

109. SAFES, BANK PROTECTION
AND RELATED DEVICES.

84

F. P. MATHER.
Fire-Proof Safes.

No. 155,325.

Patented Sept. 22, 1874.

Fig. 1.

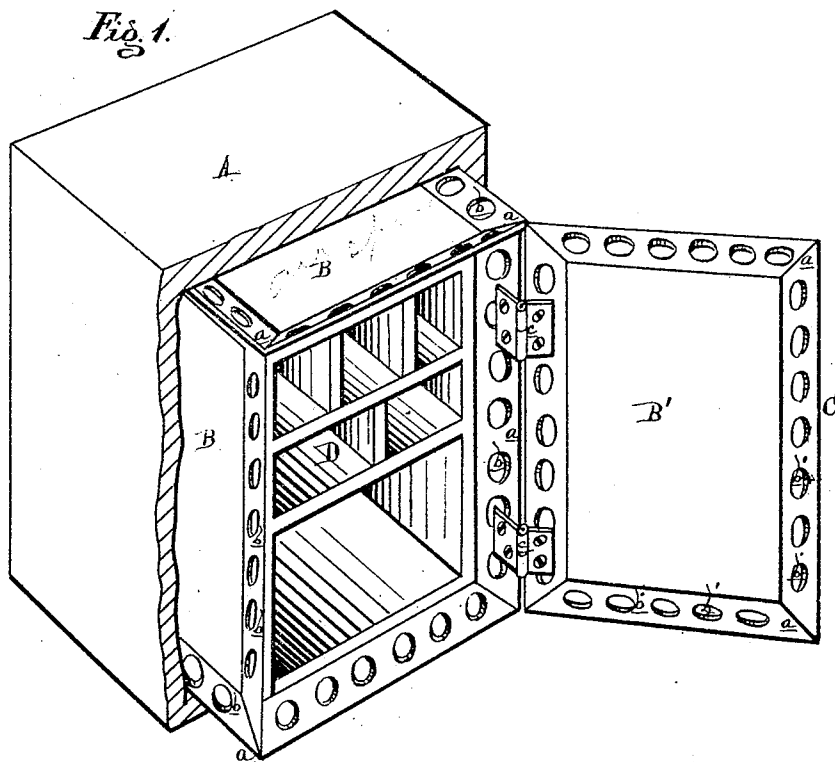
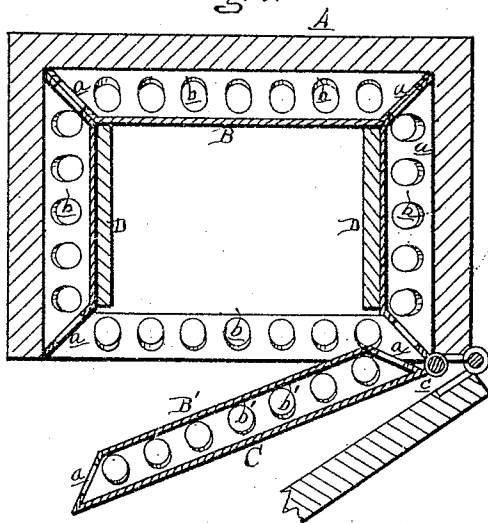


Fig. 2.



Attest:

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UNITED STATES PATENT OFFICE.

FRANCIS P. MATHER, OF DETROIT, MICHIGAN.

IMPROVEMENT IN FIRE-PROOF SAFES.

Specification forming part of Letters Patent No. 155,325, dated September 22, 1874; application filed June 17, 1874.

To all whom it may concern:

Be it known that I, FRANCIS P. MATHER, of Detroit, Wayne county, Michigan, have invented an Improvement in Fire-Proof Safes, of which the following is a specification:

The nature of this invention relates to an improvement in the interior construction of a safe, whereby an air-chamber is formed which surrounds on all sides the cabinet-work in which the articles to be protected are placed.

The invention consists in constructing said safe of two series of walls or plates. Each inner plate has its edges so flanged that an air-chamber will be formed between it and the outer wall, against which these edges rest. To make this air-chamber continuous, so as to completely protect the interior of the safe, the flanges before mentioned are pierced, so that there may be free communication from one of these spaces to the other. When the safe is subjected to a great heat, the heated air within the chamber will freely circulate around the cabinet-work, and subject the latter to about the same degree of heat at all points, as is more fully hereinafter set forth.

Figure 1 is a perspective view of my invention, with a portion of the outer double wall of the safe removed. Fig. 2 is a transverse section.

In the drawing, A represents the outer or filled double walls of a safe. B are metallic plates, bent up to a bevel at their four edges, to form the flanges *a*, which are joined together at the corners. Through each of these flanges are punched or drilled the holes *b*. Five of these plates B, of the proper size and shape, are joined together, forming a box that will fit tightly into the safe, the holes *b* in the flanges being coincident with each other; these plates, in connection with the inner walls of the safe, forming a continuous air-chamber upon five sides. A door, C, hinged at *c*, has attached to its inner face a similar plate, B', whose holes *b'* are coincident with the holes *b*, so that when the door is closed a

continuous air-chamber is formed upon all sides of the safe. D represents the cabinet-work usually placed in a safe, which, in my construction, is within the compartment formed by the plates B.

By constructing a safe in this manner, it will be seen that a continuous air-chamber is formed upon all sides of the safe, when closed; and should any portion of the same be subjected to a greater heat than the rest, the air confined in this chamber must necessarily circulate, the hotter air being continually replaced by the cooler, which thus equalizes the temperature within the walls of the safe, as it is well known that the contents of the safe in a burning building are generally destroyed by the safe being subjected to a greater degree of heat at some one point than elsewhere; hence, if the temperature of its interior can be equalized, the heat will not be intense enough to ignite the wood-work.

Although I describe and prefer to make the said lining of metal, it is obvious that it may be made partly of wood and partly of metal, or entirely of wood, and yet secure the circulation of air and equalization of the temperature around the inflammable contents of the safe.

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

A fire-proof safe composed of an outer solid wall, A, and an inner wall, B, having doors, as described, said inner wall being composed of six plates, with outwardly-flanged and pierced edges, joined together so as to form an air-chamber of truncated pyramidal shape between said walls on each side, which air-chamber, by means of the holes *b*, shall entirely inclose the inner wall of the safe, substantially as described and shown, and for the purposes set forth.

FRANCIS P. MATHER.

Witnesses:

H. S. SPRAGUE,
CHAS. J. HUNT.