Jan. 29, 1929. 1,700,504

W. O. MAHAN

CONCRETE BURIAL VAULT

Filed Sept. 27, 1926

Fig. 1.

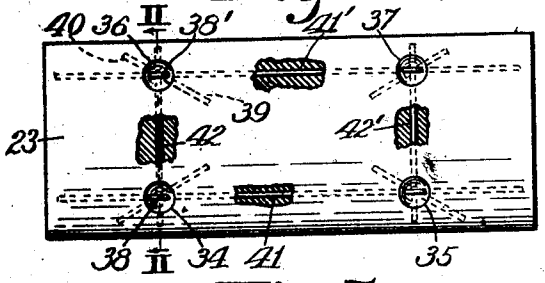


Fig. 2.

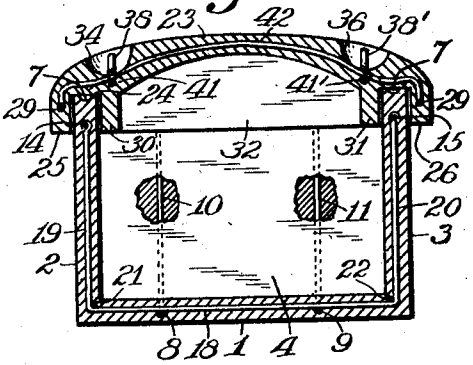


Fig. 3.

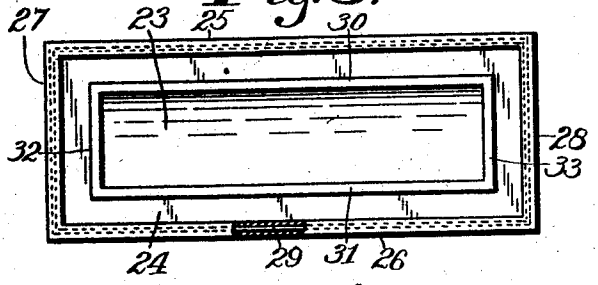


Fig. 5.

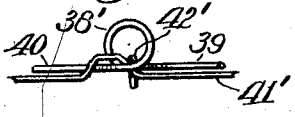


Fig. 4.

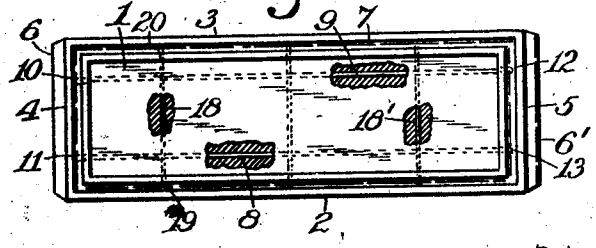


Fig. 6.

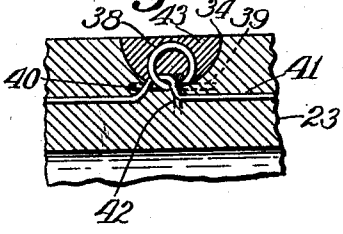
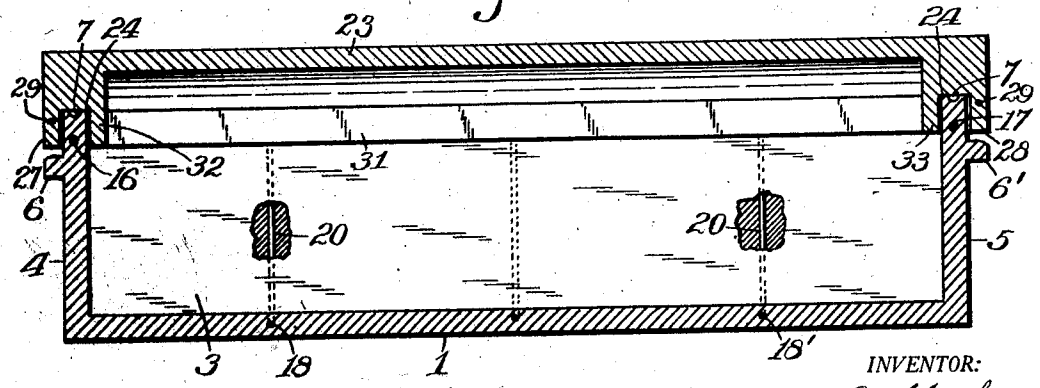


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM O. MAHAN, OF SHELBYVILLE, INDIANA.

CONCRETE BURIAL VAULT.

Application filed September 27, 1926. Serial No. 137,924.

This invention relates to a monolithic type of concrete burial vault and has reference especially to a two-piece concrete burial vault that is adapted to be air-sealed and air-tight.

An object of the invention is to provide a concrete burial vault that shall be so constructed as to be adapted to be sealed in a grave considerably higher than the bottom of the grave, where the walls of the grave are not liable to cave in or permit loose dirt or gravel to fall onto the sealing joint of the burial vault and cause unreliable sealing or interfere with sealing operations.

Another object is to provide a concrete burial vault which shall have no visible or accessible joint, but shall be substantially smooth externally when completed and without accessible or visible lowering or lifting devices that might facilitate grave robbing.

A further object is to provide improved burial vault structure and novel reinforcements therefor, all of which shall be adapted to be simple and inexpensive and yet be strong, reliable, durable and economical in use.

With the above-mentioned and other objects in view, the invention consists in a monolithic concrete vault body having improved reinforcements and constructed so as to be adapted to be sealed at its top, and a one-piece lid of novel construction adapting it to be readily and effectively sealed to the body, the invention consisting further in the parts and combinations and arrangements of parts as hereinafter particularly described and claimed.

Referring to the drawings,—Figure 1 is a top plan of the improved burial vault, portions being in section to expose reinforcements; Fig. 2 is a transverse section on the line II—II on Fig. 1 on an enlarged scale; Fig. 3 is an inverted plan view of the burial vault lid; Fig. 4 is a top plan of the burial vault body, portions being in section to expose reinforcements thereof; Fig. 5 is a side view of improved lifting and reinforcing devices; Fig. 6 is a fragmentary longitudinal section of the improved lid showing a lifting ring and reinforcements embedded in the lid; and Fig. 7 is a longitudinal vertical central section of the burial vault complete but not sealed.

Similar reference characters in the different figures of the drawings indicate corresponding elements or features of construction hereinafter referred to in detail.

The improved burial vault body comprises a bottom 1, two longitudinal side walls 2 and 3 and shorter end walls 4 and 5 constituting a continuous enclosing wall integral with the bottom, the end walls having handle bars 6 and 6′ on their upper sides and integral with the end walls respectively, the bars being normally horizontal. The top of the enclosing wall has a continuous sealing groove 7 therein to receive cement and insure tight sealing. The bottom 1 has longitudinal reinforcing rods 8 and 9 embedded therein at a suitable distance apart and from the side walls, and the end walls are similarly reinforced preferably by extending the bottom rods upward therein so that one end wall has reinforcing rods 10 and 11 and the opposite wall has similar rods 12 and 13. The upper portions of the side walls have reinforcing rods 14 and 15, the upper portions of the end walls also having similar rods 16 and 17 which may be continuous with the rods 14 and 15, and one may be connected to the vertical rods 10 and 11 and the other with the rods 12 and 13. The bottom has a suitable number of transverse reinforcing rods 18 and 19 spaced apart and preferably are integrally connected with vertical rods 19 and 20 embedded in the side walls 2 and 3 respectively and connected to the rods 14 and 15. Preferably also the bottom has reinforcing rods 21 and 22 at the junction of the walls.

The improved lid comprises an arched main portion 23 having relatively thick marginal portions provided with a plane-faced seat portion 24 adapted to rest upon the top of the vault body or upon sealing cement thereon, the lid having flange-like extensions 25 and 26 projecting downward beyond the seat face so as to loosely embrace the side walls of the vault body, the lid having also end extensions 27 and 28 to loosely embrace the end walls of the body and prevent the escape of sealing cement. A rectangular wire reinforcement 29 is embedded in the extensions of the lid. The under side of the lid has longitudinal retaining bars 30 and 31 and transverse retaining bars 32 and 33, all integral with the lid and suitably spaced apart from the lid extensions so as to constitute a continuous abutment opposite to the inner side of the body enclosing wall, the upper portions of the transverse bars having a curvature corresponding to the curvature of the arched portion of the lid. The retaining bars assist in confining the sealing cement in

place upon the vault body and aid in effecting reliable sealing and securing of the lid to the vault body.

The outer portion of the lid has four cavities 34, 35, 36 and 37 therein that are suitably spaced apart and they have lifting rings or eyes 38, 38′, arranged therein respectively, each ring having anchor rods 39 and 40 that are embedded in the lid, diagonally with respect to the longitudinal. Longitudinal reinforcing rods 41, 41′ are embedded in the lid, one rod extending through two of the rings and the other rod through the remaining two rings. Transverse reinforcing rods 42, 42′ are embedded also in the lid and extend through two of the rings.

In practical use the burial vault is lowered into a grave, by means of the handle bars 6 and 6′, or may be placed in a mausoleum, and a casket having been placed in the vault body, cement mortar of proper consistency is placed upon the top of the enclosing wall so as to fill the groove 7, and if desired a layer of the mortar may be placed on the seat 24 while the lid is inverted, after which the lid is squarely lowered upon the vault body, the weight of the lid being sufficient to flatten out the mortar so that portions of the mortar are forced into the slight space within the lid extensions and into the space outside the retaining bars, the mortar being prevented from too free flow in the narrow spaces and thus prevented from causing soiling of the inside of the burial vault and insuring air-tight sealing of the joint. When the sealing cement sets and becomes hardened the very large sealing surfaces effectively secure the lid rigidly to the vault body and prevent separation of the lid from the body, and the reinforcements prevent forcible destruction of the concrete walls, with the result that the burial vault safeguards the corpse contained therein against grave robbers. The burial vault being air-tight effectively prevents the entry of insects and preserves the corpse in dry condition excepting the moisture originally in the corpse.

When the lifting rings are not further needed each cavity containing a ring is filled with concrete 43 which is smoothed on its surface to conform to the adjacent surfaces, so that the lifting devices become effectually hidden.

What is claimed as new is:

In a concrete burial vault, the combination of an arched lid having relatively thick marginal portions, the upper side of the marginal portions having cavities therein, metallic rings arranged in the cavities respectively, each ring having anchor rods embedded in the lid adjacent to the cavity, wire rods embedded longitudinally in the lid and extending through the rings, and wire rods embedded transversely in the lid and extending through the rings adjacently to the longitudinal rods.

In testimony whereof, I affix my signature on the 18th day of September, 1926.

WILLIAM O. MAHAN.