H. M. KNIGHT.

BURIAL VAULT.

APPLICATION FILED MAR. 1, 1915.

1,337,559. **Patented Apr. 20, 1920.**

4 SHEETS—SHEET 1.

FIG. 1.

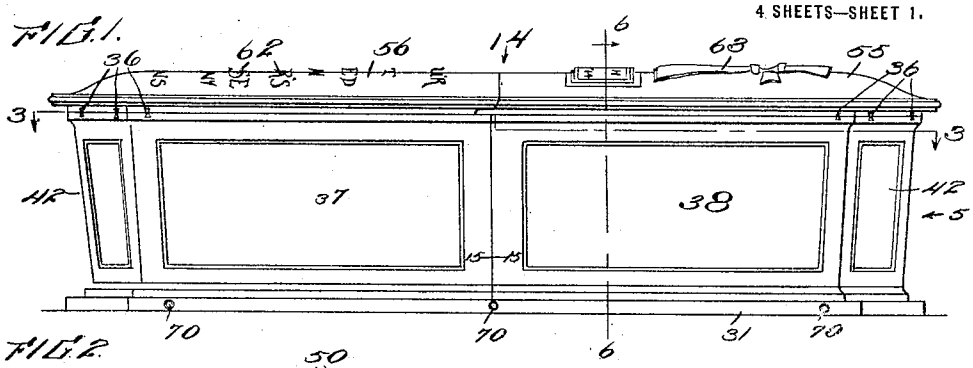


FIG. 2.

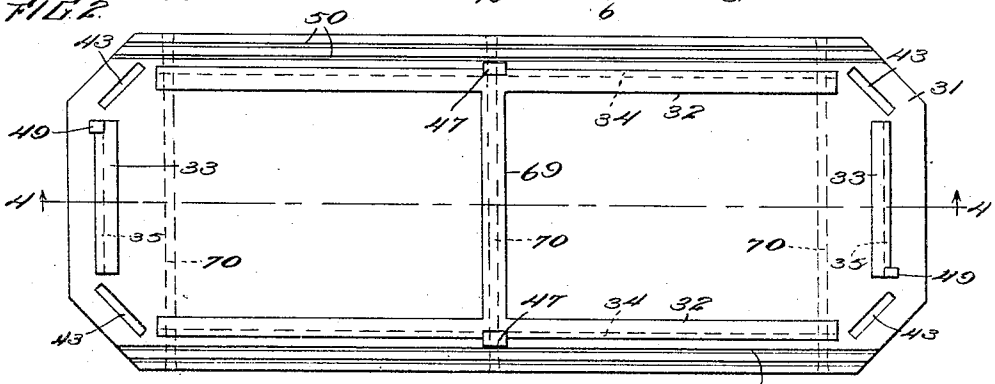


FIG. 3.

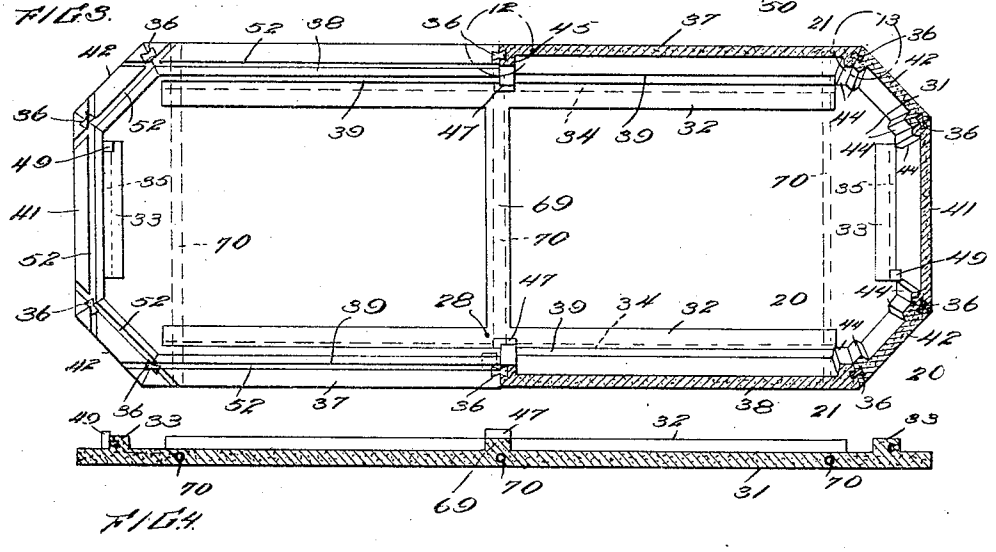


FIG. 4.

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4 SHEETS—SHEET 2.

FIG. 5.

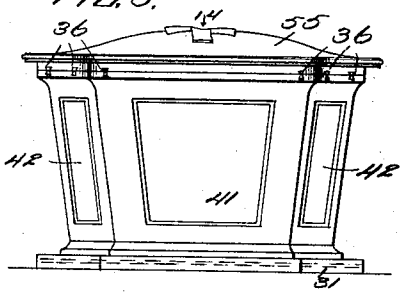


FIG. 6.

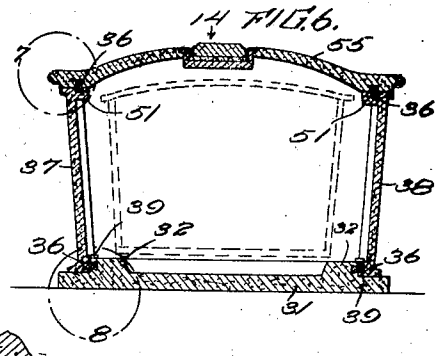


FIG. 7.

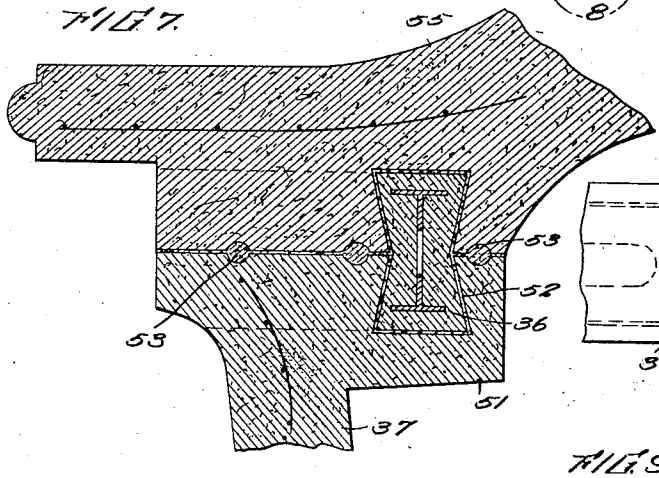


FIG. 10.

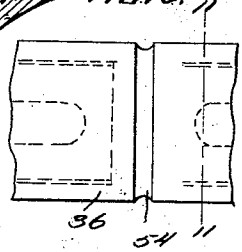


FIG. 11.

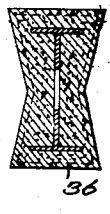


FIG. 9.

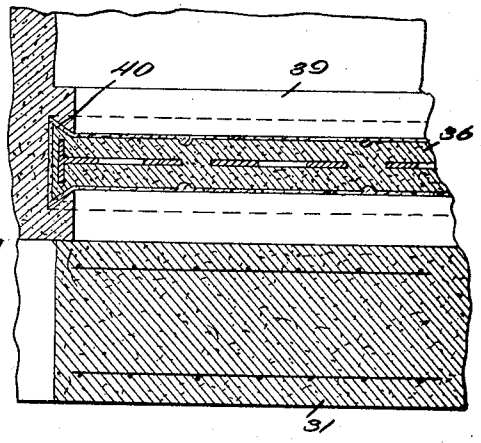
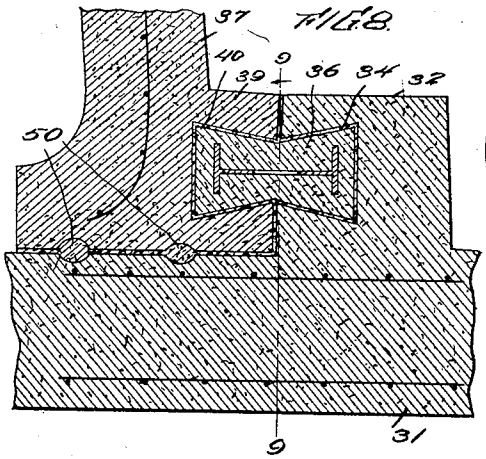


FIG. 8.



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4 SHEETS—SHEET 3.

FIG. 12.

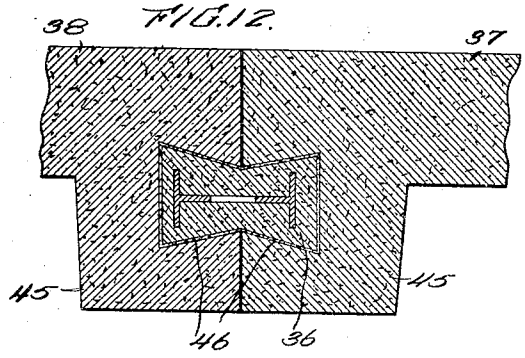


FIG. 13.

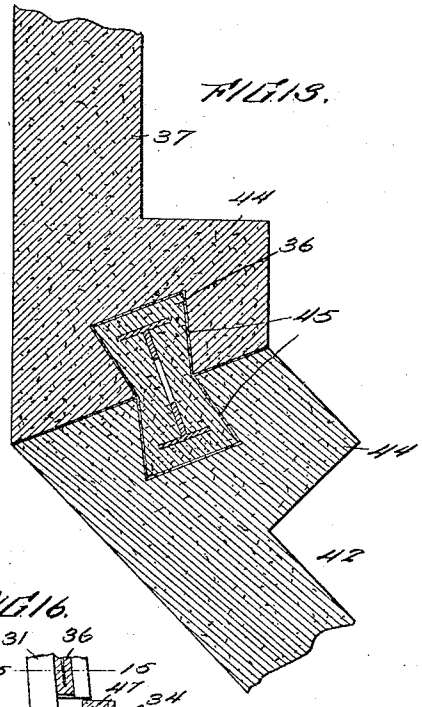


FIG. 16.

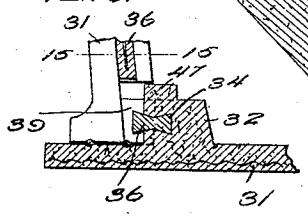


FIG. 14.

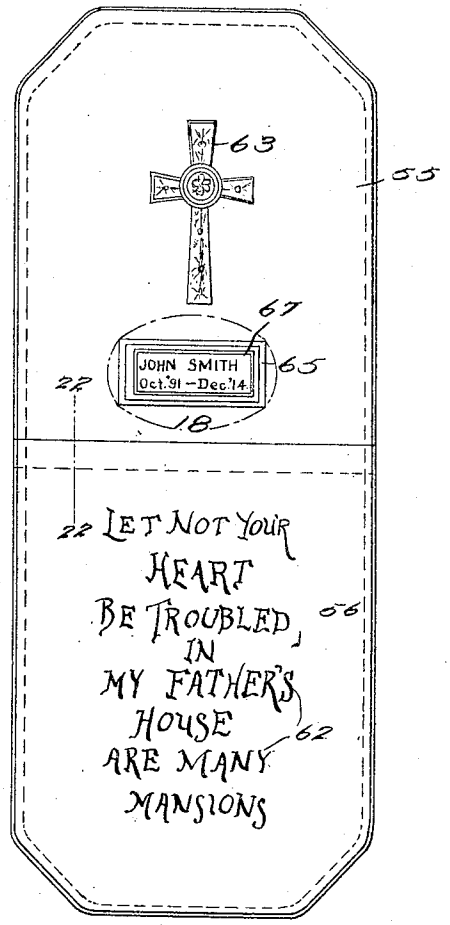
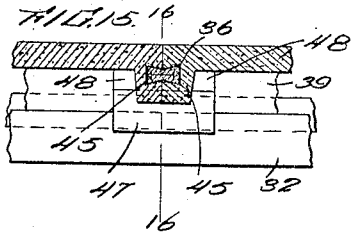


FIG. 15.



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4 SHEETS—SHEET 4.

FIG. 19.

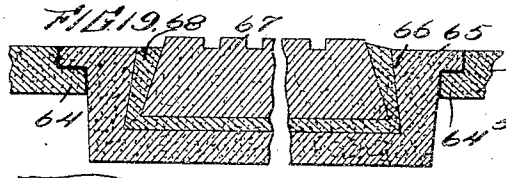


FIG. 17.

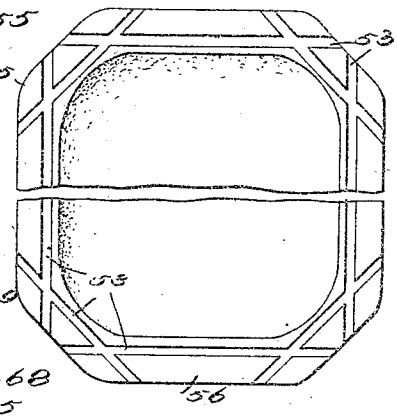


FIG. 18.

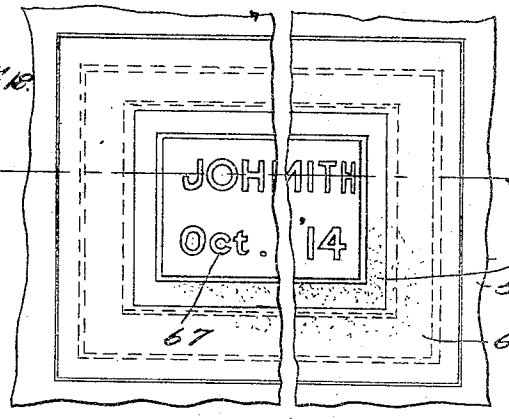


FIG. 21.

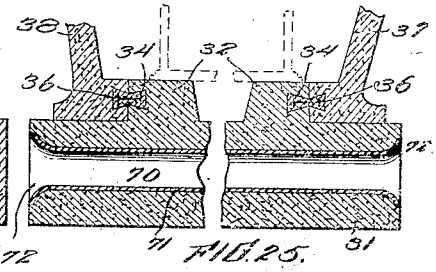


FIG. 20.

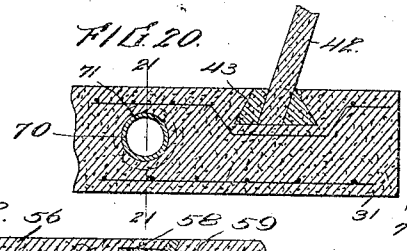


FIG. 22.

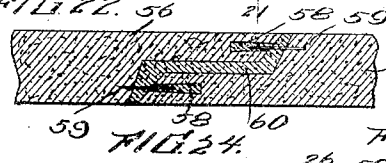


FIG. 25.

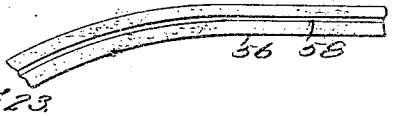


FIG. 24.

FIG. 23.

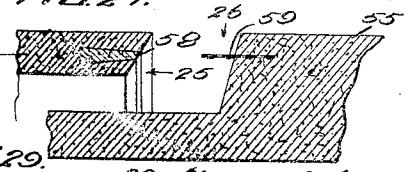


FIG. 27.

FIG. 26.

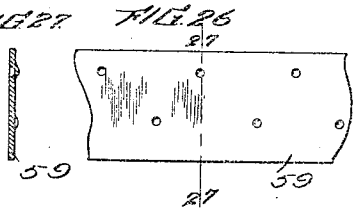


FIG. 29.

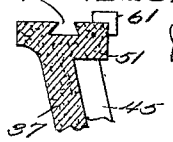
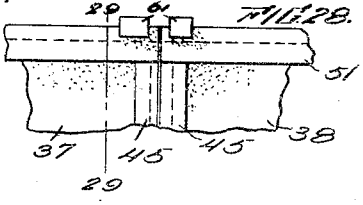


FIG. 28.



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UNITED STATES PATENT OFFICE.

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BURIAL-VAULT.

1,337,559. Specification of Letters Patent. Patented Apr. 20, 1920.

Application filed March 1, 1915. Serial No. 11,347.

To all whom it may concern:

Be it known that I, HERBERT M. KNIGHT, a citizen of the United States, residing at Rome, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Burial-Vaults; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to burial vaults, and has for an object to provide a burial vault of improved construction especially adapted to be composed of concrete or cement material, manufactured in sections, and put together, if desired, at the point of use.

A further object of the invention is to construct a burial vault wholly of reinforced concrete made up in sections with means for putting the sections together to produce a water and air-tight structure.

A further object of the invention is to provide improved means forming ports in the organized structure for strengthening the same, and also to provide means for attaching hoisting means to raise and lower the structure after it is completed.

With these and other objects in view, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a view of the improved vault in side elevation.

Fig. 2 is a top plan view of the base member or slab.

Fig. 3 is a view one-half in top plan and one-half in horizontal section of the vault with the cover removed, and taken on line 3—3 of Fig. 1.

Fig. 4 is a longitudinal sectional view through the base slab taken on line 4—4 of Fig. 2.

Fig. 5 is a view of the vault in end elevation, as indicated by arrow 5 at Fig. 1.

Fig. 6 is a transverse sectional view taken on line 6—6 of Fig. 1.

Fig. 7 is a detail view of the upper corner with the cover in place, as indicated within the circle 7 of Fig. 6.

Fig. 8 is a detail view of the lower corners assembled as shown within circle 8 of Fig. 6.

Fig. 9 is a detail view of the joint between the side members and the bottom slab as indicated at line 9—9 of Fig. 8.

Fig. 10 is a view in side elevation of the double dove-tail key used to join the several parts.

Fig. 11 is a cross sectional view of the double dove tail key taken on line 11—11 of Fig. 10.

Fig. 12 is a detail sectional view of the matter within the circle 12 of Fig. 3.

Fig. 13 is a detail sectional view of the joint within the circle 13 of Fig. 3.

Fig. 14 is a top plan view of the burial vault as indicated by arrow 14 at Figs. 1, 5 and 6.

Fig. 15 is a sectional view through the joint between the side members of the vault as indicated by line 15—15 of Fig. 1.

Fig. 16 is a vertical sectional view through the joint at the bottom where the side members join and join the bottom slab as indicated by line 16—16 of Fig. 15, and also showing line 15—15 as the position for Fig. 15.

Fig. 17 is an inverted plan view of the cover.

Fig. 18 is an enlarged top plan view of the memorial tablet as seen within the oval 18 at Fig. 14.

Fig. 19 is a transverse sectional view through the memorial tablet as shown on line 19—19 of Fig. 18.

Fig. 20 is a detail sectional view of the attaching of one of the end members to the bottom slab as indicated by line 20—20 of Fig. 3.

Fig. 21 is a detail view of the connecting of the side members with the bottom slab, and showing the hawse hole on line 21—21 of Figs. 3 and 20.

Fig. 22 is a detail sectional view of the joint of the cover members as indicated by line 22—22 of Fig. 14.

Fig. 23 is a detail view of one edge of one of the cover members.

Fig. 24 is a detail sectional view of the edge of the other cover member.

Fig. 25 is a detail view in edge elevation of one member of the cover member as indicated by arrow 25 at Fig. 24.

Fig. 26 is a view in plan of the dowel employed to secure together the cover members as indicated by arrow 26 at Fig. 23.

Fig. 27 is a cross sectional view of the dowel as indicated by line 27—27 of Fig. 26.

Fig. 28 is a detail fragmentary view of the top of the vault at the point of joining the side members at the point indicated by arrow 28 at Fig. 3.

Fig. 29 is a transverse sectional view through the detail shown at Fig. 28 and as taken on line 29—29 of that figure.

Like reference characters indicate corresponding parts throughout the several views.

The improved vault comprises a bottom member 31 preferably, though not necessarily, of monolithic construction, and it is obvious that the bottom may be constructed in accordance with the disclosure hereinafter relative to other sections. Whatever the facts relative to constructions are, the bottom is provided along its edges with ribs 32 and across the ends with similar ribs 33 which are respectively provided with dove-tail grooves 34 and 35 along their outer sides, each adapted to receive a double dove-tail key 36 used throughout the construction, and when inserted in the ribs 32 and 33 will obviously be one-half received therein and the other half extending beyond the lines of the ribs.

Side sections 37 and 38 are provided along their lower edges with ribs 39 provided with dove-tail grooves 40 receiving the other half of the double dove-tail key 36 as indicated more particularly at Fig. 8, so that the sides 37 and 38 are held rigidly and in nearly upright position relative to the bottom 31, as shown more particularly at Fig. 6.

End sections 41 are provided along their lower edges with similar dove-tail grooves to engage the key 36 seated in the ribs 33. The general planes of the end sections 41 are at right angles to the planes of the side sections 37 and 38, leaving intervals between such end sections and side sections which are filled by sections 42. The sections 42 have their lower ends inserted in cavities 43 which are filled with cement before the lower ends of such sections 42 are inserted. The side members 37 and 38, the end members 41 and the intermediate members 42 are each provided along their edges with similar ribs 44 as shown more particularly at Fig. 13, such ribs being provided along their proximal faces with dove-tail grooves 45 with the double dove-tail key 36 inserted therein.

Also the side members 37 and 38 along their abutting lines centrally of the structure are provided with ribs 45 similarly provided with dove-tail grooves 46 as shown more particularly at Fig. 12 with the double dove-tail key 36 inserted therein.

So that the side sections 37 and 38 may be properly positioned relative to the bottom slab 31, a lug 47 is erected centrally of the ribs 32 and the ribs 39 along the lower edges of side sections 37 and 38 are cut away as shown more particularly at 48 in Fig. 15 to abut against such lugs when the side sections 37 and 38 are in proper position. Likewise, the ribs 33 along the ends of the bottom are provided with lugs 49 against which the end members 41 abut when in the proper position. It is intended that the keys 36 will be inserted in the grooves 34 of the ribs 32 being first coated with cement, and while in that position the side sections 37 and 38 will be slidably moved to place until they abut against the lugs 47, while similar keys are inserted in the ribs 33 similarly treated, and the end sections 41 slidably moved to place until they engage the lugs 49. The intermediate sections 42 are then put into position, and the keys 36 previously coated with cement are inserted in the key-ways between the several sections whereby the bottom, side, end and intermediate members become rigidly connected by means of the double dove-tail keys, and becomes an integral structure by reason of the crystallization of the cement coating upon the keys, and the crystallizing of the cement in the sockets 43. The abutting edges of the sections, as well as the proximal edges or surfaces of the bottom are likewise coated with cement, and preferably, though not necessarily, grooves 50 are formed along the edges of the bottom and the adjacent lower edge of the sides which are filled with cement as shown more particularly at Figs. 2 and 8.

The top of the side, end and intermediate sections are provided with inwardly extending ribs or flanges 51 as shown more particularly at Fig. 7, such flanges being provided with dove-tail grooves 52, and a cover is provided having grooves 53 formed therein registering with the grooves 52, so that the double dove-tail keys 36 may be inserted in such registering grooves as shown more particularly at Fig. 7, having been first treated with a coating of cement and also grooves to carry cement as shown at 53 are likewise provided.

The keys 36 may of course be of any usual

and ordinary double dove-tail construction, but are preferably of the construction shown and disclosed in copending application Serial Number 829,757, filed April 6, 1914; and specifically forms no part of the present invention, except that the said key so disclosed is provided with grooves or constrictions 54 to enable the breaking of said key at any desired point. It is obvious therefore, that the required length of key may be broken from a longer member and inserted in the various dove-tail grooves so that with the grooves crossing at the corners as shown particularly at Figs. 2 and 17, the proper length may be employed so that each will clear the other, and the outer ends of the grooves then filled with cement. The cover carrying the grooves 53 may be of any approved and desired form, but is preferably constructed in sections 55 and 56 upwardly curved or bulged as shown particularly at Figs. 1, 5, 6 and 7. The sections 55 and 56 are connected together to form an integral structure in the manner shown more particularly at Figs. 22, 23, 24, 25, 26 and 27. This connection consists in halving the proximal edges of the sections to overlap as shown more particularly at Fig. 22. The extreme edges of each of the sections is provided with a dove-tail groove 58 which is filled with cement, while a dowel 59 is cast into the proximate surface as shown more particularly at Figs. 22 and 23 to be inserted in the grooves 58, and therein embedded in cement while the space between the overlapping portion of the sections is filled with cement as shown at 60 in Fig. 22. When the cover is constructed in sections, it is desirable to have limiting stops for properly positioning the sections of the cover the same as the sections of the sides are limited, for which purpose lugs 61 are formed centrally of the sides and adjacent the ends of the sections 37 and 38 as shown more particularly at Figs. 28 and 29.

One advantage in casting the cover in sections is that it is usually desirable to have certain inscriptions, insignia, memorial tablets, or the like carried by the cover member. By forming such cover in sections the desired result may be obtained by combining such sections as desired. As shown at Figs. 1 and 14, one of the sections is provided with an inscription as shown at 62, while the other section is provided with an insignia 63. It is obvious that these sections may be cast or molded with different inscriptions and different insignia, and then combined as the demand may require. One of the sections at 55 is also provided with an opening having a flange 64 thereabout as shown more particularly at Fig. 19, with a block 65 cast or molded to fit into such opening and with a depression 66 proportioned to receive a memorial tablet 67, and to receive cement material 68 to maintain such memorial tablet in position.

Centrally of the base or bottom a rib 69 is formed serving the purpose of supporting the casket in the middle, the outer edges setting upon the ribs 32 and 33. Also through the base hawse holes 70 are provided which are preferably produced by embedding pipes 71 in the material of the base with their outer ends expanded or belled as shown at 72 in Fig. 21. This permits the insertion of hawsers or cables through such openings to lower the vault into the excavation.

It is obvious that with the vault constructed as described, and all of the various parts put together with cement as disclosed, a practically integral or homogeneous structure will be the result, water and air-tight as nearly so as the ordinary cement construction can provide.

It is also obvious that while the specific construction disclosed herein is shown as having the various sections connected, united, or joined in a specific manner and of specific construction, that sections of different shape and consequently of different uniting portions could be substituted for the specific portions or sections herein shown; and that the manner of uniting might be somewhat different and yet all fall within the scope of the present invention.

It will be apparent from Figs. 1, 5, 6 and 7 that the edges of the cover sections are made to extend beyond the lines of the body of the vault to produce an eave in the usual well-known manner, and for the usual well-known purpose.

I claim:—

1. In a burial vault, a base provided with upwardly extending ribs, side and end members erected adjacent the upwardly extending ribs and having inwardly extending ribs at their bottoms in juxtaposition to the upwardly extending ribs of the bottom, a cover member, all of the abutting surfaces of the base, side, end and cover members being provided with registering dove-tailed grooves, and a double dove-tailed key inserted in each of the registering grooves adapted to connect the several parts rigidly together.

2. In a burial vault, a base provided with upstanding ribs adjacent some of its edges, and depressions adjacent others of its edges, upright members, means to secure some of its upright members to the upstanding ribs, others of said upright members being provided with elongated lower ends proportioned to be cemented in the depressions.

3. A burial vault provided with a base having upwardly extending ribs and a superstructure, some of the members of which

are provided with inwardly extending ribs located in juxtaposition to the upwardly extending ribs of the base, said juxtaposed ribs being provided in their adjacent surfaces with dove-tailed grooves and a double dove-tailed key inserted in the registering grooves of the adjacent ribs.

4. In a burial vault, a base provided adjacent some of its edges with upstanding ribs and adjacent others of its edges with depressions and a superstructure composed of a plurality of side members some of which are provided with ribs having means for engagement with the upstanding ribs of the base and others of which are provided with elongated portions adapted to be cemented into the depressions.

In testimony whereof I affix my signature in presence of two witnesses.

HERBERT M. KNIGHT.

Witnesses:
L. T. GREGERSON,
E. O'BRIEN.