# J. Farrel
## Safe Lock.

No. 48919. Patented July 25. 1865

Fig: 1.

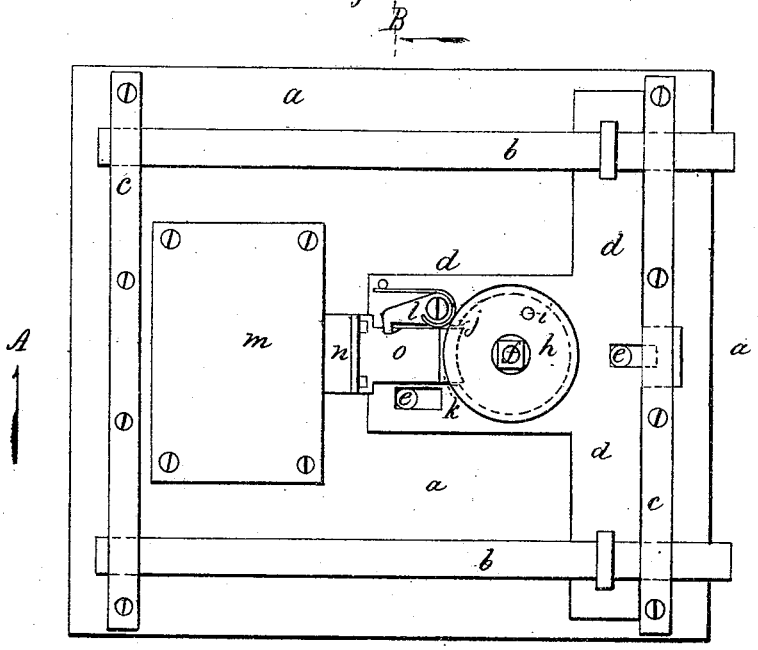



Fig: 2

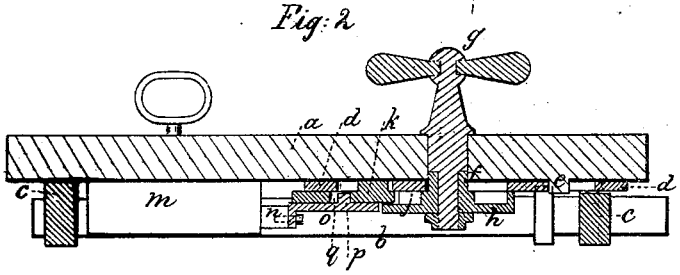
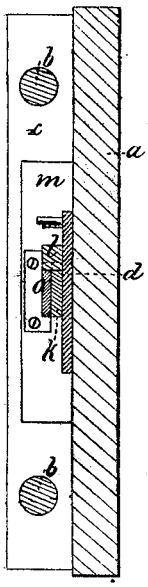



Fig: 3




Witnesses

Wm. H. Rowland

Andrew De Lacy

Inventor

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# UNITED STATES PATENT OFFICE.

JOHN FARREL, OF NEW YORK, N. Y.

## IMPROVED SAFE-LOCK.

Specification forming part of Letters Patent No. **48,919**, dated July 25, 1865.

*To all whom it may concern:*

Be it known that I, JOHN FARREL, of the city, county, and State of New York, have invented a new and useful Improvement in Locks for Safe, Vault, and other Doors; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of the inner face of a safe-door with my said invention applied; Fig. 2, a horizontal section taken in the plane of the line A *a* of Fig. 1; and Fig. 3, a vertical section taken in the plane of the line B *b*, Fig. 1.

The same letters indicate like parts in all the figures.

To get access to the inside of safes, vaults, &c., burglars have frequently resorted to the expedient of introducing gunpowder through some aperture, and by the explosion thereof, or by other violent means, to break the connections by which the lock is secured to the door, thereby liberating the bolt by which the door is locked.

The object of my invention is to prevent any such expedient from unlocking the bolt or bolts which secure the door; and to this end my said invention consists in combining the bolt or bolts which fasten the door with the bolt of the lock by an intermediate mechanism, which, so long as the lock is in place, will admit of the lock-bolt locking and unlocking the bolt or bolts which secure the door, and which will permit the lock-bolt to be separated or detached from it without unlocking the bolt or bolts which secure the door when by violent means the lock is detached from the door or its means of security are otherwise destroyed.

In the accompanying drawings, *a* represents the door of a safe, and *b b* two parallel bolts, fitted to slide in holes formed for that purpose in two bars, *c c*, secured to the inside face of the door. These two bolts are firmly connected by a plate, *d*, against the inner face of the door, and formed with mortises adapted to slide on guide-pins *e e*, projecting from the door, and on the spindle *f* of the knob *g*, by which the bolts *b b* are thrown. On the inner end of the spindle *f* there is a circular disk, *h*, with an elongated hole to receive a wrist-pin, *i*, that projects from the plate *d*, which connects the two bolts *b b*, so that by turning the knob *g* the bolts can be thrown in or out for ordinary use when not locked. A radial slot, *j*, is formed in the disk *h* of sufficient size to receive one end of an auxiliary bolt, *k*, which is connected with and slides on the plate *d*, that connects the two bolts *b b*, and this auxiliary bolt *k* is provided with a spring-tumbler, *l*, pivoted to the plate *d*, to hold it (the bolt *k*) when thrown into the slot of the disk *h* of the knob.

A lock, *m*, of any suitable construction, is secured to the inner face of the door, and to the outer end of the bolt *n* of this lock is attached a plate, *o*, which extends over the auxiliary bolt *k*, and which is best made of a corresponding shape; or, if desired, this plate *o* may be a prolongation of the lock-bolt. A pin, *p*, projects from the face of this plate *o* and extends into a mortise, *q*, in the auxiliary bolt *k*. The upper edge of the plate *o* is formed with a notch to receive the tumbler *l* when it is depressed to lock the auxiliary bolt *k*, which takes place when the lock-bolt is thrown out and the auxiliary bolt *k* has locked the bolts *b b*. One side of this notch is inclined to lift the tumbler to unlock the auxiliary bolt by the first part of the unlocking motion of the lock-bolt, so that it can be drawn out to liberate the disk *h* by the latter part of the unlocking motion of the lock-bolt. The length of the mortise *q* in the auxiliary bolt *k* is sufficient to allow the pin *p* of the plate *o* to move in it the required distance to lift the tumbler *l* before the auxiliary bolt is moved.

From the foregoing it will be seen that after the bolts *b b* have been thrown to bolt the door the radial slot *j* of the disk *h* is then in line to receive the auxiliary bolt *k*, by which it is locked, and which is forced into this slot by the lock-bolt. As the only connection between the lock and the auxiliary bolt is by the pin *p* on the plate *o* of the lock-bolt working in the mortise of the auxiliary bolt, by the application of any violent force to the lock it will result that the two will separate, leaving the bolts of the door locked by the auxiliary bolt.

If desired, a casing can be placed over the

tumbler of the auxiliary bolt to prevent its being reached by any instrument which might be inserted through any aperture in the door opened by the means employed to remove the lock.

Having described and represented the mode of construction by which I have successfully reduced my said invention to practice, I wish it to be distinctly understood that I do not limit my claim of invention to such mode of application, as the same mode of operation may be applied by other and equivalent means.

What I claim as my invention, and desire to secure by Letters Patent, is—

Combining the bolt or bolts by which the door is secured with the bolt of the lock by a mechanism, substantially such as described, operated by the lock-bolt to lock the door bolt or bolts, and which, when violence is applied to the lock, will permit the lock-bolt to separate from it without unlocking the door bolt or bolts, as set forth.

JOHN FARREL.

Witnesses:
WM. H. BISHOP,
ANDREW DE LACY.