F. P. PFLEGHAR.

DOOR LOCK.

APPLICATION FILED MAY 23, 1906.

914,669. Patented Mar. 9, 1909.

Fig. 1.

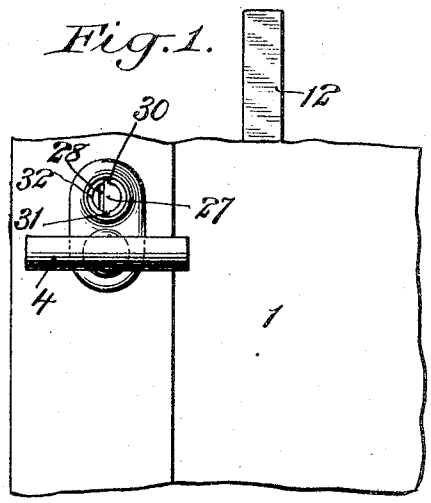


Fig. 2.

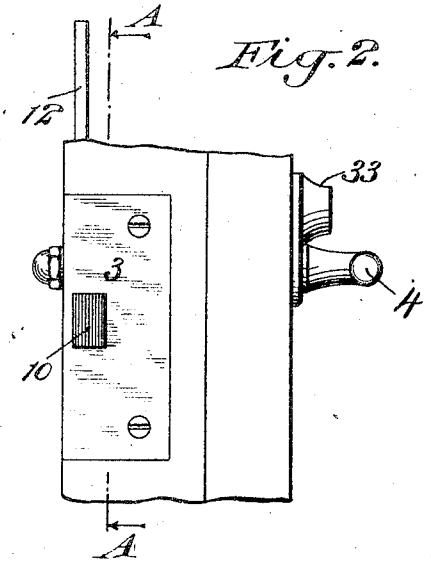


Fig. 3.

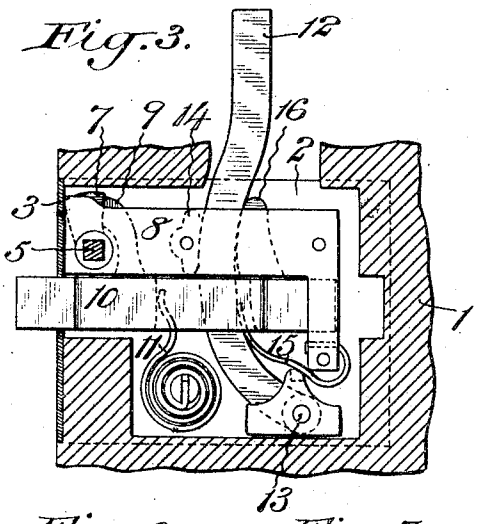


Fig. 4

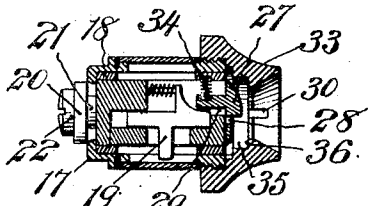


Fig. 8.

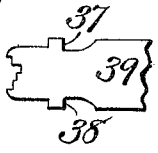


Fig. 6.

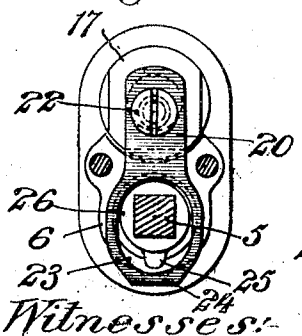


Fig. 7.

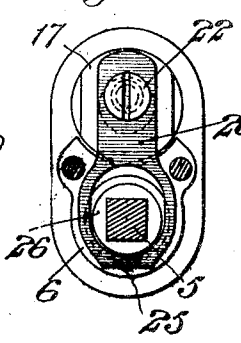
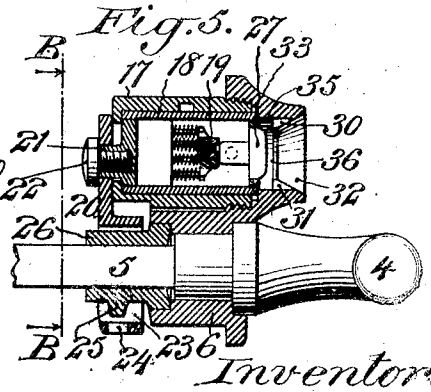


Fig. 5.



Witnesses:
F. George Barry
Henry Thieme

Inventor:
Frank P. Pfleghar
by attorneys
Brownell & Brownell

UNITED STATES PATENT OFFICE.

FRANK P. PFLEGHAR, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO F. P. PFLEGHAR & SON, OF NEW HAVEN, CONNECTICUT, A FIRM.

DOOR-LOCK.

No. 914,669. Specification of Letters Patent. Patented March 9, 1909.

Application filed May 23, 1906. Serial No. 318,295.

To all whom it may concern:

Be it known that I, FRANK P. PFLEGHAR, a citizen of the United States, and resident of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Door-Locks, of which the following is a specification.

My invention relates to improvements in door locks and has for its object to provide a novel and effective device for locking the latch bolt handle.

This invention is particularly well adapted for use in connection with limousine doors.

In the accompanying drawings, Figure 1 represents an outside view of a portion of a door with my improved lock applied, Fig. 2 is an end view of the same, Fig. 3 is a vertical section taken in the plane of the line A—A of Fig. 2, looking in the direction of the arrows, Fig. 4 is an enlarged horizontal central section through the lock, Fig. 5 is a vertical central section through the lock, Fig. 6 is a section taken along the plane of the line B—B of Fig. 5, looking in the direction of the arrows, Fig. 7 is a similar view showing the bolt of the lock engaged with the latch bolt handle shank for locking the latch bolt at the limit of its outward movement, and Fig. 8 is a detail view of a key fitted to the particular lock shown herein.

The door is denoted by 1. This door has the usual recess 2 for the reception of the working parts of the lock. The lock casing plate is denoted by 3 and it is extended along the front end and inner side of the door.

The latch bolt handle is denoted by 4 and its shank by 5. The handle shank 5 extends through the front plate 6 of the lock. The shank 5 has fixed thereto the usual arm 7 between the casing plate 3 and the intermediate casing plate, 8, which arm is arranged to engage a lug 9 on the latch bolt 10 for sliding the latch plate into its withdrawn position against the tension of the spring 11 carried by the casing plate 3.

The handle for throwing the latch bolt from the inner side of the door is denoted by 12 and is pivoted at 13 to the casing plate 3. This handle 12 is normally held at the limit of its forward movement against a stop 14 located between the casing plates 3 and 8 by a spring 15. This handle 12 is arranged to engage a lug 16 on the latch bolt 10 for withdrawing the latch bolt.

The cylinder 17 of a tumbler lock is screwed or otherwise secured to the front plate 6 of the lock. A barrel 18 is mounted to rotate in the cylinder 17, which barrel contains a plurality of spring actuated tumblers 19.

The locking bolt is denoted by 20 and is mounted on an eccentric pin 21 carried by the barrel 18. This bolt 20 is held in position on the eccentric pin 21 in the present instance by means of a screw 22. The locking bolt 20 embraces the shank 5 of the latch handle 4, its elongated loop portion being denoted by 23. The outer end of the loop portion 23 of the locking bolt is provided with a recess 24.

A lug 25 is formed on a sleeve 26 which surrounds the shank 5 of the latch bolt handle 4 within the loop portion 23 of the locking bolt 20. When the latch bolt 10 is in its extended position, the lug 25 is opposite the recess 24 so that if the locking bolt 20 be withdrawn the recess 24 will be brought into engagement with the lug 25 thus locking the shank 5 and thereby the latch bolt 10 in its extended position.

I have provided certain novel features in the lock whereby the interior of the barrel and the tumblers are effectually protected from dust and dirt thus rendering the lock well adapted for use in connection with limousine doors.

The outer end of the barrel 18 is provided with a spring actuated laterally sliding guard 27 having a key slot 28 therethrough which is normally out of alinement with the slot 29 in the end of the tumbler barrel and the recesses 30 and 31 in the flaring mouth 32 of the mouthpiece 33. The spring which actuates the guard 27 for yieldingly closing the key slot 29 in the barrel is denoted by 34. The oppositely arranged recesses 30, 31, communicate with an annular groove 35 in the inner wall of the mouthpiece 33, the annular shoulder 36 formed by said groove serving to engage shoulders 37, 38, on the key 39 after the key has been inserted through the recesses 30, 31, into the annular groove 35 and turned out of alinement with the said recesses 30, 31.

When it is desired to lock the latch bolt handle and thereby the latch bolt, the key 39 may be inserted into the lock, the end of the key being first inserted beneath the guard 27 so as to slide the guard laterally a sufficient distance to permit the insertion of the end of the key through the key slot 29 in the barrel into position to slide the tumblers 19 into

alinement. The key is then turned, thus causing the lock bolt 20 to move into position to cause the recess 24 in the loop portion 23 of the bolt to engage the lug 25 on the sleeve 26. The key may then be withdrawn from the lock through the oppositely arranged recesses 30, 31. It will be seen that as soon as the key is withdrawn from the lock, the guard will slide laterally into position to cover the key slot 29 thus protecting the interior of the lock from dust and dirt. It will also be seen that when the key is in the lock, at any point intermediate the limits of its movements, it cannot be removed from the lock because of the engagement of its shoulders 37, 38, with the shoulder 36 of the annular groove 35. To unlock the latch bolt handle and thereby the bolt, the key may be again inserted into the lock and the operation reversed thus disengaging the recess 24 of the loop portion 23 of the lock bolt from the lug 25 on the sleeve 26.

What I claim is:—

1. In a door lock, a latch bolt handle, a sleeve fitted on the shank of the handle, a tumbler lock including a rotary barrel provided with an eccentric bearing at its inner end, a locking bolt hanging on and depending from the said eccentric bearing and embracing the sleeve on the shank of the handle, the embracing portion of the locking bolt and the sleeve being provided the one with a recess and the other with a projection adapted to enter the recess for locking and releasing the latch bolt handle.

2. In a door lock, a latch bolt handle, a sleeve fitted on the shank of the handle, a tumbler lock including a rotary barrel provided with an eccentric bearing at its inner end, a locking bolt hanging on and depending from the said eccentric bearing and embracing the sleeve on the shank of the handle, the embracing portion of the locking bolt and the sleeve being provided the one with a recess and the other with a projection adapted to enter the recess for locking and releasing the latch bolt handle, a key for operating the lock, a mouth piece through which the key enters the lock and a laterally sliding spring-actuated key-hole guard located between the mouth piece and the end of the lock in position to be slid laterally by the key as the key is inserted into the lock.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 21st day of May 1906.

FRANK P. PFLEGHAR.

Witnesses:
FREDK. HAYNES,
HENRY THIEME.