June 26, 1934. J. A. VOGEL 1,964,234

BURIAL CASE OR VAULT

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Fig. 1.

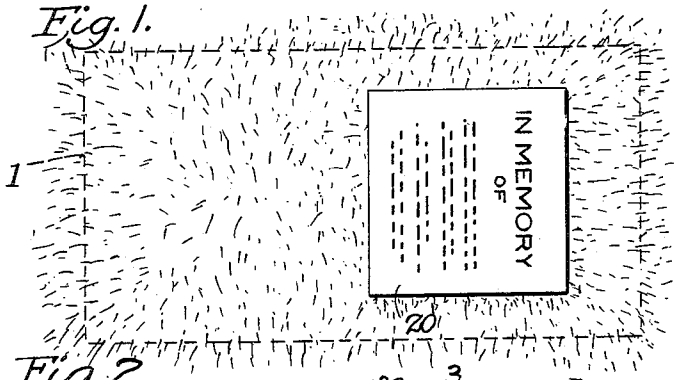


Fig. 2.

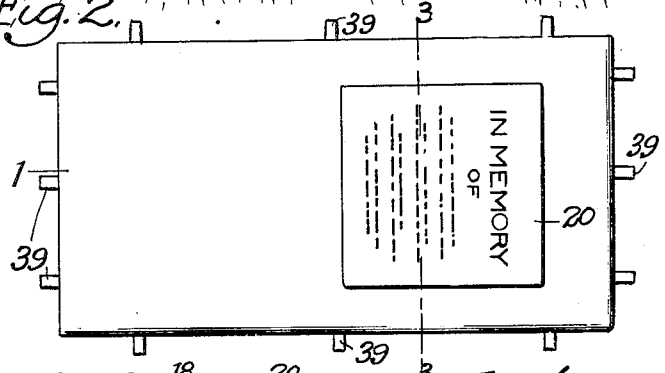


Fig. 5.

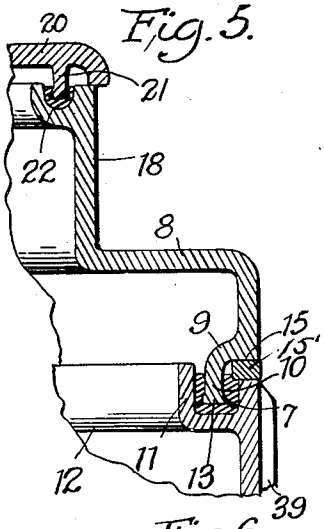


Fig. 6.

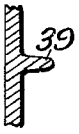


Fig. 3.

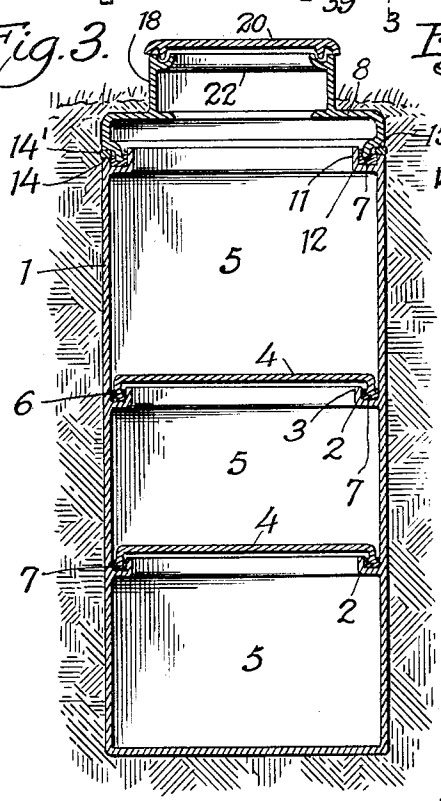
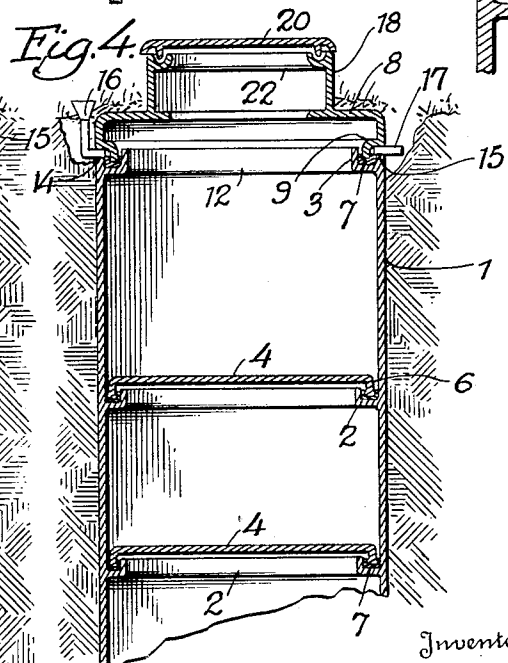


Fig. 4.



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BURIAL CASE OR VAULT

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Fig. 7.

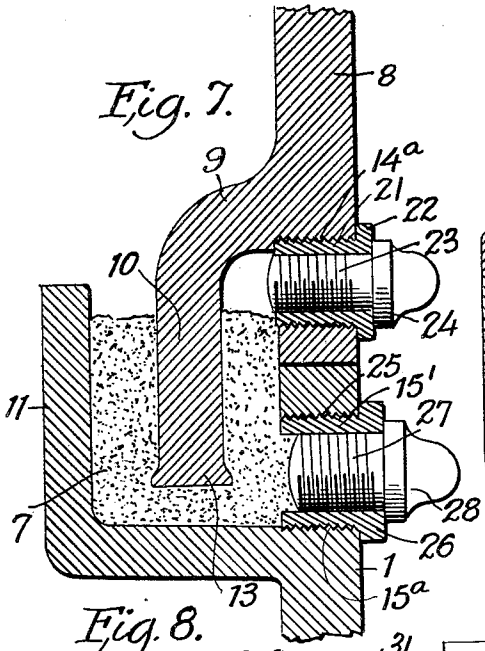


Fig. 13

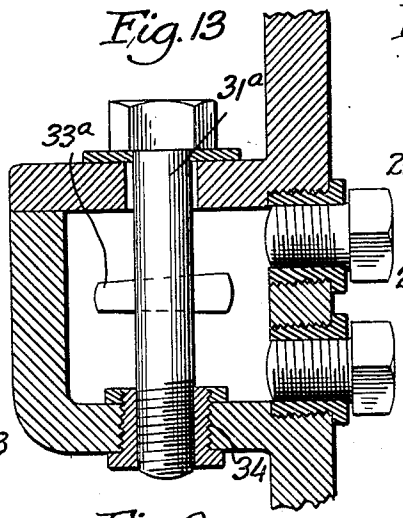


Fig. 14.

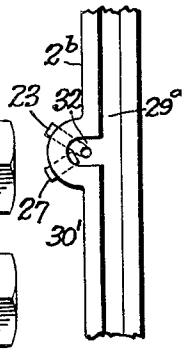


Fig. 8.

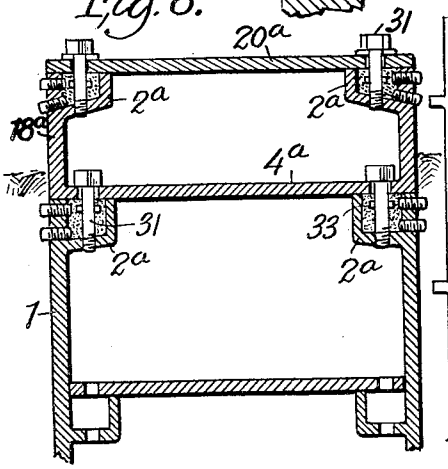


Fig. 9.

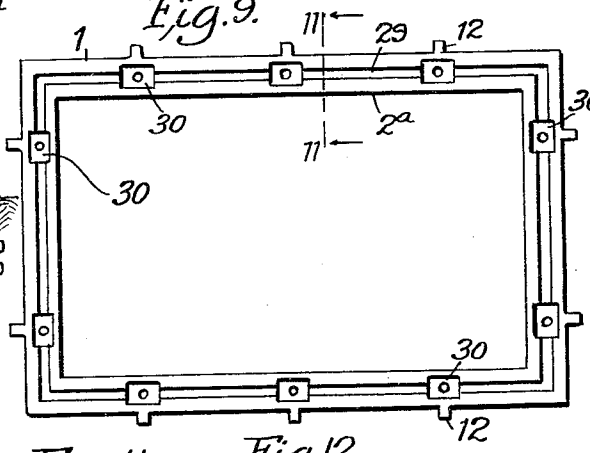


Fig. 11.

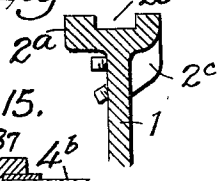


Fig. 12.

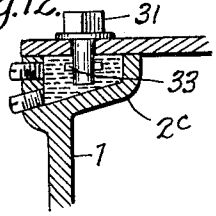


Fig. 10.

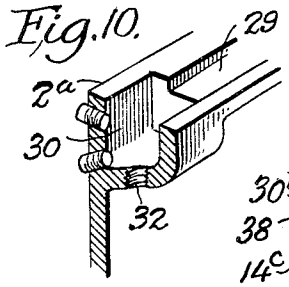
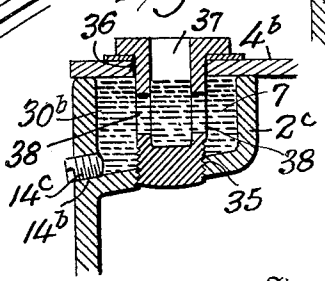


Fig. 15.



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Patented June 26, 1934

1,964,234

UNITED STATES PATENT OFFICE

1,964,234

BURIAL CASE OR VAULT

Joseph A. Vogel, Wilmington, Del.

Application June 17, 1932, Serial No. 617,962

9 Claims. (Cl. 72—7)

This invention relates to burial cases or vaults, and one of its objects is to provide a burial case or vault made of some suitable indestructible or highly durable material and adapted to be securely sealed against the entrance of air or moisture, whereby the remains and clothing worn by or personal effects enclosed in the case or vault with the remains may be preserved against decay or material deterioration for an indefinite period.

Another object of the invention is to provide a case or vault having a closure lid provided with an observation panel formed by an inscription plate bearer extension which may serve as a receptacle for holding material or data applying to the vault and its contents and adapted to be closed by a lid or cover which serves as an inscription plate on which an appropriate epitaph may be placed, whereby the use of head and foot stones or other auxiliary markers may be obviated.

Still another object of the invention is to provide a burial case or vault of the character described having burial chambers arranged in superposed relation whereby a plurality of bodies may be entombed in a case or vault of minimum width.

Still another object of the invention is to provide a case or vault adapted to be hermetically sealed against surreptitious entrance by vandals in such manner as to give visual evidence of the fact that attempts to gain access to the case or vault have been made.

Still another object of the invention is to provide a case or vault including a vault body adapted to be embedded in the ground and having a riser or inscription plate bearer of the character described which is exposed above the ground and rises to a sufficient height to dispose the inscription plate in position to be conveniently viewed.

Still another object of the invention is to provide a vault the joint or joint connections between the body and the closure member or members of which may be securely sealed against entrance of air or moisture, and in which the fastening means for securing said closure member or members may be such as to render it difficult to release the fastening by vandals, while permitting of such release by those authorized and having the required time and tools to do so.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Fig. 1 is a top plan view of the burial case or vault as it appears embedded in the ground.

Fig. 2 is a similar view of the case or vault as it appears before being embedded.

Figs. 3 and 4 are vertical transverse sections on the line 3—3 of Fig. 2, showing the vault cover sealed and in process of being sealed, respectively.

Fig. 5 is a detail section through a portion of the lid and inscription plate.

Fig. 6 is a detail cross section through the vault body.

Fig. 7 is a similar view on an enlarged scale showing a modified form of sealing connection.

Fig. 8 is a cross-section showing a construction wherein the full area of the lid or cover extends above the ground surface and is closed by an inscription plate coextensive in area therewith.

Fig. 9 is a plan view of the vault body.

Fig. 10 is a fragmentary perspective view of a part of the vault shown in Figs. 8 and 9.

Fig. 11 is a section on line 11—11 of Fig. 9.

Fig. 12 is a section on line 12—12 of Fig. 9.

Fig. 13 is a view similar to Fig. 7 showing another modification.

Fig. 14 is a fragmentary plan view of the vault body showing still another modification.

Fig. 15 is a sectional view similar to Figs. 7 and 13 showing still another modified construction.

In carrying my invention into practice I provide a burial case or vault comprising a casing or vault body 1 of oblong rectangular form and made of metal, stone, concrete or other material of a kind which will be proof against or highly resistant to rust, corrosion, erosion or other decay or destructive influences thereon, so that a case or vault adapted to be buried in the ground and to last an indefinite period will be produced. The case or vault may be of a length and width to more or less snugly receive a burial casket of conventional size, so that the case or vault may be received within an ordinary grave space in a burial vault, or the case or vault may be of larger size. Whether of single grave space size or larger, the case or vault may be designed to hold either a single casket or a plurality of caskets arranged in superposed relationship. In the present instance the casket body 1 is shown as provided at suitably spaced vertical intervals with ledges 2 of transversely curved shape to form grooves or channels 3, which ledges are adapted to support partition plates 4 to divide the casket or vault body into a plurality of burial chambers 5, each of suitable size to receive one or more burial caskets whereby a plurality of caskets may

be enclosed in a single case or vault, which may be, if desired, within the length and width limits of an ordinary single grave space. The cover lids or partitions 4, which are adapted to be applied to close all of the chambers 5 except the uppermost one, are provided with downturned anchoring flanges 6 adapted to be received within the grooves 3 of the supporting ledges 2. After each lid 4 is placed in position to close the underlying chamber 5, a sealing medium 7 of suitable character may be introduced into the groove 3 of the ledge to seal the joint between the same and the cover 4. This sealing medium may be of fusible material, of mineral or vegetable character, such as sulphur or of a low fusing metal, or of other material primarily or normally of fluid character and adapted to harden on exposure to the atmosphere and upon hardening to lock the cover flange 6 in the groove 3 so securely against removal as to require the use of tools and heating equipment and the expenditure of such a length of time as to deter vandals from attempting to gain access to the chamber and its contents. I contemplate the use of a sealing material which will be so resistant against fracture and will hold the cover lid so firmly that attention would be liable to be called to any attempts by vandals to surreptitiously gain access to the chamber, so that warning will be given of the attempt before entrance can be effected, and so that, if an entrance is effected, visual evidence of that fact will be given.

Where the construction of the case or vault is that of the kind shown, in which the vault is provided with a plurality of superposed burial spaces or chambers, it is to be understood that the vault may be temporarily closed at its top, but each chamber in succession from the bottom upward, as it is filled, will be closed by a securely fastened and hermetically sealed cover plate 4, which will render the filled chamber proof against unauthorized access and will close the chamber against access of air or moisture, so that the contents thereof will be indefinitely preserved or maintained in good condition. Each lid or cover 4 may serve as an inscription or identification plate on which may be placed suitable inscription pertaining to the decedent in the chamber closed thereby.

The body 1 is normally open at its top and may be temporarily closed to admit access to each unfilled chamber in turn until the last or uppermost chamber 5 is occupied, after which such chamber and the top of the case or body may be permanently closed. The means for closing the top of the vault body temporarily and permanently may consist of a substantial lid or cover 8 having a downturned flange 9 to rest upon the rim edge of the body 1, said flange 9 being provided with an inwardly and downwardly projecting locking rib 10 adapted to enter the groove or channel 11 of a channeled keeper 12 similar in form to the ledges 2 and arranged adjacent to and just below the rim edge of the body 1. The groove 11 of this channeled keeper 12 is adapted to receive a primarily or normally fluid sealing and locking medium of the character above described, which is adapted upon hardening to seal the joint between the body and cover 8 against access of air or moisture and to lock the cover in position so that it can not be removed without being broken and giving visual evidence of the fact that the seal has been broken and the cover removed. Preferably the locking rib 10 is provided with a flaring portion providing a shoulder or enlargement 13 which will be invested in the sealing medium and present lateral retaining surfaces for investment in and to be overhung by the sealing medium to lock the cover more firmly and securely in place. Thus it will be understood that when the cover 8 is applied permanently it will seal the upper chamber 5 and prevent access thereto, and this cover can not be surreptitiously removed because of the time and difficulty required in its removal, so that attention would be quickly called to the fact that attempts to remove it are being made. As the seal can not be reached and broken without the body and cover being damaged visual evidence of the fact that the cover has been tampered with will also be given. Suitable means (not shown) may be provided in practice to temporarily lock the cover 8 in place until the case or vault is filled and, if desired, a temporary filling of a sealing material may be used during such time to seal the groove 11, although such use will not be necessary, since each of the underlying filled chambers will be hermetically sealed and locked. As the body 1 and cover 8 may be, and preferably are, of unitary construction and quite weighty, it is desirable to provide some means whereby the same may be respectively lowered into place and placed in position at the time of use. To this end, suitable fixtures may be provided on the body and cover for engagement with lifting or handling mechanism or implements if the use of such be desired or required. In the operation of filling the sealing grooves 3 and 11, it will be understood that the groove 3 of each channeled ledge 2 may be filled with the sealing medium before the lid 4 is applied, and the lid 4 then lowered into position. In other words, the grooves 3 may be filled with the sealing medium from the interior of the body 1 immediately before application of the closing lid. It is preferable, however, for various reasons, to provide means for introducing the sealing medium to the groove 11 of the upper locking channel 12 after the top cover or lid 8 has been applied. To this end, I provide the body 1 at opposite sides with any desired number and arrangement of spaced filling and overflow openings 14 and 15 communicating with the unfilled channel. The opening 14 is adapted to receive the discharge end of a filling tube 16, through which the sealing medium may be pumped or introduced by gravity, while the opening 15 is designed to receive an overflow tube 17 through which the sealing medium, when the groove 11 is completely filled, will escape, and thus show to the operator that a proper amount of the sealing medium has been introduced, whereupon the tubes 16 and 17 are removed and the openings 14 and 15 suitably plugged, as at 14' and 15', respectively. Fig. 3 shows the vault lid applied and sealed, while Fig. 4 shows the lid applied and in process of being sealed.

Rising from the lid or cover 8 is an inscription plate bearer or supporting extension 18 which is of rectangular or other suitable form and which surrounds and guards an observation or inspection opening 19 in the lid or cover 8. The extension 18 may be integral with or inseparably fastened to the cover 8 and is normally open at its top and adapted to be closed by a closure slab or inscription plate 20. This plate 20 is provided, like the cover 8, with a locking rib 21 and the walls of the extension 18 are provided with a channeled keeper 22 similar to the keeper

12 to receive a sealing medium of the character previously described which will seal the joint between the extension and inscription plate and lock said plate in position against removal.

In practice the body of the case or vault and preferably its cover 8 are embedded in the ground with the extension 18 only extending above the surface of the ground to a suitable height. This extension serves as a final inspection opening through which the upper part of the casket in the top chamber may be viewed through the opening 19, until said opening 19 and the top of the extension is closed by application of the plate or slab 20. The extension 18 also serves as a grave marker or indicator extending above the surface of the ground to show the vault or case location and to indicate generally by its condition whether or not any attempts have been made to open the vault, and it further serves to support the inscription plate or slab 20 in proper position for ready and convenient observation so as to obviate the use of head and foot stones or other auxiliary grave markers. The extension 18 may still further serve as a chamber or receptacle in which objects or material of historical or other significance may be placed for future reference. The opening 19 itself may be closed by a suitable cover (not shown) closing communication between the top chamber 5 and the extension 18, if desired.

In Fig. 7 I have shown a modification in which the filling openings 14*a* for introducing the sealing and locking material 7 to the sealing channel is threaded to receive a bushing 21 having at its outer end a wrench-engaging flange 22, which bushing is internally threaded to receive a closure plug 23 having an external wrench-engaging head 24, and wherein the drain opening 15*a* is threaded to receive a similar internally and externally threaded bushing 25 having an outer wrench-engaging head 26 and adapted to receive a closure plug 27 having a wrench-engaging head 28. In filling the sealing channel the plug 23 is removed and the sealing material or compound introduced, after which the plug 23 is re-applied to close the filling opening. In breaking the seal and the fastening connection heat may be suitably applied to fuse the material 7 and the plug 27 removed to permit the fused material to drain out. The heating may be effected, if desired, by means of a blow torch, the flame from which is projected through the unclosed bushings 21 and 25. The purpose of employing bushings to receive the threaded plugs is to protect the threads of the openings 14*a* and 15*a* and prevent the same from being filled with the sealing material, so that a clean thread will be left in the vault body or cover when the plug and bushing are removed. Where the sealing channel is continuous the filling and drain openings may be provided at suitable intervals. Where the channel is in the form of a pocket, however, it is only necessary to provide a single filling opening and single drain opening for each pocket. The bushings and plugs here shown may be used throughout all the forms of the invention in place of ordinary plugs 14' and 15'.

In Figs. 8 to 12, inclusive, I have shown another modified form of my invention involving a change in the sealing and locking means and a change in the construction of the lid or cover. In this form of the invention the lid or cover 18*a* is designed to be closed at its base by a cover plate 4*a* and at its top by an inscription plate or slab 20*a*. This lid or cover is devoid of the bearer extension 18 and is of equal area throughout and extends to a proper elevation above the ground line to dispose the lid or cover 20*a* so that it forms an inscription plate. The ledges 2*a* in this construction are formed with shallow sealing grooves 29 and sealing and locking pockets 30 between adjacent grooves 29, a suitable number of said pockets 30 being provided at intervals throughout the ledge or rim. The grooves 29 may receive a suitable non-drying liquid serving as a sealing connection between the ledge and an overlying cover to close the joint in an air and moisture proof manner, while the pockets 30 are designed to receive the fusible sealing and locking material 7 and to lock retaining bolts 31 therein. As shown, the cover or closure plate 4*a* or 20*a* rests upon the surface of the ledge 2*a* and may be provided with a flange to fit within the groove 29 and within the sealing medium therein. The cover or closure plate is provided in alinement with the pockets 30 with openings for the passage of the bolts 31 and the bottom walls of the channels are provided with threaded openings 32 to receive the lower threaded ends of the bolts, whereby the bolts have a physical interlock with the body or lid to which its cover plate is applied. Preferably the bolts are formed with transverse openings for the passage of keys 33, which may be fitted therein after they are passed through their cover plates, which keys will be invested in the sealing material in the channel or pocket, thus locking the bolt against movement or withdrawal until the sealing and locking material 7 is fused. These channels or pockets 30 are provided with filling and drain openings, closed by plugs 14' and 15' or plugs 23 and 27, and, if desired, the lower walls of the pockets may be arranged at an angle or suitable slope to facilitate the discharge of the fused material in breaking the seal and interlocking connection. With this construction the closure members may be quickly and conveniently applied and locked in position by fastening members which can only be removed with difficulty and by the use of suitable tools and which, because of the limited number of fastening points, may be quickly applied and removed with greater facility by authorized persons having the necessary time and tools for the work.

In Fig. 13 I have shown a modified form of my invention in which a sealing channel or pocket is shown and a bolt 31*a* and pin 33*a* and coacting parts of the type previously described, together with filling and vent plugs, are employed, but in this construction the opening in the bottom wall of the channel or pocket is threaded to receive a bushing 34 which receives the lower threaded end of the bolt 31*a* and which is similar in construction and application to the bushings 21 and 25 and the purpose of which will be obvious from the foregoing description.

In Fig. 14 of the drawings I have shown a modified construction in which the ledge 2*b* is provided with a sealing groove 29 communicating with an outwardly extending pocket 30*a* of the type previously described, which may be employed if desired.

In Fig. 15 I have shown still another modified form of my invention in which the ledge or rim 2*c* is provided with a pocket or channel 30*b* to receive the fusible material 7 and the bottom wall of which is sloped outwardly toward the drain opening 14*b* which may be closed by a suitable plug 14*c* of any of the forms previously described. The said bottom wall of the opening is provided with a threaded aperture 35 to receive the lower

threaded end of a bolt 36 passing downward through an opening in the cover plate 4b. This bolt is of hollow form or provided with a longitudinal bore or channel 37 terminating above its lower threaded end and communicating with cross slots or passages 38. This construction, therefore, provides a bolt to physically unite the two parts to be connected and which is provided with openings which are filled with the solidified fusible material, which locks the bolt in place and against removal once the fusible material is fused. The fusible material may be fused in a convenient manner by projecting the flame from a blow torch down through the opening in the bolt, so that on removal of the plug 14c the fusible material will flow out, thus releasing the bolt and permitting of its removal.

Where the body 1 is made of relatively thin material it may be provided with internal strengthening ribs 39.

From the foregoing description, taken in connection with the drawings, it will be seen that my invention provides a burial vault or case which is adapted to be closed against access of air or moisture, so as to preserve the contents thereof for an indefinite period, and that the closure construction is such as to render the case or vault secure against entrance by grave vandals or desecrators. It will also be seen that the invention provides an economical type of burial vault or case which may be constructed to receive a number of caskets arranged in superposed order, so that a plurality of burials may be made within the length and width of an ordinary grave space, thereby increasing the burying capacity of a grave plot. It will be further seen that the invention provides a burial case or vault which, while embedded in the earth, will be proof against deterioration or decay, and which is provided with means extending above the ground surface which is adapted to serve not only as a marker adapted to bear a suitable inscription but also as an inspection means designed to contain historical or other reference material and which, when required, may be broken into for inspection without the necessity of unsealing the vault.

While the structure disclosed is preferred, it will be understood that changes in the form, proportions and details of construction may be made, within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim is:—

1. A vault seal connection between a vault part and closure therefor, comprising a receptacle on the vault part to receive a fusible material, and a hollow bolt engaging the closure and receptacle and having a central bore and also having transverse openings in its walls communicating with said bore to receive and interlock it with the fusible material in said receptacle.

2. In a burial case or vault, a vault body having vertical walls and provided with an opening in its top, a ledge within the body about the inner faces of said walls adjacent to the said opening and forming a channeled holder, said walls of the body having openings leading to the outer sides thereof from said channeled holder and serving as entrance and overflow openings in introducing into the channel a fluid sealing and locking medium adapted to harden therein, closures for said openings, a cover for closing the top of the casing, and fastening means on the cover depending into the channel and extending down into the sealing medium therein, said fastening means embodying obstructing means interlocking with said medium and opposing withdrawal of said fastening means therefrom.

3. In a burial case or vault, a vault body having vertical walls and provided with an opening in its top, a ledge within the body about the inner faces of said walls adjacent to the said opening and forming a channeled holder, said walls of the body having openings leading to the outer sides thereof from said channeled holder and serving as entrance and overflow openings in introducing into the channel a liquid sealing and locking medium adapted to harden therein, internally threaded metallic bushings fitted in said openings, threaded closure plugs engaging the bushings, a cover for closing the top of the casing, and fastening means on the cover depending into the channel and extending down into the sealing medium therein, said fastening means embodying obstructing means interlocking with said medium and opposing withdrawal of said fastening means therefrom.

4. In a burial case or vault, a vault body having vertical walls and provided with an opening in its top, a ledge within the body about the inner faces of said walls adjacent to said opening and forming a channeled holder, said walls of the body having openings leading to the outer sides thereof from said channeled holder and serving respectively as entrance and overflow openings in introducing into the channel a fluent sealing and locking medium adapted to harden therein, closures for said openings, a cover for closing the top of the body having vertical walls in alinement with the walls of the body, and a sealing and locking flange offset inwardly from the vertical walls of the cover and depending into the channel, said flange having a shouldered portion embedded in and interlocked with the sealing and locking medium to hold the flange from withdrawal.

5. In a burial case or vault, a vault body having vertical walls and provided with an opening in its top, a ledge within the body about the inner faces of said walls adjacent to the said opening and forming a channeled holder, said walls of the body having openings leading to the outer sides thereof from said channeled holder and serving as entrance and overflow openings in introducing into the channel a fluid sealing and locking medium adapted to harden therein, closures for said openings, a cover for closing the top of the casing, and locking pins or bolts on the cover extending down into the channel and the sealing and locking medium therein and each carrying an obstructing surface arranged at an angle to its plane to oppose its withdrawal from said medium.

6. In a burial case or vault, a vault body having vertical walls and provided with an opening in its top, a ledge within the body about the inner faces of said walls adjacent to said opening and forming a channeled holder, said walls of the body having openings leading to the outer sides thereof from said channeled holder and serving respectively as entrance and overflow openings in introducing into the channel a fluent sealing and locking medium adapted to harden therein, bushings fitted in said openings, threaded closure plugs engaging the bushings, a cover for closing the top of the body, locking pins or bolts on the cover extending down into the channel and the sealing and locking medium therein, and transversely extending detents on each pin or bolt invested in said sealing and locking medium

to oppose withdrawal of said bolt from said medium.

7. In a burial case or vault, a vault body having vertical walls and provided with an opening in its top, a ledge formed upon and increasing the width of the walls adjacent the opening, the ledge and edges of the walls being coterminous and provided with a shallow sealing channel and relatively deeper pockets intersecting the channel at intervals, said channel and pockets being adapted to respectively receive a fluent sealing and locking medium adapted to harden therein, and each pocket being provided with filling and overflow openings for the introduction of the sealing medium therein, closures for said openings, a cover for the top of the body, and locking pins or bolts extending from the cover down into the pockets and embedded in and interlocked with the sealing and locking medium therein.

8. A vault fastening and seal connection between a vault part and closure therefor, comprising a receptacle located on the inner side of the vertical wall of the vault part, a fusible sealing and locking material in said receptacle, and a fastening member for the closure depending into and having abutment means thereon interlocked with the fusible material in said receptacle, the receptacle having a filling inlet and a drain outlet extending therefrom outward through said wall, and closures for said filling inlet and drain outlet.

9. In a burial vault or case, a vault body having a channel formed in its rim edge, a sealing and locking medium in said channel comprising a material fusible at a low temperature for introduction in a fluent state into the channel and adapted to solidify and harden at normal atmospheric temperature therein, and coacting fastening means on the cover depending into the channel and having a portion invested by and physically interlocked against withdrawal in the hardened fusible medium.

JOSEPH A. VOGEL.