A. A. PAGE.

ELEVATOR SHAFT DOOR LOCK.

APPLICATION FILED APR. 5, 1911.

995,710. **Patented June 20, 1911.**

Fig. 1.

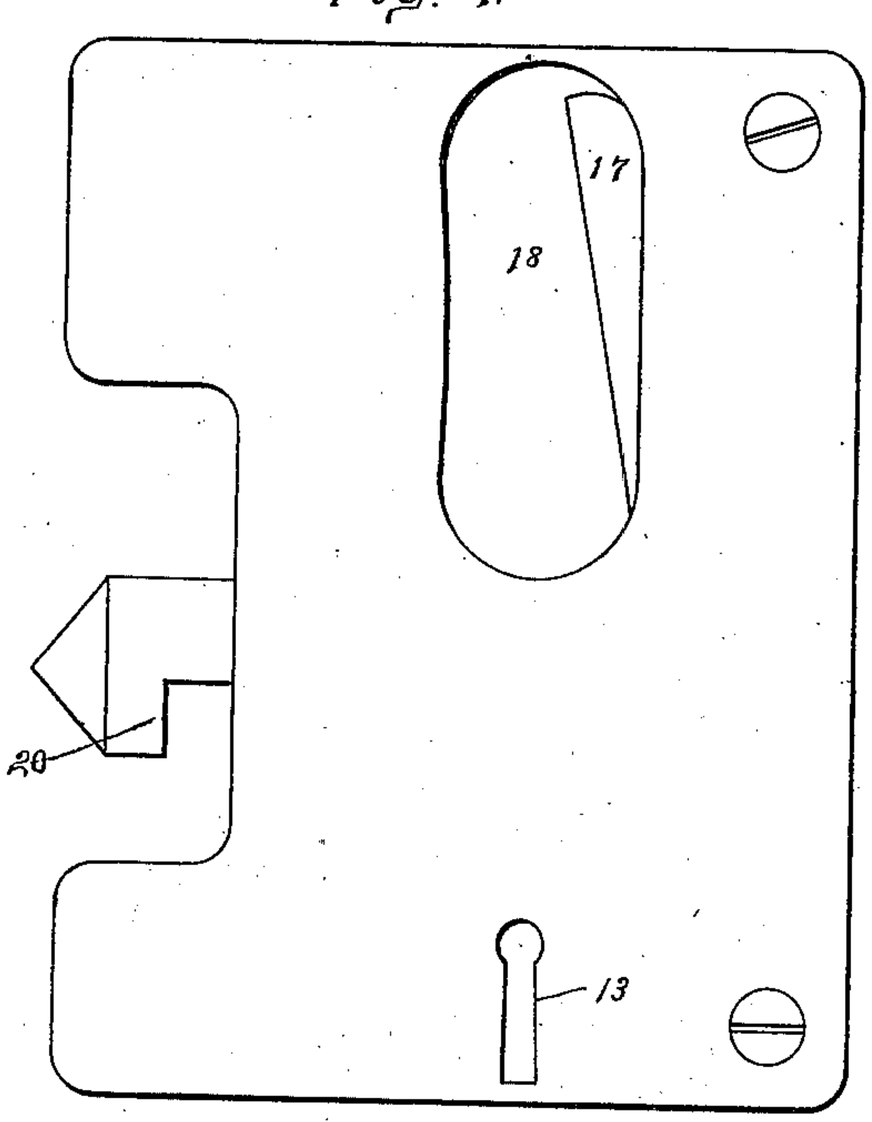


Fig. 4.

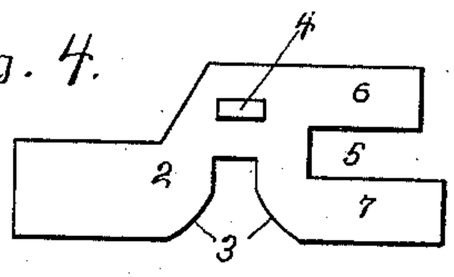


Fig. 5.

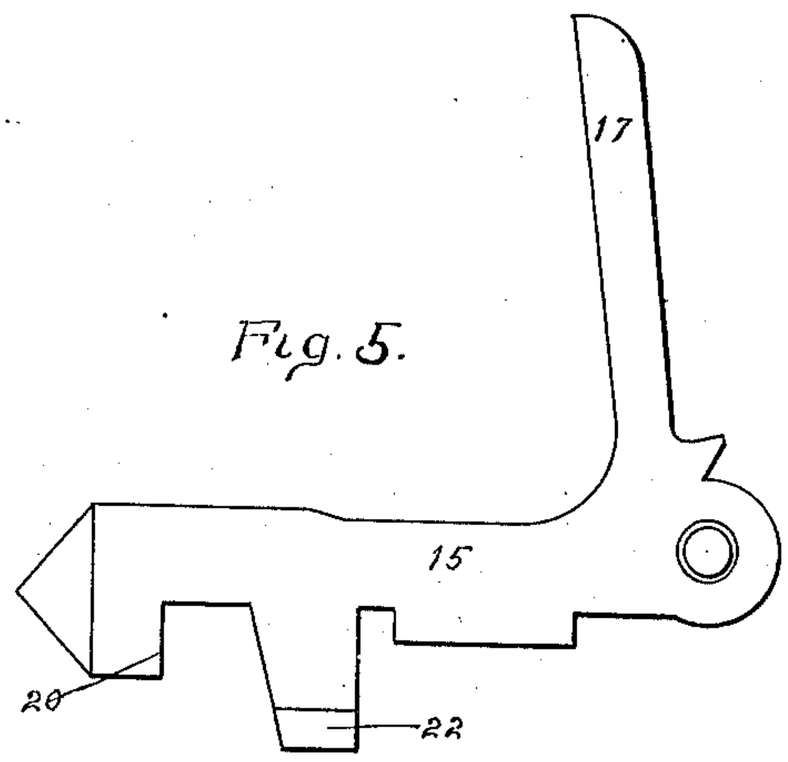


Fig. 2.

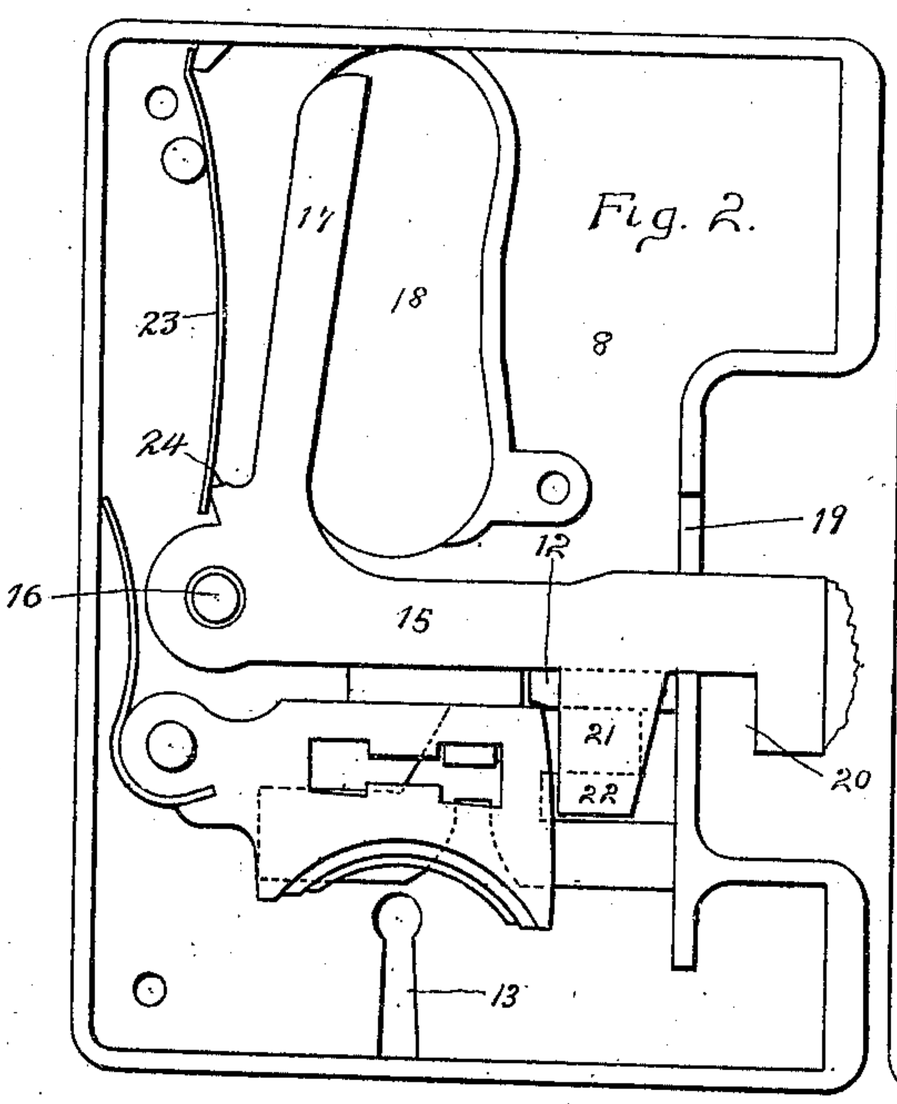
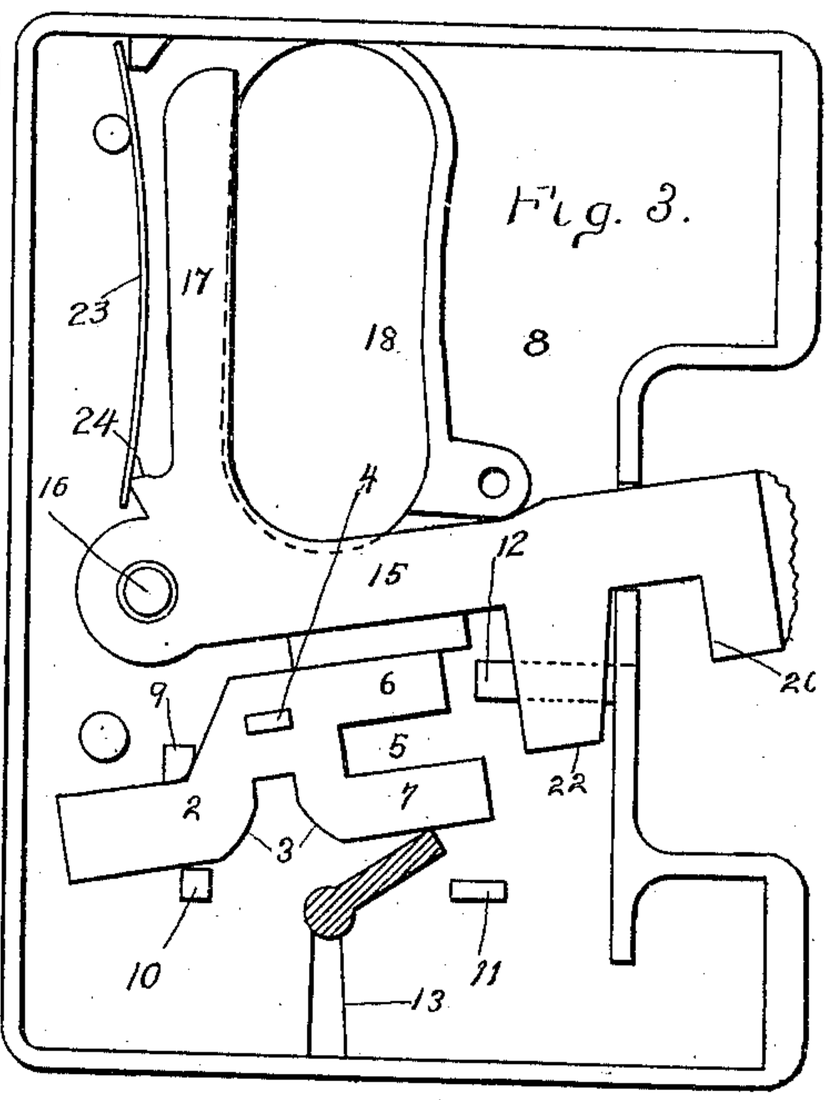


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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ELEVATOR-SHAFT-DOOR LOCK.

995,710. Specification of Letters Patent. Patented June 20, 1911.

Application filed April 5, 1911. Serial No. 619,161.

To all whom it may concern:

Be it known that I, ALBERT A. PAGE, a citizen of the United States, residing at East Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Elevator-Shaft-Door Locks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a view in elevation of an elevator-shaft door lock constructed in accordance with my invention and shown with its latch in its locking position. Fig. 2 a view of the lock in inside elevation with the cover removed to show the locking of the pivotal latch by means of the locking and lifting slide. Fig. 3 a corresponding view with all of the tumblers removed and the latch shown as moved into its unlocked position by the lifting of the slide by the key of the lock. Fig. 4 a detached view of the combined locking and lifting slide. Fig. 5 a detached view in inside elevation of the pivotal latch.

My invention relates to an improvement in that class of locks designed with particular reference to being used on loft doors opening directly into an elevator-shaft the object being to produce a simple and convenient lock constructed with particular reference to security against being forced from the elevator itself.

With these ends in view my invention consists in a lock having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, I employ a combined locking and lifting slide 2 formed with key-talons 3, carrying a racking-stump or post 4 and having a longitudinal locking-slot 5 formed in its outer end which is thus made to consist of an upper arm 6 and a parallel lower arm 7. This slide is placed against the bottom of the lock-case 8 and held in place and guided by means of lugs 9, 10 and 11, and a long rib or abutment 12, all formed upon the bottom of the said case, the slide resting upon the lugs 10 and 11 and swinging between the lugs 9 and 10 as shown in Fig. 3, when the slide is lifted by the engagement of the lower edge of its arm 7 by the key. The said rib is adapted in length so that its inner end will be cleared by the upper arm 6 of the slide when the slide is lifted by the engagement of the lower edge of its lower arm 7 by the lock-key which may be of any approved construction and which is entered into the lock through a keyway 13 located near the lower edge of the case 8 which is furnished with a cover 14.

In combination with the slide 2 just described, I employ a locking-latch 15 pivoted upon a stud 16 and formed with an upwardly extending operating-lever 17 which is engaged for manual operation through a vertically elongated finger-opening 18 formed in the lock-case 8. The said latch 15 projects at its outer end through a clearance opening 19 in the outer wall of the said lock-case 8 and is formed with a downwardly opening keeper-slot 20 which shuts over the keeper which is of ordinary construction.

Just within the lock-case 8 the latch is provided with a downwardly extending hook-like locking-arm 21 formed at its lower extremity with a horizontally projecting lug 22 adapted to enter the locking-slot 5 of the slide 2 when the slide is moved to the limit of its outward movement as shown in Fig. 2. In this position of the slide it effectually guards the latch 15 from being forced open since any effort to lift the latch is blocked by the interposition of the arm 6 of the slide between the lug 22 of the locking-arm 21 of the latch 15 and the locking-abutment 12 which is integral with the lock-case 8. However, when the key of the lock is introduced into the same and properly turned, it coacts with the slide 2 to retract the same to the limit of its inward movement, whereby the upper-arm 6 of the slide is cleared from the inner end of the abutment 12 of the lock-case 8. Now when the key is further turned and so engaged with the lower edge of the lower arm 7 of the slide, it lifts the entire slide 2 which turns upon the lug 9 as upon a pivot, whereby the upper edge of the arm 6 engages with the lower edge of the latch about midway the length thereof and turns the latch on the stud 16 so as to swing it into its unlocked position in which it clears the keeper.

It will be seen from the foregoing that the combined locking and lifting slide 2 op-

erates when at the limit of its outward movement to block the latch against being forced open, while when at the limit of its inward excursion, it provides for lifting the latch into its open position by the key of the lock. A spring 23 located within the lock-case 8 and engaging with the heel 24 of the latch 15, provides for throwing the latch into its locking position. As shown, the lock is provided with a plurality of ordinary pivotal tumblers 25 having gates 26 for the reception of the post 4 of the slide 2. But my improved lock may be variously changed in details of construction, but however constructed will employ a pivotal latch in combination with a slide operating in one position to lock the latch, and in another position to lift it.

I claim:—

1. In an elevator-shaft door lock, the combination with a pivotal latch having an operating lever, of a combined locking and lifting slide for locking the latch in its locked position, and lifting it into its unlocked position.

2. In an elevator-shaft door lock, the combination with a pivotal latch having an upwardly extending operating-lever and a depending locking-arm, of a combined locking and lifting slide formed with a locking-notch receiving the said arm when the slide is at the limit of its outward movement, to lock the lifting of the latch.

3. In an elevator-shaft door lock, the combination with a pivotal latch having an upwardly extending operating-lever and a depending locking-arm formed with a locking-lug, of a combined locking and lifting slide having a locking-slot for the reception of the locking-lug of the said arm, and an abutment located within the lock-case in position for being engaged by a portion of the slide when the same is in its locking position so as to block the forcing of the latch.

4. In an elevator-shaft door lock, the combination with a pivotal latch having an upwardly extending operating-lever and a depending locking-arm, of a combined locking and lifting slide adapted to co-act with the said arm to block the lifting of the latch, formed with talons for co-action with a key and adapted when in its retracted position to be swung for lifting the catch into its unlocking position.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

ALBERT A. PAGE.

Witnesses:
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