

S. Morris Lillie.
Safe.

117435

PATENTED JUL 25 1871

Fig. I.

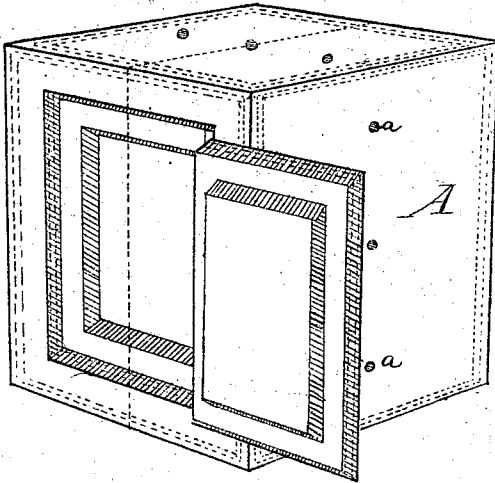


Fig. II.

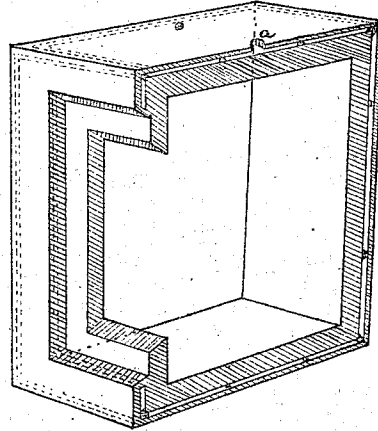


Fig. III.

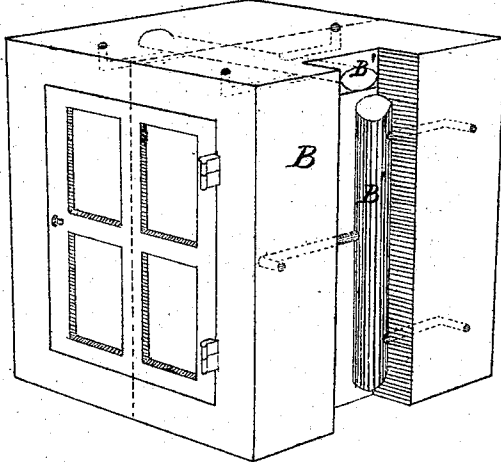
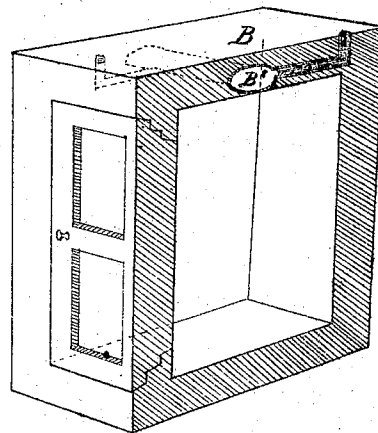


Fig. IV.



Attest
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UNITED STATES PATENT OFFICE.

S. MORRIS LILLIE, OF ELIZABETH, NEW JERSEY.

IMPROVEMENT IN PROTECTING SAFES.

Specification forming part of Letters Patent No. 117,435, dated July 25, 1871.

To all whom it may concern:

Be it known that I, S. MORRIS LILLIE, of Elizabeth, in the county of Union and State of New Jersey, have invented certain Improvements in Safes and Vaults; 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—

Figures 1 and 2 are views of a burglar-proof safe embodying the principle of my invention. Figs. 3 and 4 are views of a fire-proof safe with my improvement.

The nature of my invention consists in the employment in safes and vaults of highly-compressed or liquefied poisonous gases, such as ammonia, carbonic acid, carbonic oxide, and the like, retained in suitable pipes, chambers, or recesses in the walls or other portions of the safe, such pipes, chambers, or recesses communicating with the exterior surface of the safe at any number of points by suitable branch pipes sealed with plugs which will fuse to release the gas at any given temperature. Safes made in this manner will be a sure protection against burglars and fire, for the walls of the burglar-proof safes are so constructed that they cannot be penetrated by the drill or other devices without releasing the gas, of which a sufficient quantity can readily be stored away in the smallest safe to poison the atmosphere of a large building to such an extent that animal life in it is not possible; and, by the provision of branch pipes sealed with fusible plugs, the heat of a fire, by fusing such plugs, releases the gas, which, being also a non-supporter of combustion, immediately extinguishes the fire around the safe.

The burglar-proof safe A, shown in Figs. 1 and 2, consists of an interior cast-iron casing and an exterior thinner surrounding casing, with a narrow space between the two for the reception of the liquefied ammonia or other gas which is destructive to life and a non-supporter of combustion. A similar space is formed in the door of the safe; and at suitable points holes are bored through

the outer casing or plates, which holes are closed by soft-metal plugs *a*, which will fuse at a given temperature and release the gas to extinguish the fire around the safe. Instead of forming a space in the walls and door of the safe a double layer of pipes may be inserted in the walls and door, so arranged with reference to one another that the walls cannot be penetrated without opening or fracturing some one of the pipes and forming an escape for the gas. The pipes should communicate one with the other. Other means than those alluded to may be employed for receiving the poisonous gases; and I wish it to be clearly understood that I do not limit myself to the particular means above set forth. In the fire-proof safe B, shown in Figs. 3 and 4, suitable reservoirs B' are used for the reception of the gas. These reservoirs are placed within or surrounded by the fire-proof filling, and communicate by branch-pipes, indicated by dotted lines in Fig. 3, with the exterior surface of the safe. There are usually two or more such reservoirs in each safe, and the branch pipes of one are sealed with plugs which will fuse at a lower temperature than will the plugs of the branch pipes of the other reservoirs, so that the safe will be able to extinguish the fire around it several times should it fall from its original position.

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

1. A safe or vault containing, in suitable pipes, chambers, or recesses, a quantity of highly-compressed or liquefied poisonous gas, such as ammonia or the like, substantially as and for the purpose set forth.

2. In a safe or vault constructed with pipes, chambers, or recesses for the reception of poisonous gas, as described, the branch pipes sealed with fusible plugs, substantially as and for the purpose set forth.

S. MORRIS LILLIE.

Witnesses:

W. M. GOODING,
EDWARD COLLVER.