W. D. VAN TASSELL.

CONCRETE BURIAL VAULT.

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1,403,579. Patented Jan. 17, 1922.

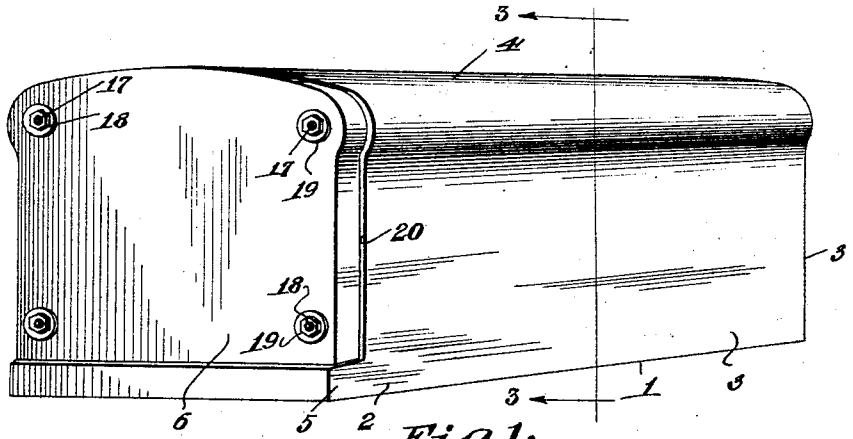


Fig 1.

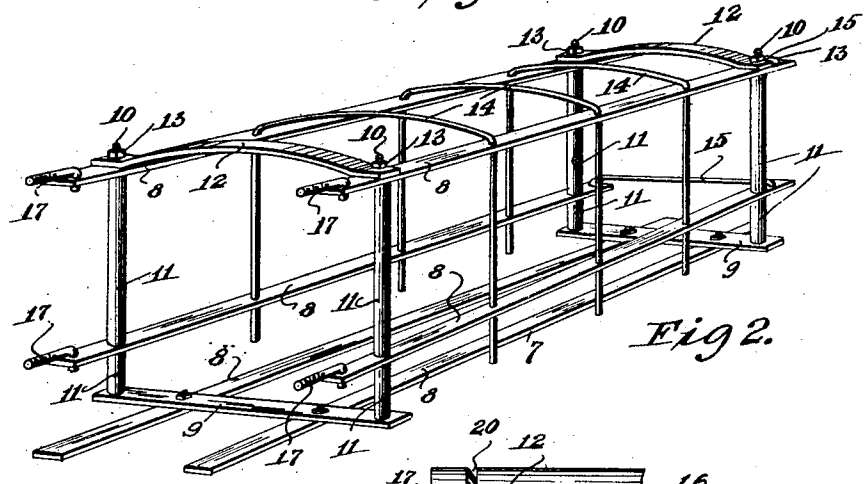


Fig 2.

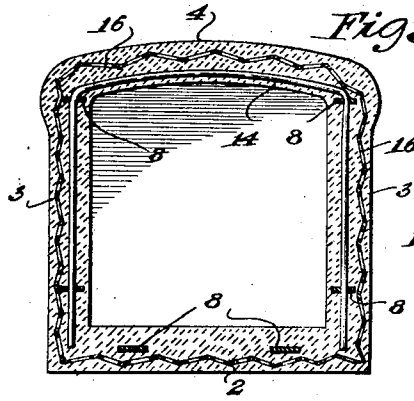


Fig 3.

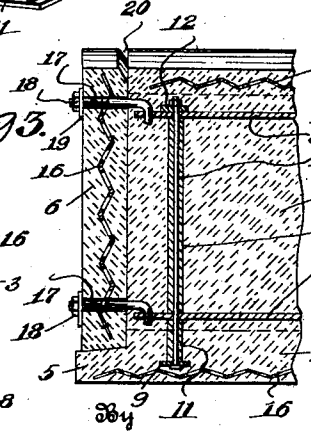


Fig 4.

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CONCRETE BURIAL VAULT.

1,403,579. Specification of Letters Patent. Patented Jan. 17, 1922.

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To all whom it may concern:

Be it known that I, WILLIAM D. VAN TASSELL, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Concrete Burial Vaults, of which the following is a specification.

This invention relates to an improved concrete burial vault, and has for its primary object to provide a vault of this character wherein improved features of reinforcement are provided so as to render the vault exceptionally strong and durable in construction and to be capable of preserving its contents from the effects of the elements and after interment for an extended and indefinite period.

Another object of the invention resides in a grave vault which is formed from concrete or some other monolithic material and wherein all the sides thereof are protected and reinforced by an internally located frame structure, which latter is embedded in the walls of the vault and is of such construction as to enable the vault to resist the complex stresses which are imparted thereto under conditions of actual use.

A further object of the invention resides in a concrete grave vault wherein the entrance thereto is located at one of its longitudinal ends, and which entrance is closed by a concrete slab, the latter being secured in position by the provision of longitudinally extending bolts which are connected to and form a part of the frame structure, said bolts serving to permit the closure or slab to tightly seal the entrance to the vault, and to thereby render the latter fully capable of resisting the action of moisture seepage, and to exclude such seepage from the interior of the vault.

With these and other objects in view, as will appear as the description proceeds, the invention accordingly consists in the novel features of construction, combinations of elements and arrangement of parts, hereinafter to be fully described and to have the scope thereof pointed out in the appended claims.

In the accompanying drawing, forming a part of this specification and in which similar characters of reference denote like and corresponding parts throughout the several views thereof:

Figure 1 is a perspective view of the improved concrete vault comprising the preferred form of the present invention.

Figure 2 is a similar view disclosing the frame or reinforcing structure for the vault.

Figure 3 is a transverse cross sectional view taken through the vault substantially on the line 3—3 of Figure 1, and,

Figure 4 is a detailed vertical sectional view taken through the mechanism for securing the closure of the vault in an applied position.

Referring more particularly to the details of the invention, I provide a concrete vault 1 which in the form shown in the accompanying drawing, consists of a hollow body 1, which comprises a flat base 2, upstanding side and end walls 3, and a substantially arched top 4. It will be understood, of course, that these walls are of irregular formation by reason of the monolithic materials employed in the production of the vault and hence, possess considerable strength and are fully capable of resisting stresses and pressures applied thereto. It will be observed, by reference to Figure 1, that the base portion 2 is extended at one end of the body to provide a shelf or a transversely extending shoulder 5, which protrudes some distance beyond the corresponding end of the vault. This end of the vault is open in order that the interior of the body will be rendered accessible, and adapted to be supported by the shelf and to close the open end of said body is a concrete closure member 6. This member is preferably formed from the same materials as the body 1 and substantially conforms to the cross sectional formation of the vault. It will be seen that the lower edge of the member 6 rests upon and is received by the shelf 5, and hence a strong construction is provided to support the weight of the closure member.

In order to reinforce the walls of the vault, use is made of a frame structure which is designated in its entirety by the numeral 7. This frame structure is adapted to be molded within the body 1 during the process of forming the latter, and consists of a plurality of longitudinally extending metallic bars 8 which are so located as to extend longitudinally and horizontally of the base 2 and the side walls 3 of the body 1. The ends of the bars positioned within the base 2 are connected by means of transversely extending bars 9, which operate to connect the bars 8 together and to maintain

the relatively spaced positions of the latter. The bars 8 in the walls 3 are suitably connected together and joined with the bars in the base 2, by means of vertically extending bolts 10, which bolts extend upwardly through alined openings provided in said bars, and spacing sleeves 11 are interposed between the bars 9 of the base and the bars 8 of the side walls, so that the relative positions of the latter bars will be maintained. Arched bars 12 are so disposed as to extend through and to conform with the conformation of the top 4, and these bars are apertured at their ends to receive the upper threaded ends of the bolts 10, whereby upon tightening the nuts 13 provided upon the upper ends of said bolts, the entire frame structure will be firmly and rigidly bound together to produce a connected, self supporting rigid frame. Also, if desired, additional U shaped reinforcing rods 14 are provided and are so formed that their upper curved portions will be positioned within the top 4 of the vault, while the depending side legs of said rods will extend through openings provided at spaced intervals in the bars 8 of the side walls 3, these rods also serve to materially reinforce the general strength of the frame structure. It is obvious that by the provision of this frame structure, the walls of the vault will be strongly and securely reinforced, and that the vault as a whole will be enabled to successfully withstand the many stresses to which the same is subjected when in actual use. The closed end wall of the vault is reinforced by means of transversely extending rods 15, which are secured in position by passing their down-turned ends through apertures formed in the adjacent ends of the side bars 8. Moreover, metal lathing 16 may be passed around the entire frame structure, except at the open end of the vault, and this lathing may be securely connected with the frame structure and operates to reinforce the walls of the vault at positions between the various rods and bars constituting said frame structure.

To securely unite the closure member in detachable connection with the vault, the forward ends of the side bars 8 are equipped with openings in which are swiveled the inner ends of longitudinally extending fastening bolts 17. These bolts project beyond the open end of the body 1 in a longitudinal direction, and are adapted to be received within longitudinally extending openings provided in the closure member 6. The ends of these bolts are threaded and are designed to receive securing nuts 18, whereby upon the tightening of the latter against the washers 19, said closure member will be tightly and firmly drawn into sealing engagement with the entrance portions of the vault. It will be noted that the bolts 17 have a swiveled connection with the side bars 8, and are hence allowed to slightly oscillate, and in practice I have found it advisable to form the bolt receiving openings in the closure member a little larger than is absolutely necessary, so that when in assembling the closure member, the movement allowed the bolts 17 will permit the latter to readily penetrate and pass through the openings in the closure member, therefore slight irregularities which may occur in the location of the bolt openings will be compensated for by the movement allowed the bolts, a feature which renders extremely accurate workmanship unnecessary. The inner edges of the closure member are slightly beveled as indicated by the numeral 20, and by so beveling the edges 20 at positions contiguous to the end of the body 1, a V shaped groove is provided which is adapted to contain any suitable sealing compound, and in this manner the meeting surfaces between the closure member and the end of the body 1 will be hermetically sealed, and the contents of the vault thereby preserved by the exclusion of liquids and moisture.

In view of the foregoing description, taken in conjunction with the accompanying drawing, it will be apparent that there is provided a grave vault characterized by its exceptional strength and durability, and yet of such form as to permit of its convenient and economical fabrication. In finishing the vault, a suitable waterproofing material may be applied to its exterior surfaces, a feature which also greatly contributes in preventing the natural passage of water through concrete. Also, by the provision of the shelf 5 it will be apparent that the closure member will be located and will rest upon said shelf and thus the weight of the closure member will be taken off of the bolts 17, thus permitting the latter to solely function in their capacity of securing the closure member in an applied position.

What is claimed is:

1. A concrete grave vault comprising a hollow body formed to constitute integral base, side, end and top walls, one of the longitudinal ends of said body being open to render the vault accessible, a reinforcement for said body, said base wall being extended an appreciable distance beyond the open end of said vault to provide a shelf, a concrete closure member arranged to be carried by said shelf and to seal the open end of said vault, a pivotally movable fastening means carried by said reinforcement for connecting said closure member to said vault.

2. A concrete grave vault comprising a substantially hollow body having an open end, said body being formed to constitute integral base, side, end and top walls, a metallic reinforcement disposed in each of said

walls, a shelf projecting from said base wall and extending for an appreciable distance beyond the open end of said vault, a closure member arranged to be carried by said shelf and to close the open end of the vault, and fastening means connected with said reinforcing structure and serving to bind said closure member into secured engagement with the open end of said vault.

3. A concrete grave vault comprising a substantially hollow body formed to include an open longitudinal end, said body being formed to constitute integral base, side, end and top walls, said base wall being formed to extend a considerable distance beyond the open end of said vault to provide a shelf, a frame structure embedded in each of the walls of said body, a concrete closure member arranged to rest upon said shelf, said closure being provided with relatively enlarged longitudinal openings, and a plurality of bolt elements movably carried by the ends of said reinforcing structure and arranged to project through said closure openings, the outer ends of said bolts being threaded to receive binding nuts to permit said closure member to be securely bound in engagement with the open end of said vault, the enlarged openings in said closure member serving to permit the weight of the latter to rest directly upon said shelf.

4. In a concrete grave vault, a substantially hollow open ended body formed to comprise base, side, end and top walls of integral formation, a metallic reinforcing structure for bracing said walls, said structure comprising a plurality of longitudinally and transversely extending bars adapted to be embedded in said base wall, longitudinally extending side bars adapted to be embedded in said side walls, transversely extending bars arranged to be embedded in said top wall, bolts passing through aligned openings formed in said bars and capable of rigidly connecting the latter, spacing sleeves for maintaining said side wall bars in spaced relationship, and a metal sheathing arranged to surround said bars.

In testimony whereof I affix my signature.

WILLIAM D. VAN TASSELL.