J. B. Cornell.

Guard for Safe Doors.

No 21,119. Patented Aug 10 1858.

Fig: 3.

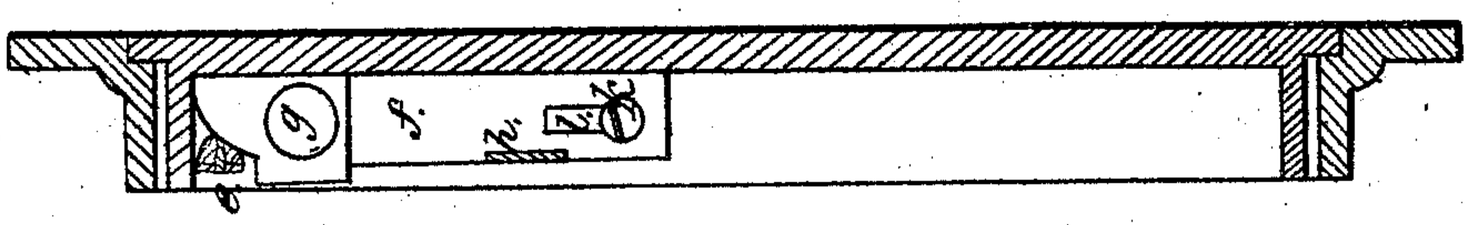


Fig: 2.

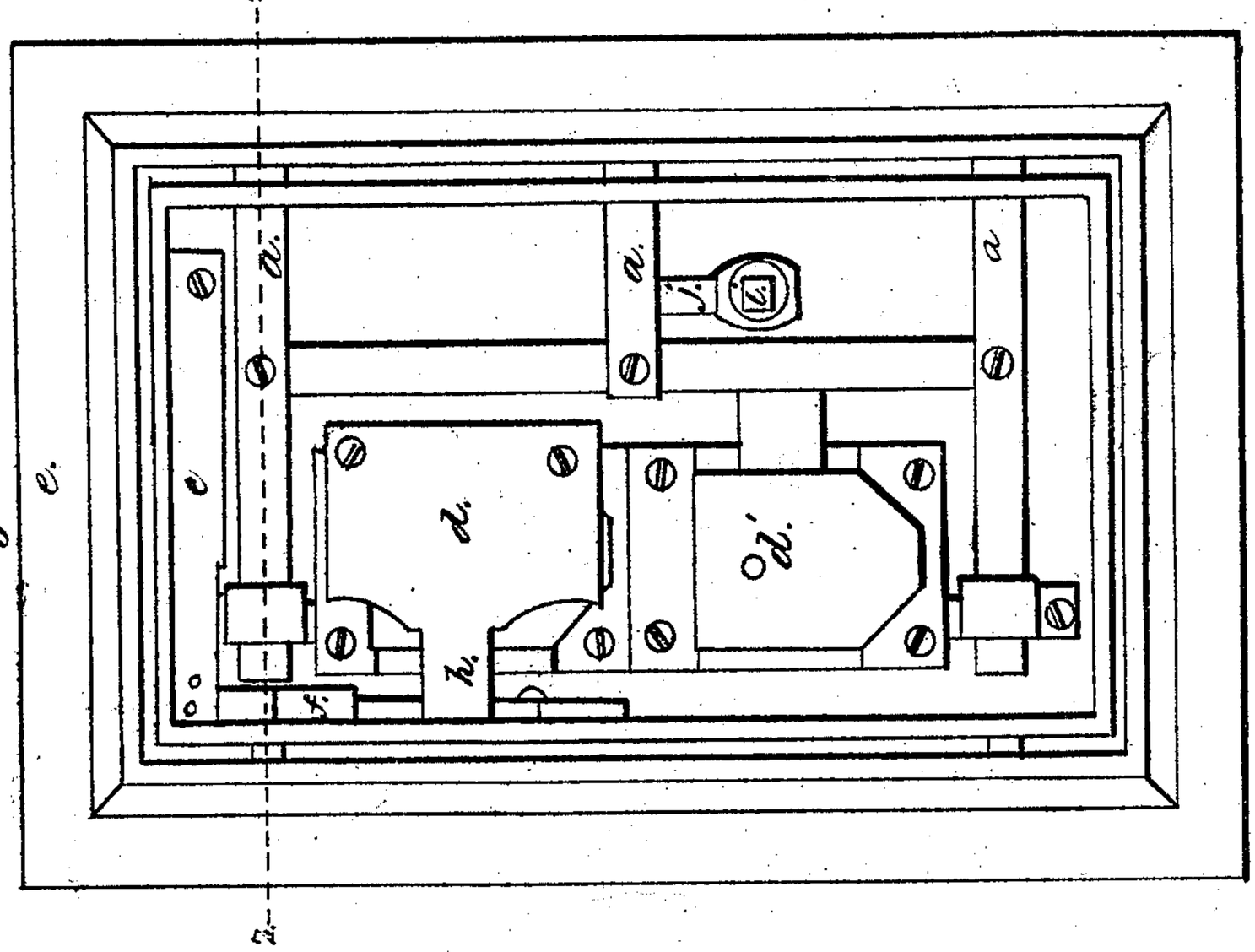


Fig: 4.

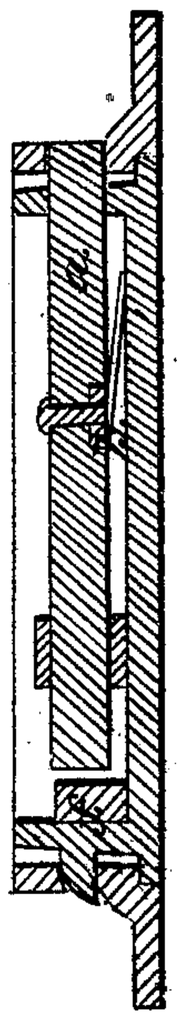
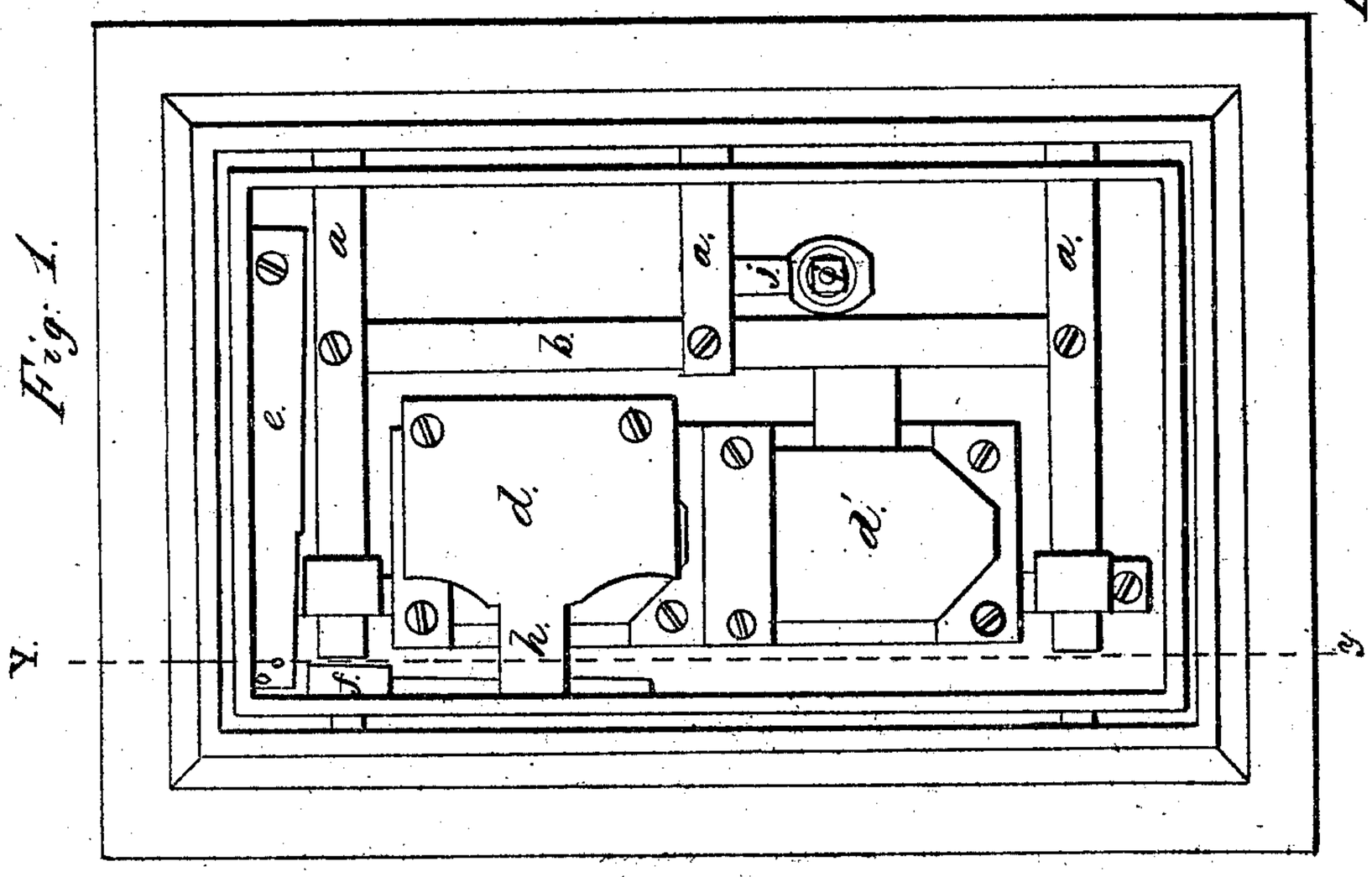


Fig: 1.



UNITED STATES PATENT OFFICE.

JOHN B. CORNELL, OF NEW YORK, N. Y.

SAFETY-GUARD FOR SAFE-DOORS.

Specification of Letters Patent No. 21,119, dated August 10, 1858.

To all whom it may concern:

Be it known that I, JOHN B. CORNELL, of the city, county, and State of New York, have combined a safety-guard with the door of an iron safe in such a manner, with relation to its lock and the united fastening-bolts of said door, that a slight inward displacement of said lock will cause the said safety-guard to be thrown into such a position as to render it impossible for the said door-bolts to be thrown back from a fastening position or for the safe-door to be opened without first cutting a hole through said door, and thus throwing the said safety-guard back into its normal position; and I do hereby declare that the following is a full and exact description of said invention, reference being had to the accompanying drawings, making a part of this specification, Figures 1 and 2 being plans of the inner side of the door of a safe; Fig. 3, a section in the line *y y* of Fig. 1, and Fig. 4 a section on the line *z z* of Fig. 2.

Within the last few years locks have been brought to so high a degree of perfection that those which are now generally used upon safes cannot be picked or opened by means of false keys. Consequently, the only means by which a burglar can now find his way to the treasures concealed in an iron safe is to remove the lock from the safe door by an explosion of gun powder, or by forcing said lock inward by the aid of cunningly devised instruments; and it is difficult if not impossible to secure the lock to the door of a safe in such a manner that a skilful burglar cannot displace it and open the safe. Hence the necessity of combining a stop, or safety guard, with the inner side of the door of a safe in such a manner, in relation to the lock and the united series of fastening bolts which are combined with said door, that the act of forcing the lock inward, will throw the said guard into such a position as to hold the said bolts immovably in a fastening position without any assistance from the lock bolts.

The door of a safe has usually several large fastening bolts *a*, *a*, *a*, which are combined with each other and with the shank (*i*) of an external knob, (by means of a suitable lever *j*,) in such a manner that the said bolts can be thrown backward or forward by means of said knob.

The vertical bar *b*, which unites the series of fastening bolts *a*, *a*, *a*, to each other, is located in such a position with respect to the locks *d*, *d'*, on the safe door—or a single lock on said door—that when the said fastening bolts are thrown forward to secure said door in a closed position, the lock bolts can be thrown forward against the said bar *b* for the purpose of preventing a return movement of the fastening bolts, so long as the lock bolts remain in an extended position, or so long as the lock or locks remain firmly secured to the door of the safe.

The form of the safety guard *f*, is clearly shown in the drawings. It is a block of metal in which is formed an aperture *g*, and a slot *l*, and which is secured to the inner edge of the innermost flange of the door of the safe by means of the set-screw *k*, which passes loosely through the slot *l*, into a screw aperture in the said door flange. A lever *h*, which projects from the inner face of the lock *d*, (or which may be combined with said lock in any suitable manner,) fits into a notch in the outer edge of the guard *f*, and retains it in such a position that the inner end of the upper bolt *a*, will pass freely into the aperture *g*, in said guard as the lock bolts are thrown back, so long as the lock remains in its proper position upon the door of the safe.

The upper outer angle of the guard *f*, is rounded off, and the spring *e*, which is combined with the upper portion of the safe door, has a beveled extremity which acts upon the said curved upper portion of the guard in such a manner as to force it downward to the position shown in Fig. 2, the instant that the said guard is relieved from the action of the lever *h;* and when in that position the upper solid end of said guard is opposit the inner end of the upper fastening bolt *a*, as shown in Fig. 4, which renders it impossible to throw back the said bolt, or either of the other bolts which are combined with it, until after the said guard has been restored to its normal position.

Of course the guard *f*, may be given an infinite variety of shapes, and it may be located in various positions within the door of the safe, and may be combined with retaining levers and moving springs, or their equivalents, of various patterns and by different methods. Therefore, I do not intend to limit myself to any particular shape or position of the guard *f*, nor to any special and particular manner of combining said guard with the lock or with the actuating

spring, provided the said guard is so arranged with relation to the lock and the fastening bolts of the door of the safe, that the displacement of the lock on said door will cause the said guard to be thrown into such a position as to render it impossible to throw back the said door-bolts from their fastening position until after the said guard has in some way been thrown back to its normal position, which cannot be accomplished without cutting a hole of considerable size in the door of the safe.

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

Arranging a safety guard within the door of an iron safe in such a manner with relation to the lock, or locks, and the fastening bolts which are combined with said door, that the act of forcibly displacing the said lock, or locks, from its or their proper position on a locked door, will cause the said safety-guard to be thrown into such a position that it will securely hold the said fastening bolts in an extended position from the moment that the lock bolts cease to exert a retaining action on the said fastening bolts, all substantially as herein set forth.

The above specification of my improved safety guard for the doors of burglar-proof safes, &c., signed and witnessed this 6th day of July, 1858.

JOHN B. CORNELL.

Witnesses:
A. A. JAYNE,
WILLIAM W. CORNELL.