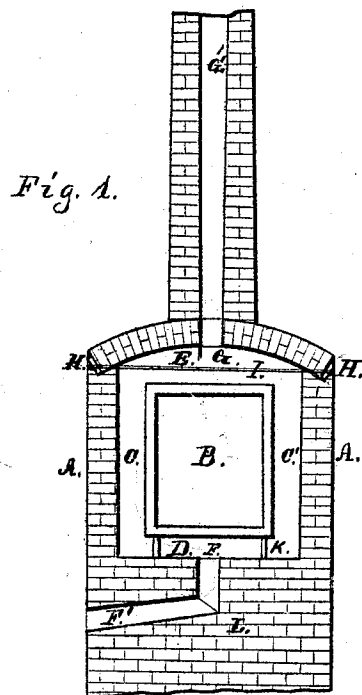


2 Sheets--Sheet 1.

G. W. PITTMAN.
Fire-Proof Vaults.

No. 139,916.

Patented June 17, 1873.



Witness:—
Saml. J. Wallace, Granville Warren Pittman
Rumrill Hall

Inventor:—

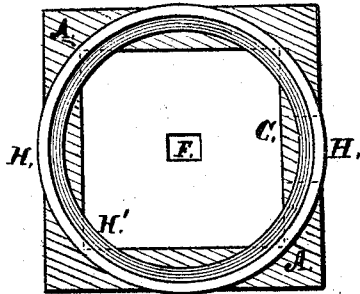
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Fig. 2.



Witness:
A. J. Holland,
J. M. Tate.

Inventor:
Granville Warren Pittman.
By David J. Wallace,
Attorney.

UNITED STATES PATENT OFFICE.

GRANVILLE W. PITTMAN, OF KEOKUK, IOWA.

IMPROVEMENT IN FIRE-PROOF VAULTS.

Specification forming part of Letters Patent No. **139,916**, dated June 17, 1873; application filed March 18, 1872.

To all whom it may concern:

Be it known that I, GRANVILLE WARREN PITTMAN, of Keokuk, Iowa, have made a new and useful Improvement in Fire-Proof Vaults, of which the following is a specification.

The object of this invention is to protect safes or other articles in burning buildings, and to do this by the formation of fire-proof vaults having advantages which no others possess. To this end the invention consists of a general design of parts and means to secure the combination of three different features desired together, which have not been attained at once before. These are, first, a secure and permanent position for the safe or other contents of the vault; second, a vault that will maintain its integrity of structure through the most destructive fire and the falling of the buildings and walls; third, a circulation of air from some place unaffected by the heat through the vault to keep down the heat.

To do this the invention is made and arranged substantially as shown in the drawings, and set forth hereinafter.

Fig. 1 is a central vertical section of the vault as in use; and Fig. 2 is a horizontal section or top-plan of same, showing the structure when built to the point ready for beginning the arched top.

The vault A is built of brick or other suitable fire-proof material, and is arranged to contain the safe B or contents to be protected in a secure and permanent position, and to have an air space, C C', on all sides next to the walls, or on all sides that would be exposed to heat. The safe B is elevated above the bottom, leaving an air-space, D, and has another, E, above it. In the bottom of the vault is an opening, F, for the admission of cool air by suitable flue passages from the outside of the building, or from a protected sewer or other place where air would not be heated by fire. In the top of the vault is an opening, G, for heated air to pass out by rising and by its heat causing a circulation, drawing in fresh air below to carry off the heat and protect the contents; the heating of the vault or flue G' above making the circulation particularly

forcible when needed. The flue G' is arranged to reach upward to the outside air so as to enable the hot air to freely escape, and so as not to be endangered in its structure by the fire. The top of the vault is made in the form of a spherical arch of brick or other suitable material, and support the flue G' when built on it, and to resist the falling of walls and heavy beams on it, which might break and destroy its efficiency. In order to sustain this arch intact it is built in a holder, H, which is made of strong metal in the form of a ring, narrower at the bottom H' than at the top, so that the arch will be held by it at all parts independent of the side walls underneath at any point. This holder, of a circular form, rests on the four or other number of side walls so as to substantially cover the internal space by the arch top, the side walls being built up at the corners, &c., flush with the top, and made tight. The flue-passage F for the entrance of air is built securely in a permanent foundation-wall, or otherwise protected, so as not to be interfered with by the fire. The walls of the vault, if desired, may have air-spaces to help resist the passage of the heat, and these air-spaces might, too, be made to form part of the air circulatory system.

I claim—

1. The combination of the fire-proof vault A, the receptacle B in a permanent position, the air-passages C C' around the contents, and the passages F G for introducing cool air and forcibly carrying off hot air, all substantially as set forth.

2. The combination of the fire-proof vault A, the air-passages F G for introducing cool air and carrying off hot air, and the arched top having the circular holder H, substantially as set forth.

3. The combination of the spherical arched top with its circular holder H, made smaller at its bottom part, as set forth.

GRANVILLE WARREN PITTMAN.

Witnesses:

SAMUEL JACOB WALLACE,
GEO. W. MCCRARY.