

LEWIS LILLIE'S

Improved Burglar Proof Safe.

117899

PATENTED AUG 8 1871

Fig. 1.

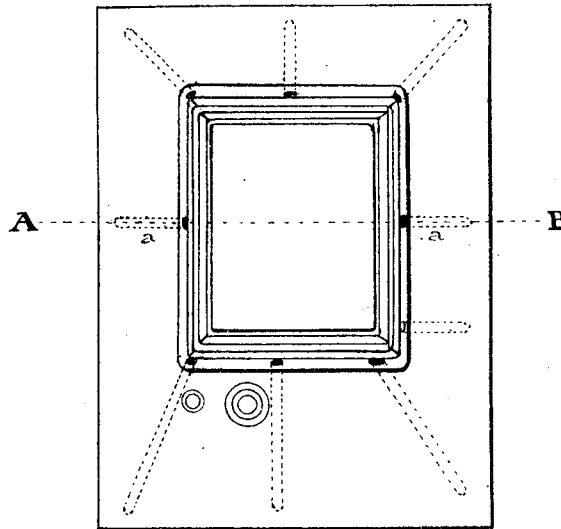
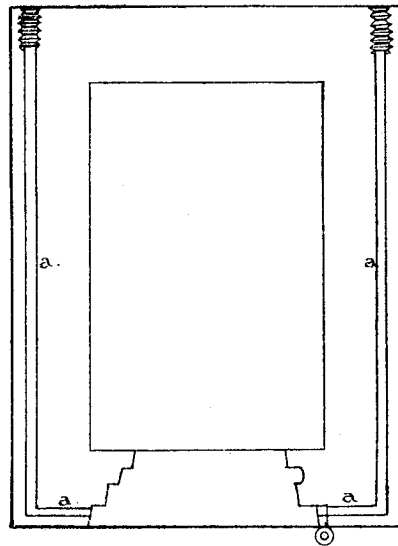


Fig. 2.



W. M. Gooding }
Edward Colver } *attest*

Lewis Lillie

UNITED STATES PATENT OFFICE.

LEWIS LILLIE, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN BURGLAR-PROOF SAFES.

Specification forming part of Letters Patent No. 117,899, dated August 8, 1871.

To all whom it may concern:

Be it known that I, LEWIS LILLIE, of Newark, in the county of Essex and State of New Jersey, have invented certain Improvements in Safes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which—

Figure 1 represents the front of a safe with tubes containing charges of powder or other explosive substances radiating from the door-way. Fig. 2 is a horizontal section on the line A B of Fig. 1.

The nature of my invention consists in forming in the walls near the exterior surfaces of safes, a series of tubular spaces, which are separately filled with primed charges of powder and ball, or simply with powder or other explosive substance, and may be so disposed that the safe cannot be penetrated by a drill without puncturing some one of these pipes and igniting the explosive material by the sparks evolved in drilling through the hard metal.

I am aware that it has been proposed to construct safes with a thick inner and thin outer shell of iron, and to fill the intervening space which extended all around the safe with powder, which, on ignition by sparks evolved in drilling through the iron, would explode and blow off the outer shell. This application of explosives to safes as a protection against burglars is subject to the serious objections that it not only imperils the lives of the burglars and creates an alarm, but that the explosion involves the destruction of the safe and at least partial destruction of the building, while it also endangers the lives of persons in the adjoining buildings. It is also defective for the reason that no means are provided for exploding the powder by percussion, so that the outer shell may be fractured by blows and the powder drawn off or flooded before proceeding to drill through the inner shell. All these objections are overcome by me by the use of non-communicating tubular spaces, some or all of which contain primed charges of powder and ball, which will explode by percussion, and in sufficient quantities to blow off pieces of the outer shell in their immediate vicinity, for the purpose of creating an alarm and maiming the burglar, but not sufficient to cause the total destruction of the safe and the building it is in.

The safes to which my improvements are applied should be made of such hard metal that a drill cannot penetrate it without generating sparks or sufficient heat to ignite powder. All around near the outer surface tubular spaces *a* are formed, either by coring or inlaying of pipes, in which spaces the explosives are inserted. These spaces may be filled with powder alone, and some of them with nitro-glycerine, to deter burglars from using a sledge, or they may be filled in whole or in part with powder and ball, primed with percussion-powder. In the latter case the several cartridges will be connected by suitable fuses to provide for a succession of discharges, which, should the burglar escape unharmed, would create such an alarm as to cause him to seek safety in flight. The charges can be inserted both from the door-jamb and from behind, the holes being closed with screw-plugs. Charges may also be inserted in the spindles of the lock, rendering dangerous any attempt to drive or bore them. In the jambs of the safe the pipes are so placed that a wedge, if used, must strike one of them, and cutting through, evolve sparks in striking the first rabbet, causing the explosion of the powder. I propose, also, in some cases to insert centrally in each tube a square bar, of the hardest of cast-steel, from which sparks will be obtained beyond a doubt by the forcible contact of the drill. The metal of the walls of the safe inside of the tubular spaces is very hard, and, being also thicker than that outside of such spaces, will not be affected by the explosion of any of the charges, which will only blow off portions of the exterior metal.

It may be proper to state that the simple knowledge of the construction of these safes will deter burglars from meddling with them, and that it will not be necessary, absolutely, to place the tubes so that they will protect the safe at all points.

What I claim as my improvement in burglar-proof safes, and desire to secure by Letters Patent, is—

A safe, containing in its walls, near the exterior surface, a series of tubular spaces, which are independent of one another, and separately filled with explosives, substantially in the manner and for the purposes set forth.

Witnesses: LEWIS LILLIE.

W. M. GOODING,
EDWARD COLLIVER.