Nov. 7, 1961 E. G. WEAN 3,007,224

BURIAL VAULTS

Filed Aug. 24, 1959 2 Sheets-Sheet 1

FIG. 1.

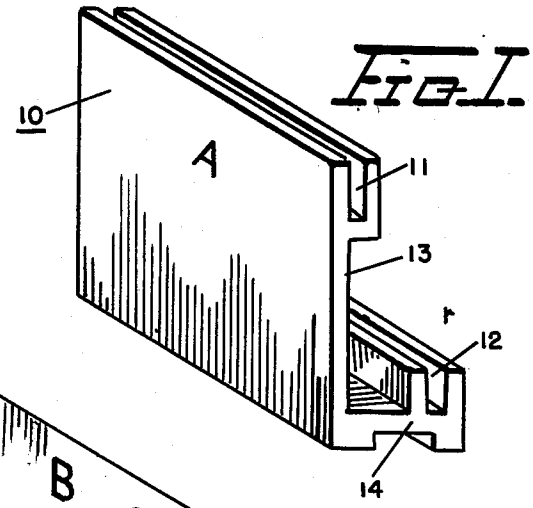
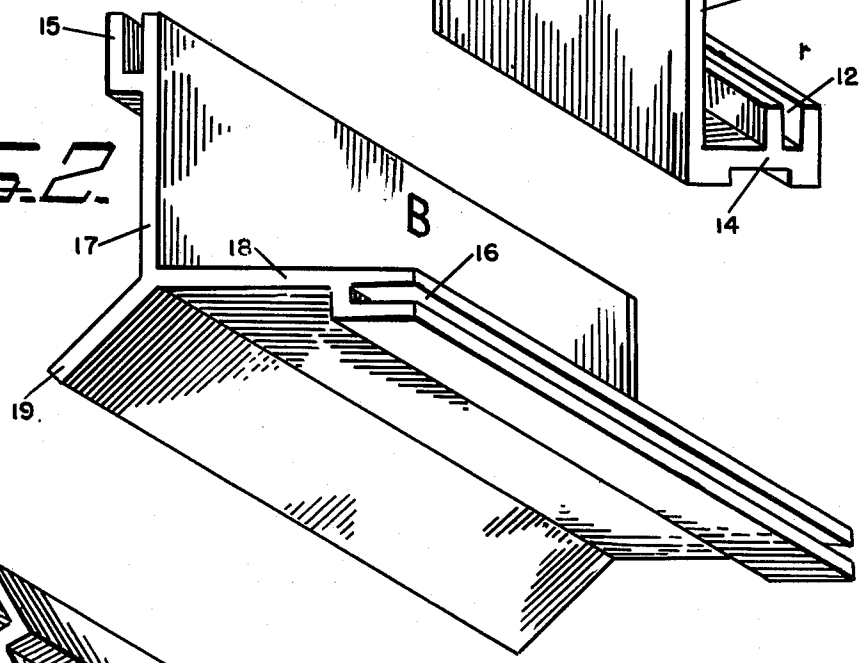


FIG. 2.



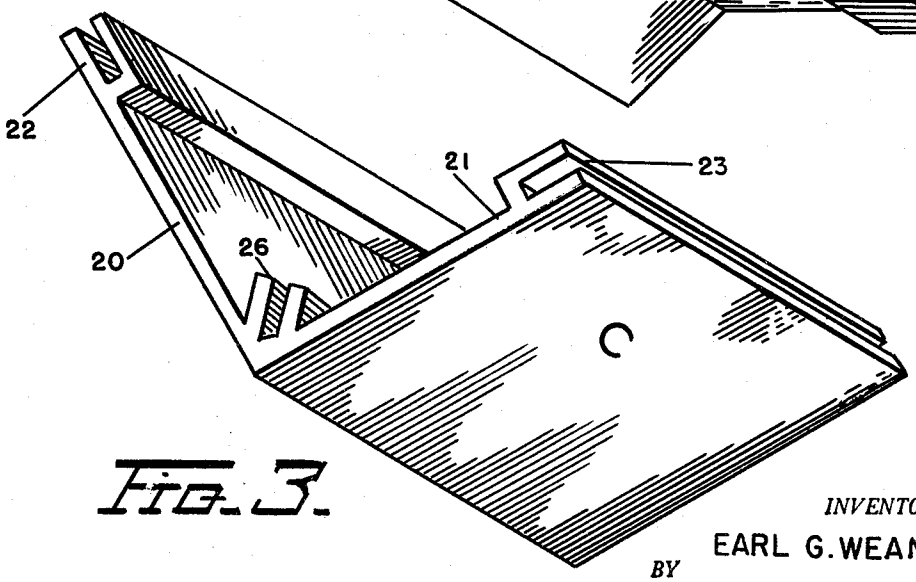


FIG. 3.

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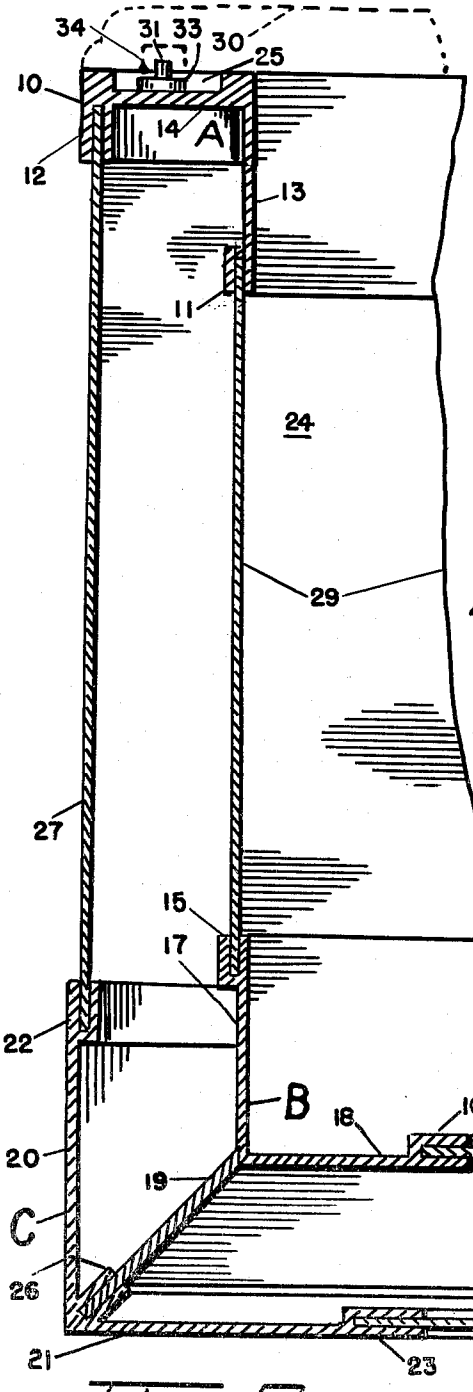


FIG. 6

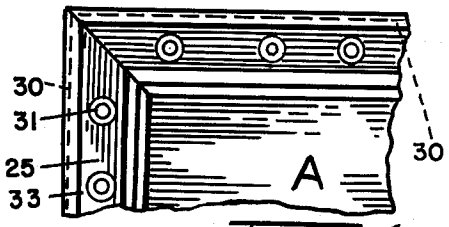


FIG. 4

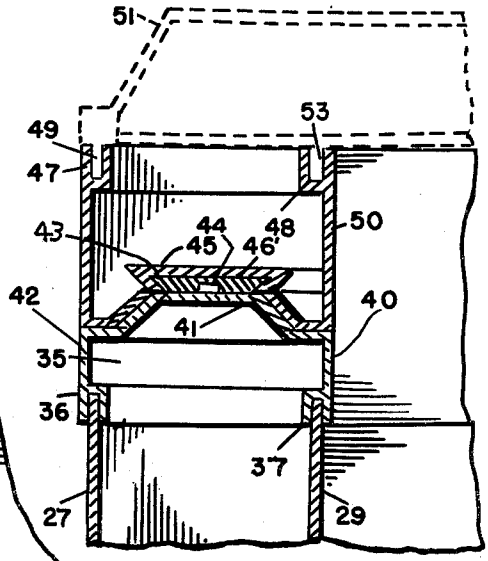


FIG. 5

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3,007,224
Patented Nov. 7, 1961

3,007,224

BURIAL VAULTS

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Filed Aug. 24, 1959, Ser. No. 835,658
2 Claims. (Cl. 27—35)

This invention relates to burial container construction and more particularly to that of vaults, coffins and caskets, intended for burial purposes; and has among its objects to provide a new and improved type of such containers, that avoids some of the disadvantages and limitations of the previous art.

Another object of this invention is to provide a new and improved burial vault construction that will permit the interlocking of sides and sections in a telescopic manner.

A further object of the invention is to provide a new and improved construction that will permit assembly with a minimum amount of labor and material without lessening its strength and capacity for the purposes intended.

An additional object of the invention is to provide a new and improved burial vault construction with socket segments designed for facile manufacure by extrusion methods.

Still another object of the invention is to provide a new and improved vault construction and gusset segments therefor, that will permit panels of flat or bent form to make the walls of the vault integral and strong when used to connect them together.

Other objects will become apparent as the invention is more fully set forth.

In the construction of burial vaults, coffins and caskets out of metallic material and other rigid stock, it is customary to employ brakes and similar machinery to form them into the desired contours. The corners are necessarily rounded, angle pieces are provided and the parts fastened with bolts, and exposed welding. These methods involve expense, and the extra parts add to the weight and detract from the appearance. The joints formed by these overlappings are a source of leakage and require special treatment, especially in size and type of cutting, before they can be properly made up. In this preferred form of the invention, the walls consist of plain sheets cut to size. The gusset segments employed to arrange them in place are manufactured by extrusion, through dies having similar contours. Assembly is permitted, without use of a brake machine common in metal working. The segments allow joints to be made integral with the sheets or panels, by a special system of welding by high frequency vibrations, and avoid the customary roughness that conventional welding produces. The gusset segments provide enough flexibility to take care of atmospherical and temperature variations, as the panels can slide a limited amount in the jaws that hold their edge portions. The conformations serve to brace and space plural panels to produce plural walls and chambers in between them. They also make the corners strong, straight and pleasing in appearance. A feature of the construction of considerable importance is in the fact that its parts may be shipped knock-down and packed into a relatively compact space, and then at a point of delivery put together by unskilled labor. The instructions for so doing are simple, and work of assembly can be accomplished expeditiously.

For a better understanding of the invention and the principles thereof, reference is made to the accompanying drawings, wherein a particular form of the structure is indicated. The following description outlines its features and operation, and the appended claims its scope.

In the drawings:

FIG. 1 is a perspective view of a rim gusset segment, designed to interlock the edge portions of a panel of rigid material with another and hold them suitably aligned, and embodying this invention; to form a burial vault;

FIG. 2 is a perspective view of a liner gusset segment having similar functions but applicable to another location of the vault and especially intended for sustaining a set of liner walls;

FIG. 3 is a perspective view of a bottom gusset segment;

FIG. 4 is a partial plan view of the upper corner of the assembled vault, the outline of its lid being shown in broken lines and the segments being bevelled and securely united together;

FIG. 5 is a sectional view of a modified form of construction of the vault adjacent the upper rim, with a lid in dotted outline attached to it; and

FIG. 6 is a partial sectional view of a side wall assembly of the vault, with the lid indicated in dotted outline.

Similar reference characters refer to similar parts throughout the drawings.

FIG. 1 illustrates the gusset segment that is designed, in that form of vault, for the support of the container panels at the upper rim. It is also marked A for facilitating its identification in the assemblies. The segment is of an L-like contour 10, having bifurcated jaws 11 and 12 at its terminations. The segment extends longitudinally at the side of the vault, and forms the connection between the upper rim and the side panels. The flanges 13 and 14 carry the jaws 11 and 12 respectively. The flanges are subject to variation in lengths, depending on spacing between the walls to be adopted. The recess 25 is provided for the attachment of the lid 30. In the recess a permanent magnet 33 and dowel 31 are mounted at spaced intervals, to coact with an armature 34 on the lid, when the latter is laid and aligned with the rim segment.

FIG. 2 shows the inner liner segment with its bifurcated jaws 15 and 16 attached to its flanges 17 and 18 respectively. The flanges are preferably at right angles to each other, or approximately so, and at their apex have an exterior projecting flange 19, as shown. This gusset segment is marked B.

FIG. 3 shows a gusset segment C that has a pair of flanges 20 and 21 disposed at right angles to each other, having bifurcated jaws 22 and 23 at their terminations, and an inner jaw 26 where the flanges come together.

In the assembly indicated in FIG. 6, the gusset segments C are situated along the bottom of a vault 24, with the spur flanges 19, inserted in the jaws 26. This provides a rigid connection, particularly when the longitudinal and transverse segments are secured in place. The gusset segments may be securely attached in place by employing a suitable cement to hold them. The cement is not shown but is understood to be used. The purpose of the cement is to render the joints strong and water-tight. The panels 27 and 29 have their edge portions inserted in their respective jaws, and are cut to length in manufacture to fit the vault in question. The arrangement is as follows.

The gusset segments as indicated may be used right and left, to suit the requirements. Also their faces are flat. The lengths of the segments are determined by the size of the vault. Such lengths are precut to size and shape, and then aligned and guided with the sockets provided by the jaws over the edges of panels. Where the corner portions of the segments meet, they are welded by the special process that enables the surfaces to be smooth and inconspicuous and form an integral joint. The term vault used in this specification, is intended to

be generic enough to include coffins, caskets and containers of a similar nature.

The lid is mounted on the rim segment of the vault to close the open top of the latter. It is formed to fit into the recess **25**, and lock in place by reason of the attraction of the magnets **33** on the armature **34**.

The modified construction of the rim gusset segment **35** as shown in FIG. 5, actually is an adapter, consisting of the flanges **40** and **42** with the bifurcated jaws or sockets **36** and **37** as shown, and spaced apart, holding the panels **27** and **29**. The upper portion **41** of the segment is built up into a three-sided pyramid the top being flat and relatively broad.

This quasi-pyramid fits into underside **45** of the main gusset segment **50** having a U-like section opening above. The bottom is likewise of quasi-pyramid contour in section with a dove-tail recess **46'** suitably filled with an insulating filler **43**. This filler has a socket **44** into which a dowel on the part **45** projects to align them together.

Bifurcated jaws or sockets **47** and **48** extend from the walls of the segment **50** as illustrated and receive the lips **49** and **53** of the cover or lid **51**. The adapter **35** with the segment **50** permit extension of the sides or the walls of the vault.

This invention is unique in that it enables special extrusions to be passed through dies to produce the conformations indicated, for the construction and assembly of a vault. This method has not been employed before in conventional institutions, that produce burial vaults. In fact it has not been practical heretofore to avoid the use of brake machinery and other types of heavy and expensive equipment. The provision of partitions in the vault structure has been a matter of appreciable difficulty, requiring considerable labor and resulting in the waste of the materials involved. In this invention, the segment C is laid on a work table with one flange flat against it, and the other perpendicular. The panel **27** is inserted in the jaw or socket **22** and cemented in place. The segment A is then placed upon the edge portion of the panel held in the jaw or socket **22**. Then the segment B is brought into place so its spur flange **19** is held in the jaw or socket **26**. The panel **29** is then inserted in the jaws **11** and **15** and cemented securely. This completes one side wall of the vault. The other walls are built up in a similar manner. The corner portions are cut to butt up neatly with each other, and be welded smoothly. This is indicated in FIG. 6, and requires the mitering of the flange **19** edge portion into the socket **26** of the corner segment C. This spaces the flanges **17** and **18** inwardly so their Y construction will be available for the placement of the panels **29** and inner bottom panel in the jaws **15** and **16** respectively. At the same time, the flanges **20** and **21** of the corner segment C, are extended at right angles from each other so their jaws **22** and **23**, can hold the outer panels or walls **27** and **28** of the structure, that is of the dual wall type. The Y gusset segment shown in FIG. 2 as B, when assembled into C, places the wall panels of both in parallel alignment. The corners of the assembled gusset sections are cut to a miter and then welded by machine. The machine is preferably designed and adapted for this work, and that most suitable is one using a heli-arc principle. Other systems for such welding may be employed, if conditions are suitable. The adapter indicated in FIG. 5, is simply made up of a segment with sockets that fit on the upper edges of the panels **27** and **29** and covers the wall structure underneath it. Each side of this structure, which is box-like has such a segment and is welded to its neighboring segment. The pyramid arrangement provides a special interconnecting section. The segment **50**, sets on top of **35** like a cap, with its sockets **47** and **48** above, being arranged to receive the lid **51**, held by the lips **49** and **53** on its four sides. This provides a vault with dual panels and an air space in between. It will be noted that screws, bolts and other conventional mechanical fasteners are not used in this invention, and thereby much time is saved in fabrication, also weight and the extra expense of such items.

The construction of the vaults is from a practical point of view, made from aluminum compound of suitable composition. Magnesium, and other metals that are available could also be employed, and some plastics obtainable in sheet and extruded form. Lightness and strength are features particularly sought, and the use of the gusset segments give this. The latter strengthen the corners and permit smaller sizes in the material as to thickness. The structure may be shipped knock-down and made into a compact package, thus cutting down in the cost of transportation and storage. The effectiveness of the constructed vault is self-evident, and the desirability of having such with plural walls and air spaces or compartments is new and valuable. The exterior appearance of the segmental construction is pleasing and gives a strong and protective satisfaction to those interested.

The constructions indicated in the drawings and described herein are intended to show a preferred form, and not all the possible forms in which the invention could be constructed, for it is appreciated that other structures could be designed and made that would employ the same principles and come within the scope of the appended claims.

Having thus described the invention what is claimed is:

1. A box-like structure comprising a plurality of flanged extrusions of moldable material formed into corner gusset segments each having on the outer edges of its flanges peripherally arranged jaws along their entire lengths, and extruded rectangular panels of similar material arranged with their edge portions straight and fitted into said jaws and hermetically sealed therein, these segments and panels forming an exterior box when assembled together with the panels joined edge to edge in cubical arrangement open at one side for a lid to be placed and rested thereon; additional inner gusset segments with exteriorly projecting flanges for joining the first mentioned gusset segments and spacing them to provide an air space between them; panels for assembly with the inner gusset segments together joined edge to edge and forming an inner box open at one side, and a removable lid for covering the open sides aforesaid.

2. A box-like structure comprising a plurality of outer gusset segments and inner liner segments including flanges extending therefrom with integral rigid jaws formed along the edge portions thereof, exterior projecting flanges integral with the inner liner segments and maintaining the inner and outer segments spaced apart; panels with their edge portions inserted and held in said jaws and joined angularly to provide five sides in parallel pairs spaced apart and forming a double-walled box with an open top and the walls spaced to provide an air chamber in between; and lid means for closing the open top including means for aligning it into position and holding it.

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