S. D. POLSEN.

LOCK.

APPLICATION FILED AUG. 19, 1910.

991,363. Patented May 2, 1911.

Fig. 1.

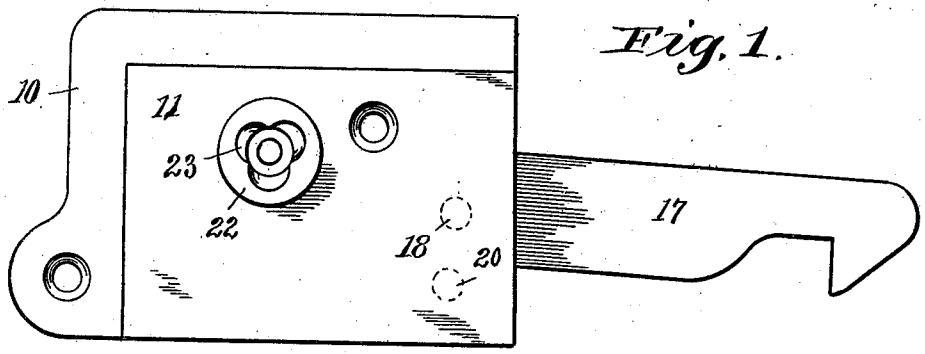


Fig. 2.

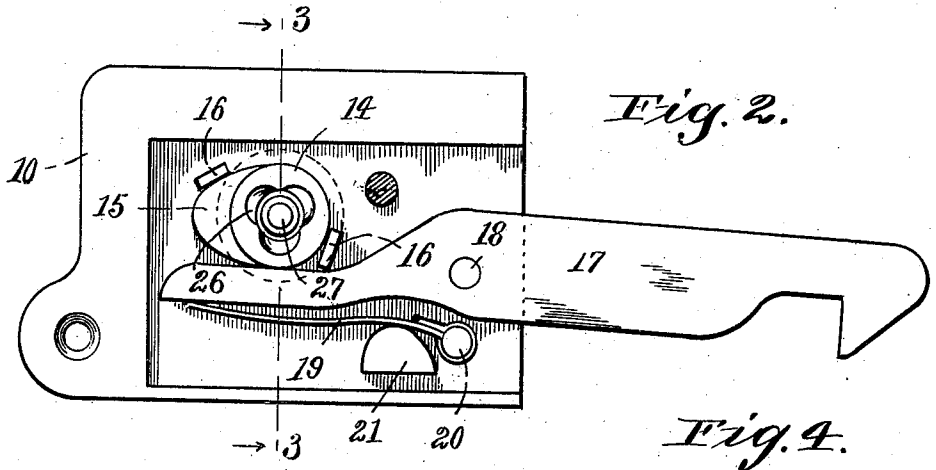


Fig. 4.

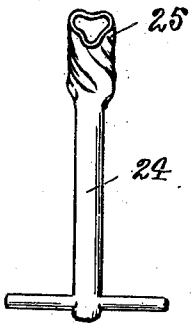
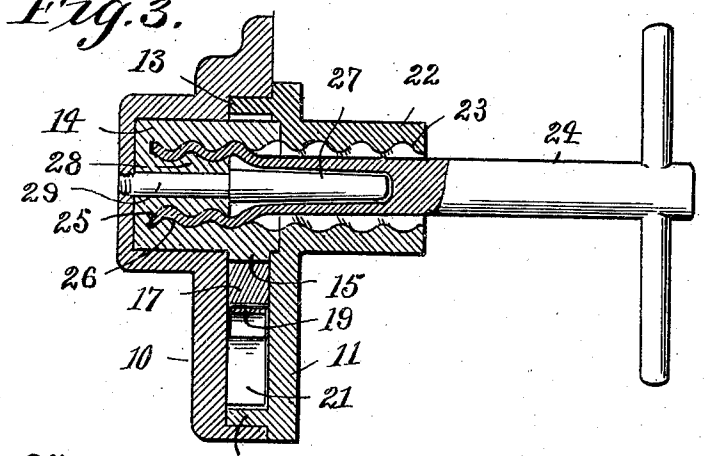


Fig. 3.



Witnesses

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LOCK.

991,363. Specification of Letters Patent. Patented May 2, 1911.

Application filed August 19, 1910. Serial No. 578,036.

To all whom it may concern:

Be it known that I, SAMUEL D. POLSEN, a citizen of the United States, and resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to new and useful improvements in spring locks such as are commonly used upon sliding doors, as for instance, car doors, barn doors, and the like.

It is the purpose of my invention to provide an improved form of lock which will require a hollow internally and externally threaded key to operate the same; to construct the lock so that it will be difficult to pick the same and wherein the operating arm and lever will have to be returned to their normal position before the key can be removed, and further to generally improve the construction of locks of this class in a way that the same may be manufactured at a comparatively low cost. In this class of locks the same style of key is intended to serve for a number of locks so that when applied to car doors a single key in the hands of a local freight agent will suffice for all cars fitted with my improved form of lock.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Similar characters of reference denote like or corresponding parts throughout the several figures of the accompanying drawings forming a part of this specification, and upon which—

Figure 1 shows a front side view of my improved form of lock in its normal position. Fig. 2 is a similar front elevation of lock with front plate removed. Fig. 3 is a slightly enlarged vertical cross section of the lock, taken on line 3—3 of Fig. 2, and Fig. 4 is a detached perspective view of the key for operating the lock.

Referring in detail to the characters of reference marked upon the drawings 10 represents the back member of the lock case and 11 the front of the case, which parts are secured together in any suitable manner. The back of the case 10 is recessed to accommodate the operative mechanism of the lock and the flange 12 of the front of the case. A cylindrical extension 13 is formed on the back of the case to produce a bearing for the key socketed rocker arm 14 mounted therein. The extended portion 15 of the arm is designed to throw back and forth between the lugs 16 formed upon the case, and against the resistance of the spring actuated latch 17. This latch is pivoted to a pin 18 secured in the case, and is provided with a spring 19 for holding the free end of the lever against the operating arm. The fixed end of this spring is secured to a second pin 20 held in the case and the free end of the spring is held against the latch by a lug 21 also secured upon the inside of the case. The forward end of the latch is notched as shown to engage any suitable form of holding bolt, not shown. The front of the case is provided with an extension 22 which has an opening through into the case, that is provided with an internal left hand thread 23 through which the key 24 is turned for insertion into the lock.

The hollow operative end portion 25 of the key is threaded both inside and outside and after passing through the key hole enters the annular spiral socket 26 within the hub of the rocker arm. The post 27 that is centrally and longitudinally disposed within the key hole is secured to the back of the lock case in any suitable manner, as for instance, by threading, as shown. The inner case 28 of the hub of the rocker arm is loose upon the inner reduced end 29 of the centering post 27. In practice the inner cylindrical end of the key loosely fits over the post, which latter is intended to form an obstruction against any attempt to pick the lock.

The action of the spring 19 serves the double purpose of holding the inner end of the latch up against the rocker arm 14 which is also held in its normal position as shown in Fig. 2. This position of the arm is such as to insure the proper registration of the threads of the arm with those of the key hole so as to allow the threaded end of the key to be freely turned through the key hole and into the threaded socket of the arm

until the key fetches up against the bottom as shown in Fig. 3, whereupon a further turn of the key causes the arm to also turn and lift the latch. The key cannot be removed until it and the arm are first turned backward, until the arm strikes the upper lug 16 as shown in Fig. 2. A further turn of the key causes it to back out of the socket and hole, and thereby leaving the parts again in readiness for a future insertion of the key as in a further operation of the lock.

The foregoing construction embodying a threaded key hole in connection with a rocker arm having an annular threaded socket to receive an internally and externally threaded hollow key serves to produce an effective lock that is difficult to operate except by the aid of a proper key.

Having thus described my invention what I claim and desire to secure by Letters Patent is,

1. In a lock of the class described the combination of a casing having a threaded key hole, a rotary rocker arm mounted within the casing and having an annular internally and externally threaded key socket, means to normally hold the said arm in position so that its threaded socket normally registers with the threads of the key hole, and a latch to be operated by the said rocker arm.

2. In a lock of the class described the combination of a casing having a threaded key hole, of a rocker arm mounted within the casing and held against lengthwise movement and provided with a threaded key socket adapted to receive a hollow and externally threaded key whereby said arm is turned within its bearings, and a latch bolt in contact with the arm and adapted to be operated thereby.

3. In a lock of the class described the combination of a casing having a threaded key hole, and a key post secured to the casing, a rocker arm mounted to turn upon the post but held against lengthwise movement and provided with an externally threaded central core to receive the internally threaded key barrel, and a latch bolt to be operated by the said arm.

Signed at Bridgeport in the county of Fairfield and State of Connecticut this 18th day of August A. D., 1910.

SAMUEL D. POLSEN.

Witnesses:

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