

J. L. Hall,
Fire-Proof Safe.
N^o 80728. Patented Aug. 4, 1868.

Fig 1.

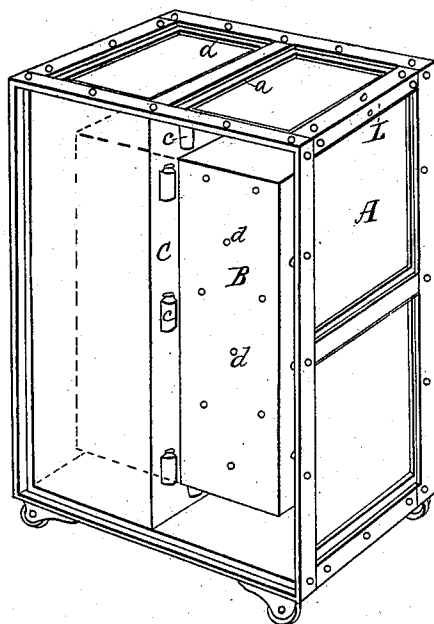


Fig 2.

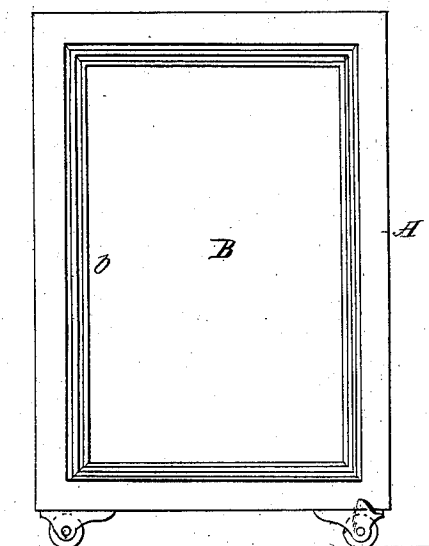
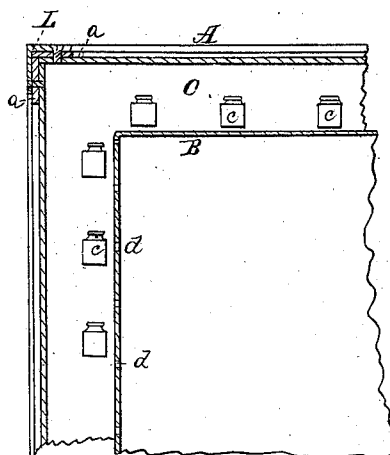


Fig 3.



Witnesses.
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JOSEPH L. HALL, OF CINCINNATI, OHIO.

Letters Patent No. 80,728, dated August 4, 1868.

IMPROVEMENT IN FIRE-PROOF SAFES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOSEPH L. HALL, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and useful Improvement in "Fire-Proof Safes," of which the following is a full and clear description, reference being had to the accompanying drawings, making part of this specification.

The nature of my improvement in "fire-proof safes" consists in embedding glass jars, or other vessels containing water or other suitable liquid, within the concrete, hydraulic cement, or other suitable filling between the inner and outer casing of safes, when they are made of two metallic cases, the one within the other; and also to the application of L-shaped angle-iron to all the exterior angles of the casings of safes.

Figure 1 is a perspective of my improved safe, having part of the outer casing removed.

Figure 2 is an elevation of the same, having the door removed.

Figure 3 is a vertical section of a portion of the same, showing the jars, or other anti-corrosive vessels, embedded in the concrete, hydraulic, or other cement, between the inner and outer casings of the safe.

A represents the outer casing of the fire-proof safe, and consists of one or more plates of iron or other suitable metal.

In order to render the case more than usually strong, and, at the same time, steam-tight externally, so as to prevent the case from being injured by falling, in case of fire, or by heavy timbers falling on it, and also to keep the steam from escaping at the joints externally, I apply externally, at the corners, the metal strips or bars *a*, as usual, and then over these I place the angle-irons L, and rivet the whole firmly to the case, as shown clearly in fig. 3.

B is the inner metallic or iron casing of the safe, secured to the front door-frame, as shown in my former patent at *b*. It is removed several inches from the inside faces of the outer casing A. The space intervening between the inner and outer casings, B and A, respectively, is filled with hydraulic or other cement, C, having embedded in it the jars, *c*, or vessels of glass or other anti-corrosive material. The jars or vessels are filled with water, or other suitable liquid, and the mouths of the jars or vessels are closed with cork, or other material, provided with small perforations. Said perforations are closed with glue or mucilage, and further protected by metallic caps or perforated covers. The jars or vessels C, having been filled with water or other desirable liquid, are embedded, one after the other, in the plastic concrete, hydraulic, or other cement, as it is poured, in a thin, liquid state, between the casings A and B of the safe, and embedding them in their positions firmly.

The main object in embedding reservoirs of water within the body of the safe is to insure that protection to the contents, especially to papers, books, and other valuable contents thereof, which are, by the application of heat, generally so charred as to render them illegible and worthless, by such an arrangement of parts that steam generated in the jars or vessels shall permeate the cement, hydraulic or other, between the jars or vessels *c* and the inner casing B, thence, through the small perforations, *d*, in the inner casing, into the receptacle of valuables and books contained therein, which, being kept in a moist condition, will not be injured, as they otherwise would be, in safes of the usual plan of construction. In case of a large fire, the steam generated by the heat would escape from the jars or vessels, and have so dampening an effect on the cement surrounding the jars as to greatly lessen the intensity of heat, protecting the contents of the safe. Should the safe be suddenly precipitated from its position on an upper floor to the ground or cellar, or should the walls fall upon it, the jars or vessels are not liable to receive injury, since they are firmly embedded in the cement. At the same time, the L-shaped angle-iron will secure the corners of the safe more rigidly than the old method, and effectually preventing the breaking open at the angles of the safe when it falls some distance; and also, are a great obstacle to the escape of steam, confining it to the interior of the safe, where it subserves the objective purpose. The advantage arising from thoroughly embedding the jars or vessels containing water in the concrete is, that a large amount of water constituting the concrete, will, in case of great heat, be given off, and unite with the steam from the jars, thus adding to the security very largely over those safes now constructed.

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

1. Arranging a series of jars or other anti-corrosive vessels, C, containing water, or other suitable liquid, when the same are embedded in concrete, hydraulic or other cement, between the inner and outer casings, B and A, respectively, of fire-proof safes, substantially as and for the purpose shown and specified.

2. The combination, in the construction of safes, of the case A, bars *a*, and the angle-irons L, when arranged as described.

3. The perforated lining B, to permit the escape of the steam to the interior of the safe, substantially as and for the purpose set forth.

JOSEPH L. HALL.

Witnesses:

C. L. FISHER,

A. M. ATEN.