(Model.)

J. ROACH & P. W. SALMONS.

LOCK.

No. 262,618. Patented Aug. 15, 1882.

Fig. 1

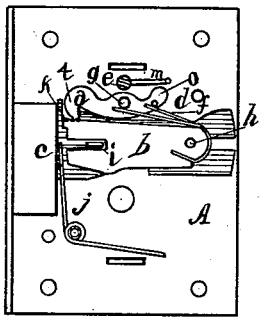

Fig. 2

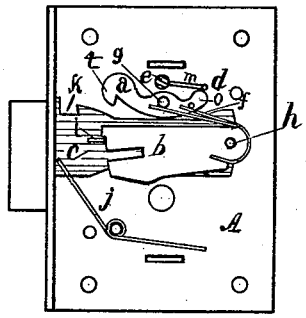

Fig. 3

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UNITED STATES PATENT OFFICE.

JAMES ROACH AND PATRICK W. SALMONS, OF TERRYVILLE, CONN.

LOCK.

SPECIFICATION forming part of Letters Patent No. 262,618, dated August 15, 1882.

Application filed January 24, 1882. (Model.)

To all whom it may concern:

Be it known that we, JAMES ROACH and PATRICK W. SALMONS, both of Terryville, in the county of Litchfield and State of Connecticut, have jointly invented new and useful Improvements in Locks, of which the following is a specification, reference being had to the accompanying drawings and letters of reference marked thereon, which form a part of this specification.

Our invention relates to locks in which the bolt is thrown to a locking position without the use of the key.

The object of our invention is to provide a lock of simple and cheap construction, in which the key is only used to draw the bolt from the locking position, and in which, upon the turning of a thumb nut or lever, the bolt is released and allowed to slide outward to a locking position, and in which one or more of the tumbler-springs operate on both the tumbler and latch mechanism.

Our invention consists in the construction and arrangement of the parts as hereinafter set out, whereby the objects of our invention are attained.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a view of the lock with the key-holder, its barrel, and the face-plate removed, showing the position of the parts when the latch is acting upon the bolt. Fig. 2 is a similar view of the lock, showing the position of the parts when the bolt is in the locking position; and Fig. 3 is a view of the latch-lever.

The drawings represent our improvements as applied to an ordinary lock of the Yale pattern.

A represents the back plate. Upon the back plate is arranged a sliding bolt, *c*, whose shank portion is slotted and slides over a pin, *h*. The front plate is formed with a barrel, (not shown,) in which a key-holder revolves. Above the bolt and at one side of the key-holder, in such position as to be operated upon by the key, are a series of tumblers, *b*, which are forced toward the key-holder by individual springs *f*. These tumblers rest flat, one upon the other, and are pivoted upon the pin *h* immediately above the shank of the bolt. The other ends of the tumblers have slots adapted to receive the lug *i* on the bolt when the slots are brought in proper registration by the key. The spring *j* has a tendency at all times to force the bolt outward to a locking position.

As thus far described, the lock does not differ substantially from locks now in use.

In applying our improvements a latch, *a*, is pivoted to the back plate in a position to catch in a notch, *k*, cut in the bolt to receive the latch when the bolt is in the position shown in Fig. 1. The end *t* of the latch is forced toward the bolt by the action of one or more of the tumbler-springs, thus saving the use of an additional number of springs in the construction of the lock. To do this we provide a projecting pin at the end *o* of the latch, against which one or more of the tumbler-springs are made to bear. The remainder of the tumbler-springs bear against the pin *g*. The rod *e* passes through the front plate and into the back plate, and is provided with a projecting piece, *m*, which, when the rod is turned, operates on the end *o* of the latch, and, forcing it toward the bolt, forces the catch end of the latch away from and releases the bolt, thus allowing it to be shot outward by the action of the spring.

It will be seen that the shape and position of the device which operates to raise the latch may be varied without departing from our invention.

The rod *e* projects through the door, and is provided with a thumb-piece, *n*. If, now, the bolt be drawn in, as shown in Fig. 1, by the key, the latch will enter the notch *k* and hold the bolt in that position until the latch is raised by turning the rod *e*, when the spring acting upon the bolt will force it outward, as shown in Fig. 2.

We are aware that a lock has heretofore been made in which the bolt is forced to a locking position by the action of a spring, and the bolt may be released by turning a projecting thumb-piece. This is, however, objectionable for the reason that a separate spring is required to operate the latch, and the construction is complicated. It will be readily seen that with very little modification our invention may be applied to any kind of lock.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A lock consisting of the combination of

a bolt provided with a spring to force it to a locking positon, a latch adapted to hold the bolt withdrawn, one or more tumblers, one or more tumbler-springs adapted to operate on both a tumbler and the latch, as shown, and a rod having a projection and arranged to project beyond the lock-plate, and adapted to be turned to operate on the latch and release the bolt and allow the bolt to be forced to a locking position by the action of a spring without the application of a key, substantially as shown.

2. In a lock, substantially as shown, the combination of the bolt *c*, having notch *k*, and provided with a spring to force it to a locking position, the latch *a*, pivoted as shown, and having end *t*, adapted to engage with the bolt at notch *k*, the rod *e*, located as shown, and provided with projection *m*, adapted to operate on the end *o* of the latch when the rod *e* is turned, one or more tumblers, *b*, having springs *f*, which operate both to cause the latch to engage with the bolt and to give the requisite action to the tumbler, all constructed and operating substantially as shown.

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