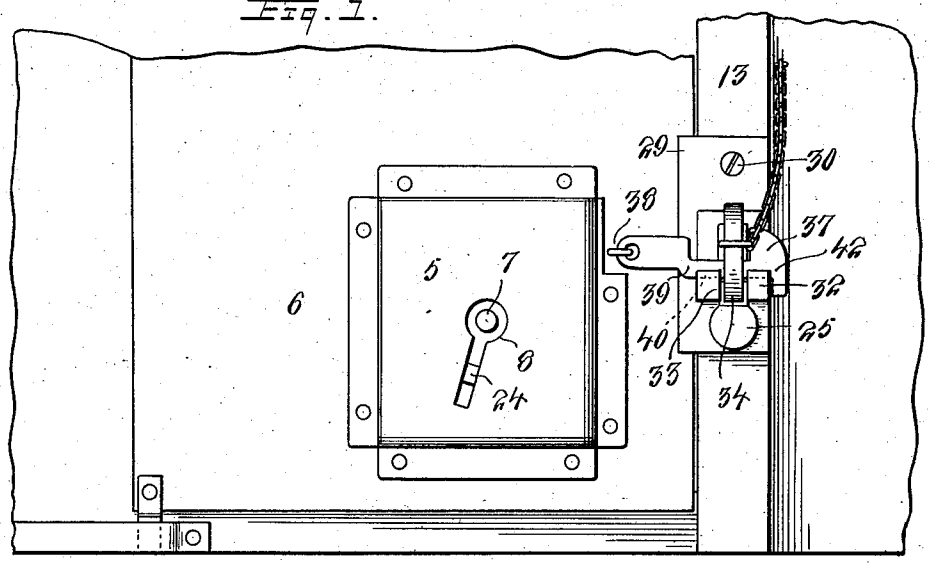
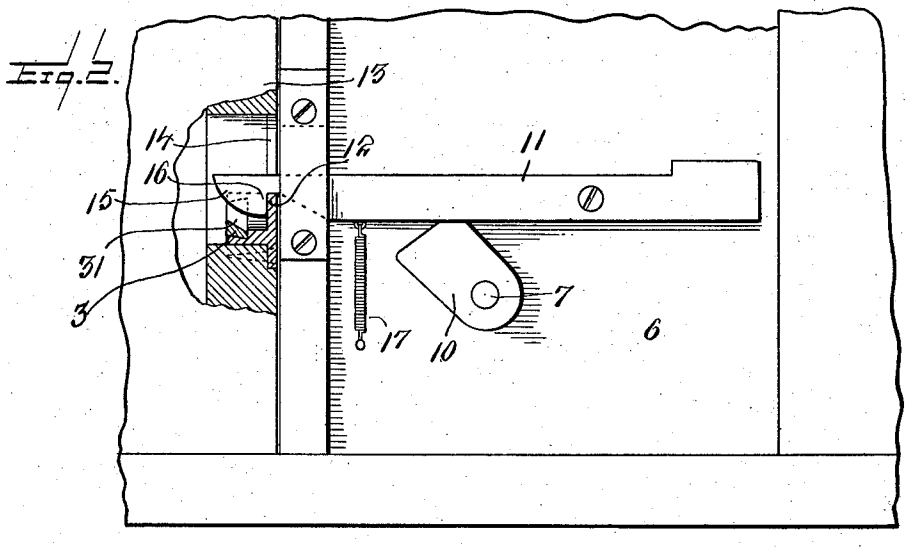


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

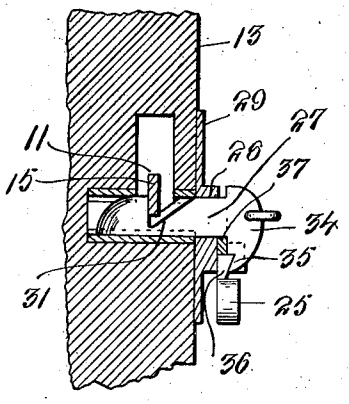


Fig. 4.

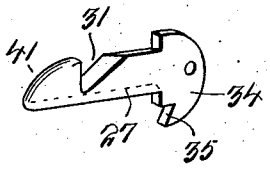


Fig. 5.

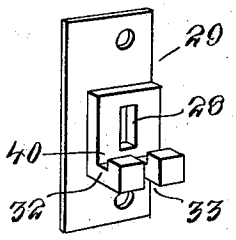
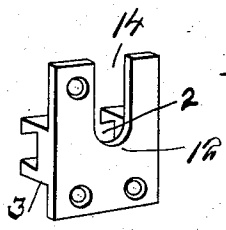


Fig. 6.



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UNITED STATES PATENT OFFICE.

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CAR-DOOR LOCK.

1,027,265. Specification of Letters Patent. Patented May 21, 1912.

Application filed July 26, 1911. Serial No. 640,555.

To all whom it may concern:

Be it known that I, TERRANCE McCARTHY, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented new and useful Improvements in Car-Door Locks, of which the following is a specification.

The general object of the invention is to facilitate the locking and unlocking and sealing and unsealing operations of car doors.

The above and other objects will appear and be better understood from the following description taken in connection with the accompanying drawings in which:

Figure 1 is an exterior view of a portion of a car provided with my device; Fig. 2 is an inner view of the same partly in section and showing means for locking the door; Fig. 3 is a sectional detail of the latch bar and seal retaining device; Fig. 4 is a detail perspective of the lock bolt; Fig. 5 is a detail perspective of the plate which coöperates with the lock bolt to hold the seal; Fig. 6 is a detail perspective of the keeper.

The lock casing 5 is arranged in the door 6 and has a key post 7 one end portion of which is in alinement with the key hole 8 of the lock frame 9; the opposite end portion of the key post extends through the lock casing 5 and door 6 and has a cam stud 10 which underlies the latch bar 11, which is herein shown as pivoted to the door 6 and having one end portion adapted to inter-lock with the keeper 12 in the side 13 of the door frame. The engaging portion of the latch bar and keeper may be constructed in any desired manner so as to inter-lock, and for accomplishing this result I have shown one construction wherein the keeper 12 has a recess 14 the lower end of which is arranged in the path of movement of a beveled nose 15 on the latch bar so that when the said beveled nose bears on the lower end of the recess while the door is being closed the outer or engaging end of the latch bar will move upwardly until the notch, 16 thereof is over the lower end of the recess whereupon the latch bar will be moved downwardly by means of the spring 17 herein shown as connected to the latch bar and door, and interlocked with the keeper.

The seal retaining device comprises a seal bolt which coöperates with the latch bar to secure the seal 25 against displacement. The seal bolt may be constructed in any preferred manner to coöperate with the latch bar, a preferred construction being herein shown as comprising a shank portion 27 adapted for insertion through the opening 28 of a plate 29 suitably secured by bolts 30 to the side 13 of the door frame, the opening 28 of the said plate alining with a dove-tail guide 3, carried by the keeper 12. The shank 27 has a beveled notch 31 to aline with a recess 2 in the guide 3 and receive the nose 15 of the latch bolt. Thus it will be seen that when the said nose is arranged in the said beveled notch outward movement of the lock bolt will be prevented. The plate 29 has a flange 32 provided with a vertical recess 33 to receive a depending portion 34 at the outer end of the shank 27 of the lock bolt when the latter is inserted through the opening of the plate as previously described. The inner side of the depending portion 34 has a beveled notch 35 which engages with a similarly beveled shank 36 on the seal 25. With this construction it will be seen that when the shank 36 of the seal 25 is inserted into the recess 33 and the shank 27 of the lock bolt is moved into engagement with the latch bar the beveled surfaces of the notch 35 and shank 36 will bear one upon the other, whereby, the said shank will be clamped between the inner wall of the recess 31 and wall of the beveled notch 35 whereupon downward movement of the seal will be prevented until the latch bar is lifted by the locking device as previously described.

A hasp 37 is secured in any preferred manner such as by a staple 38 to the door 6, the said hasp has a reduced portion 39 adapted to enter a groove 40 in the upper side of the flange 32 and when so positioned the upper side of the reduced portion 39 will underlie the opening for the latch bar so that when the latter has been inserted through the said opening as previously described, the hasp will be locked in the position shown in Fig. 1 it being understood that the hasp has been first adjusted into engagement with the flange.

When it is desired to automatically lock the door the latch bar is set so that when the door is closed the engaging end portion of the latch bar will inter-lock with the keeper. In order to open the door the cam stud 10 must be turned so as to lift the latch bar as

previously described. When the door has been locked as just described and it is desired to seal the same the seal is adjusted in the recess 31 as previously described and the shank 27 of the lock bolt is inserted through the opening 28 of the plate whereupon its beveled end portion 41 will cam the nose 13 upwardly until said nose alines with the recess 31 whereupon the nose will move downwardly and engagement will be effected between the lock bolt and latch bar and the seal secured as previously described. When it is desired to open the door the cam stud 10 is turned to raise the latch bar as previously described whereupon the lock bolt may be withdrawn and the door opened. When the car is empty and it is desired to lock the door without the aid of the latch bar, the door is first closed and the hasp moved into engagement with the flange so that the head 42 of the hasp will bear on one end of the flange. As before stated the hasp may be arranged in the last-named position previous to inserting the lock bolt so that a double lock will be provided for the door.

Although I have shown and described several forms of my device it is to be understood that I am not to be limited to the structures shown and described, since various changes may be made within the scope of the claims without departing from the spirit of the invention.

What is claimed as new is:

1. In a car door lock, a seal retaining device comprising an apertured plate arranged on the door frame and having a recess, a seal locking member insertible into the aperture of the plate and having a portion adapted to enter the recess and hold the seal therein, and a latch bar carried by the door and adapted to inter-lock with the locking member.

2. In a car door lock, the combination with a door frame having a lateral opening in one side thereof, a keeper secured to the door frame, a latch bar carried by the door and adapted to inter-lock with the keeper, and including a plate secured to the side of the door frame and having an opening alining with the opening of the latter, a lock bolt insertible through said openings and adapted to inter-lock with the latch bar and said lock bolt being further adapted to cooperate with the plate to clamp a seal therebetween.

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

TERRANCE McCARTHY.

Witnesses:

A. H. PICKETT,

R. M. BRITTON.