L. Lillie.

Burglar-Proof Safe.

No. 24,646. Patented July 5, 1859.

Fig. 2.

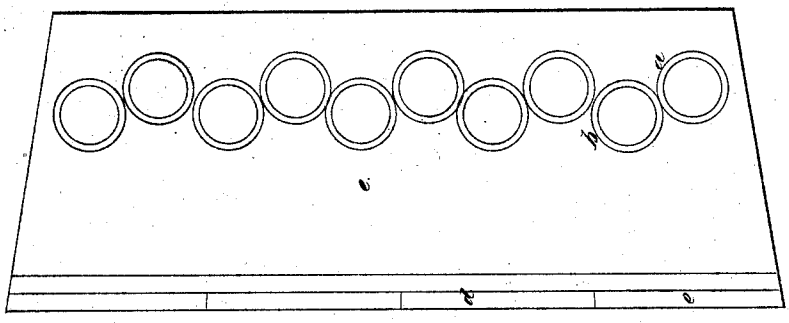
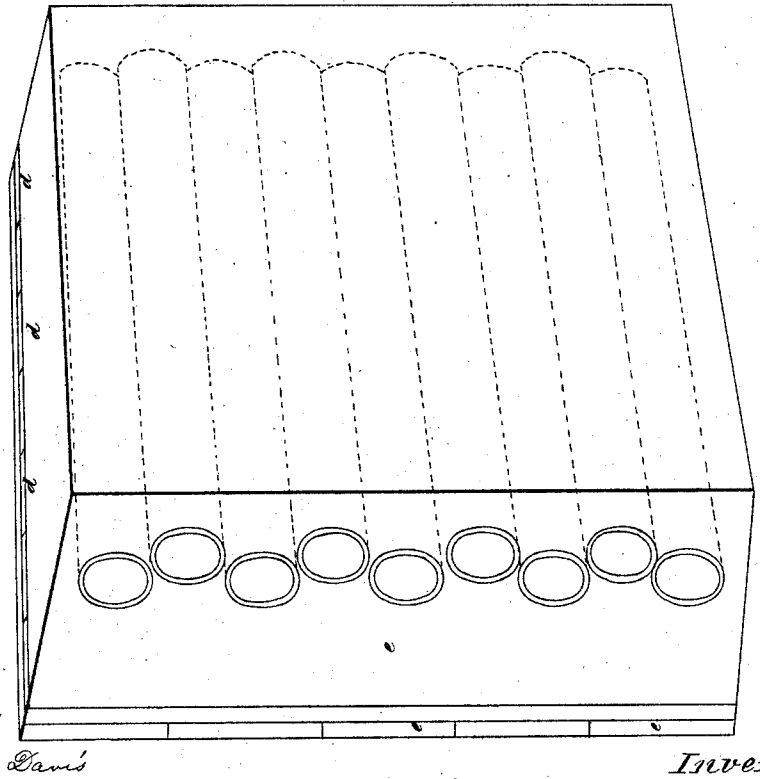


Fig. 1.



Witnesses:
Harvey J. Davis
Marcus P. Norton

Inventor:
Lewis Lillie

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

LEWIS LILLIE, OF TROY, NEW YORK.

VAULT-DOOR AND CAST-IRON SAFE.

Specification of Letters Patent No. 24,646, dated July 5, 1859.

To all whom it may concern:

Be it known that I, LEWIS LILLIE, of the city of Troy, county of Rensselaer, and State of New York, have invented a new and useful Improvement in the Construction of Vault-Doors and Iron Safes; and I do hereby declare that the following is a full and exact description of the construction, use, and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

Like figures represent like parts.

Figure 1, is a perspective view showing the arrangement and construction of the different parts thereof. Fig. 2, is an end view of the same.

The nature of my invention consists in the arrangement and combination of hollow pipes or tubes hereinafter described, and the filling of the same with refined cast iron—with round and hardened bars of cast-steel, or any other material, so as to prevent any hole or holes being drilled into and through the same, by any burglar or burglars, when such improvements are or may be used, thereby preventing an entrance therein in any way or manner aforesaid.

To enable others skilled in the art to make and use my invention, I will now describe its construction, which is as follows, to wit:

I use common gas pipes extending from side to side of vault or other doors, and from corner to corner of cast iron safes. These gas pipes or tubes are arranged as shown at (*a* and *b*) Fig. 2. The pipes or tubes (*a*, *a*, &c.) are arranged upon a line directly over each other. The pipes or tubes (*b*, *b*, &c.), are, also, arranged upon a line directly over each other, and which line of tubes are upon an angle with the line of tubes (*a*, *a*, &c.), and may be arranged so as to touch each other, or at a short distance apart from each as the case may be or require. These tubes or pipes (*a*, *b*, &c.) are placed in the mold in the required position of each.

(*c*, *c*, &c.,) Fig. 1, are flat, wrought iron bars extending across the vault door, and safe the full width thereof, and parallel to and with the aforesaid pipes or tubes and at any required distance from the same as shall conform to and with the thickness of said vault door and safe, (*d*, *d*, &c.,) are also, flat, wrought iron bars passing at right angles the said bars (*c*, *c*, &c.,) and perpendicular to and with the vault and safe aforesaid. The aforesaid flat, wrought iron bars as arranged form a network, while at the same time the said bars are perforated with holes as shown in my patents for improvements in cast iron safes, &c., patented July 15, 1851, and Sept. 7th, 1858.

When the aforesaid pipes or tubes, and flat, wrought iron bars are arranged as required in the mold and upon the core thereof, then the operation of pouring the molten lava takes place, which when done forms a thickness for vault doors, and safes, composed of flat, wrought iron bars, of gas pipes or tubes, and of cast iron, chilled by means of the said pipes or tubes, and wrought iron bars. The said pipes or tubes (*a*, *b*, &c.,) are afterward filled with cast steel hardened, in the shape of rods or round bars, or they may be filled with refined cast iron, or with both the cast-steel and refined cast iron alternate. If the said pipes be filled with cast-steel, hardened as aforesaid, the said cast-steel bars or round rods are driven therein after the said vault door, or safe containing them is cast, and become entirely cold. The said steel bar or rods are also in a cold condition. If the said pipes or tubes are filled with refined cast iron, it is done after the casting of the vault door or safe containing the gas pipes or tubes aforesaid, and after the same has become fully and entirely cold, then the refined iron in a melted condition is poured therein, whereby the same becomes hardened or chilled by reason of the aforesaid pipes or tubes surrounded by cast-iron in a cold state or condition. The refined cast-iron for filling the pipes or tubes as aforesaid is made thus by remelting several times.

The aforesaid pipes or tubes may be filled with cast steel rods, hardened, and with refined cast iron using each with each alternate as aforesaid.

A vault door, and a safe made as hereinbefore described is strong and valid against any entrance by any burglar or burglars by the use of the drill or other like machinery, when the aforesaid pipes or tubes are filled as aforesaid, the ends thereof are entirely covered up and over with molten iron poured thereon, whereupon the surface thereof becomes smooth and durable as any other part of the said vault door, and safe, while at the same time the aforesaid pipes or tubes are fully and entirely hidden from

sight in a strong and thorough manner as aforesaid. Vault doors and safes constructed and made as aforesaid are strong and durable, and proof as against burglars, &c.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is—

The arrangement and combination of a series of pipes or tubes (*a*, *b*, &c.,) and the filling of the same with cast steel hardened, or with refined cast iron as and for the purposes herein described and set forth.

In testimony whereof I have hereunto set my hand this 31st day of May 1859.

LEWIS LILLIE.

Witnesses:

HARVEY T. DAVIS,

MARCUS P. NORTON.