Dec. 29, 1970 H. A. LORENZ 3,550,337

CRYPT CLOSURE

Filed Nov. 5, 1968

Fig. 1

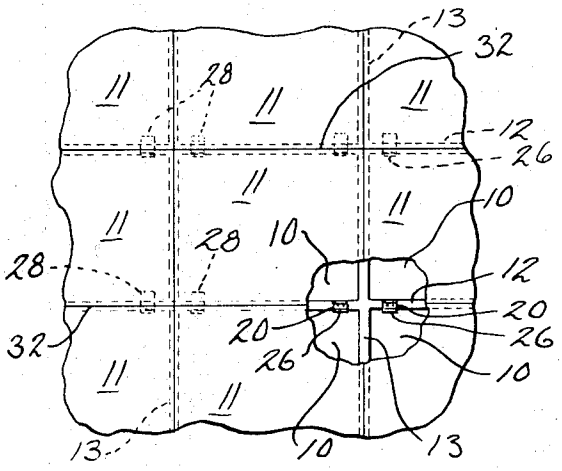


Fig. 4

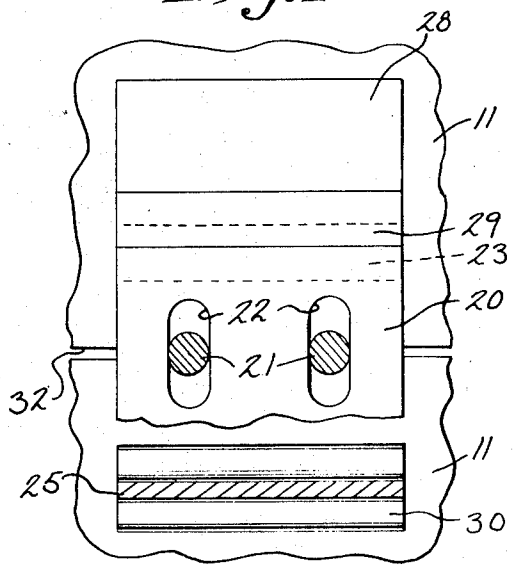


Fig. 2

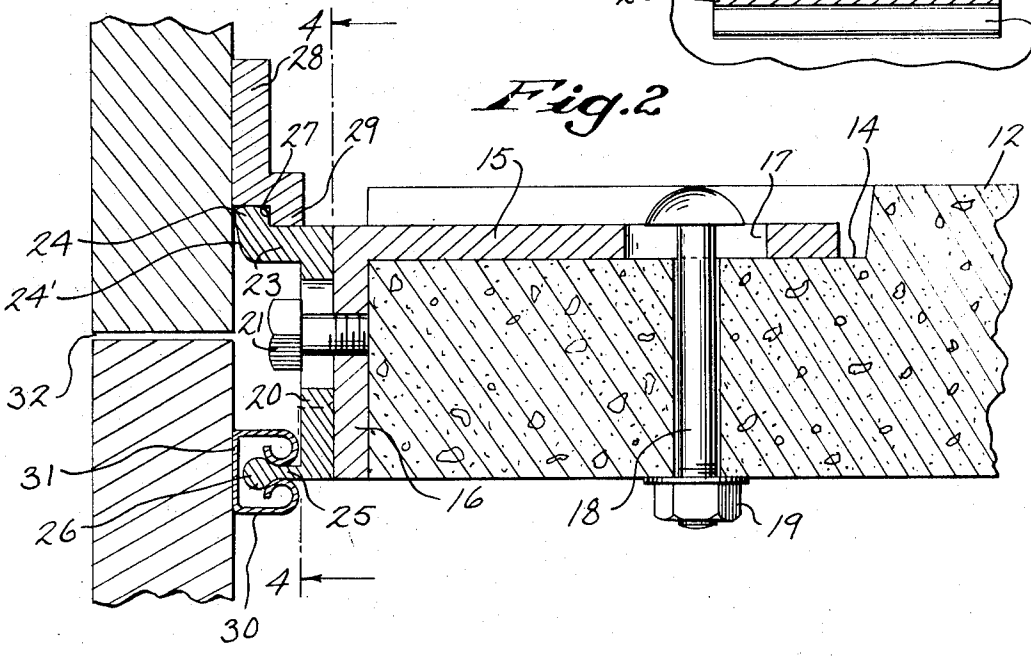
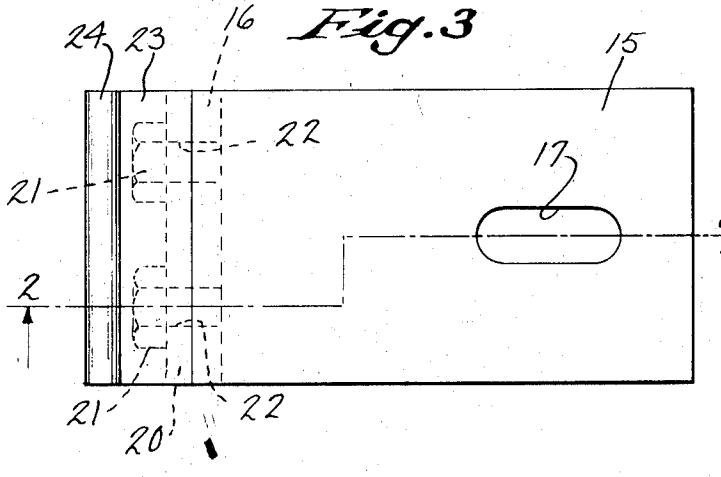


Fig. 3



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CRYPT CLOSURE

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ABSTRACT OF THE DISCLOSURE

Each crypt floor has latching fixtures adjustably secured to its forward edge, each fixture having an upper forwardly projecting supporting shelf with an upwardly projecting tongue for coaction with a groove formed at the lower portion of a latching strip adhesively bonded to the inner side of one marble crypt front near the lower edge of the latter, and each fixture having a lower horizontal latching tongue for snap insertion in a spring latching socket which is adhesively bonded to the inner surface of another marble front near the upper edge of the latter.

BACKGROUND OF THE INVENTION

Field of the invention

The present invention pertains to mausoleum crypts and relates to mechanism for supporting and releasably locking slabs of marble or other ornamental material at the front of each crypt.

Description of the prior art

Heretofore it has been customary to drill holes in the marble fronts and to bolt the fronts in position on the crypts using ornamental rosettes. Some efforts have been made to provide special fittings for holding the marble fronts in position, but all of these fittings have required either the sawing of slits in the marble or the drilling of some sort of hole in the marble. One type of fixture comprised an L-shaped bracket supported on the crypt floor. This carried a shelf member on which the lower edge of a marble front was adapted to rest. There was a small screw operating in a tapped hole in the shelf which had to be manipulated into a drilled hole in the lower edge of the marble. This took a great deal of time to install and there was always danger of damage to the marble when it is necessary to drill holes therein.

Another type of fitting is shown in Pats. Nos. 2,574,938 and 2,853,870. These disclose a fixture which is cast into the concrete walls of the crypt and which has a projecting horizontal shelf with a keyway located adjacent the corners of four marble fronts. The lower edge of two marble fronts were adapted to rest on the shelf, but these lower edges had to have slits sawed therein to receive a key member projecting from the shelf. This type of closure was time-consuming and there was always the danger of damage to the marble front. These prior fixtures all had portions engaging in the small space between the lower edge of one marble front and the upper edge of another marble front and there was the necessity of manipulating connection pieces in this small space.

SUMMARY OF THE INVENTION

The present invention provides a crypt closure wherein latching members are adhesively bonded to the inner surfaces of the marble fronts, there being complementary latching members adjustably supported on the front edge of the floor of each crypt which coact with the latching strips near the lower edge of one marble front and also with spring sockets near the upper edge of a marble front therebelow. With this arrangement each marble front can be installed by lowering the marble front into tongue-and-groove engagement with the upper latch portions of the crypt fixtures and then by pressing the upper portion of each front inwardly into yielding engagement with lower latching portions projecting from a crypt floor thereabove.

A general object of the invention is to provide completely concealed crypt closure fittings, to provide a crypt closure which eliminates the necessity of drilling, sawing, or other mutilation of the marble fronts, and to provide a construction which greatly facilitates the installation of such marble fronts.

A further object of the invention is to provide crypt fronts which may be readily removed only by parties familiar with the procedure.

A still further object of the present invention is to provide a crypt closure which is relatively simple in construction, inexpensive to manufacture, and otherwise well adapted for the purposes described.

BRIEF DESCRIPTION OF THE DRAWING

In the accompanying drawing, in which the same reference numerals designate the same parts in all of the views:

FIG. 1 is a fragmentary front elevational view showing a group of adjacent crypts provided with the improved closure fittings;

FIG. 2 is a fragmentary vertical sectional view taken through the floor of a crypt and through two marble fronts showing the improved invention, the view also being taken approximately on the line 2—2 of FIG. 3;

FIG. 3 is a plan view of the fixture which is used with the crypt floor; and

FIG. 4 is a sectional view taken approximately on the line 4—4 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring more particularly to the drawing, the numeral **10** designates a series of adjacent crypts, each of which is adapted to be closed by a rectangular front in the form of a slab **11**. While these fronts are usually marble, they may be of other stone material or even of plastic, or metal. Each crypt includes a concrete floor **12**, which floor also forms the roof of a crypt therebelow. Each crypt also includes concrete sides **13**.

Referring now to FIG. 2, the top surface of the concrete floor **12** of each crypt is recessed inwardly from the forward edge as at **14**, there preferably being two such recesses for each crypt floor. Fitted in each recess is a support in the form of an angle member **15** having a depending front flange **16** which fits against the forward edge of the crypt floor. The top of each angle member **15** has an elongated slot **17**, and a bolt **18**, equipped with a nut **19**, is employed to bolt each angle member in the position shown in FIG. 2. The slot **17** makes it possible to adjust the angle member in and out slightly. A crypt fixture **20** is in the form of a plate which is adjustably secured by bolts **21** to the depending flange **16** of each angle member **15**. The latter extend through upright slots **22** in the plate **20** so that the plate is adjustable in a vertical direction with respect to the angle member support **15**. Each plate has an upper latch in the form of a shelf **23** projecting forwardly from its upper edge, the forward edge of the shelf having an upwardly projecting tongue **24**. Projecting from the lower forward face of each plate **20**, near the lower edge thereof, is a horizontal latching tongue **25** having an enlarged rounded end **26**.

Each upper tongue **24** is engageable with a groove **27** at the lower edge of a latching strip or plate **28**. The groove is formed between an outwardly offset, downwardly projecting tongue portion **29** and the inner face

of the crypt front **11**. Each latching strip **28** is adhesively bonded to the inner surface of the marble or other front. The latching tongues **25** are each engageable with spring socket latch members **30**, the backs **31** of which are adhesively bonded to the inner face of each marble front near the upper edge thereof.

The latching strips **28**, plates **20**, and supporting angles **15** are all formed of suitable metal. It is preferred to employ aluminum or other metal which is resistant to corrosion. The spring sockets **30** are also formed of metal and may be any metal which has desired spring characteristics as well as resistance to corrosion.

The particular bonding material which is used depends upon the type of material of which the fronts **11** are made. Where these fronts **11** are of marble it is preferred to employ an adhesive which has an epoxy resin base and in which there is a hardener additive capable of causing curing at room temperature. The strength characteristic of such adhesive to secure metal to marble should substantially meet the following specifications:

A lap shear strength in the neighborhood of 1,000 p.s.i. after 30 days of curing at 75° F. determined by ASTM testing procedure No. D–1002–64 and a T-Peel (pounds per inch of width) strength of 25 lbs. at 75° F. based on ASTM procedure No. D–1876–61T.

Where the fronts are formed of marble it is found that an adhesive manufactured by the Bonstone Corporation is highly satisfactory. This epoxy resin is marketed under the trade name "Bonstone A–530," and there is an additive marketed under the trade name of "Bonstone B–500." This bonding compound may be described as an amido-amine type of epoxy resin designed for room temperature curing. It is a resin which is based on a diglycidal ether of bisphenol A. There are other epoxy resins on the market which may be used to bond the metal latching members to marble. Inasmuch as the fronts **11** may sometimes be formed of Indiana limestone granite, or other stone, or even of plastic, it is obvious that the exact type of adhesive or bonding compound will have to be selected to meet the requirements of the particular material used for the crypt front.

In installing a crypt front the latching strips **28** are preferably adhesively bonded to the inner face of the front **11** somewhat above the lower edge of the front, as shown in FIG. 2. Inasmuch as two fixtures are generally used on each crypt floor there should be two of the strips **28** secured in latching position. In addition, two of the spring socket members **30** must be bonded in suitable position to the inner face of each marble front near the upper edge thereof, as also shown in FIG. 2. Should there be any problems in installation the angles **15** may be adjusted outwardly by loosening the nuts **19**, and the plates **20** may be adjusted in a vertical direction by loosening the bolts **21**. After the parts are in proper position a front such as the upper front **11** of FIG. 2 is lowered downwardly by gravity until the tongues **24** engage within the grooves **27**. There is just enough play in the tongue-and-groove engagement at **24–27** due to the relief angle at **24'** so that the upper edge of each slab may be swung outwardly enough for clearance in handling. During installation this upper edge is pushed inwardly, causing the rounded edges **26** of the tongues **25** to snap into the spring sockets **30**. Thus each front will be securely held in place by completely concealed fittings, there being a small clearance space **32** between the upper edge of one marble front and the lower edge of another marble front.

Once the front is in closed position it cannot be removed unless one has suitable know-how and has an instrument which can be inserted in the clearance space **32** to engage behind the upper edge of the lower slab **11** so that it can be pulled outwardly to release the tongues **25** from the spring sockets **30**. Then, with the upper edge swung out far enough to permit upward lifting, the tongue-and-groove engagement at **24–27** can be readily released.

As shown in FIG. 1 there may be any number of rows of crypts arranged vertically and horizontally, and it is clear from FIG. 1 that the latching plates **20** projecting from a crypt floor each have coaction with two marble fronts, i.e. with the lower portion of an upper front and with the upper portion of a lower front.

It is obvious from the above that with the preferred procedure above described, no drilling, sawing, or other mutilation of the stone fronts **11** is required, and the installation may be accomplished easily with relatively inexpensive fixtures.

While one of the principal objects of the present invention is to provide a latching arrangement wherein latching members may be adhesively carried by the stone slabs so as to avoid drilling or cutting into the marble, nevertheless certain features of the invention have utility regardless of the particular way in which the latching strips **28** and spring sockets **30** are connected to the inner faces of the slab fronts.

Various other changes and modifications may be made without departing from the spirit of the invention, and all of such changes are contemplated as may come within the scope of the claims.

What I claim is:

1. In a crypt section having superimposed crypts each provided with a floor having a front edge, upper latching means connected to and projecting forwardly from the front edge of each floor and having upwardly facing shelf means with upwardly projecting tongue means; strong, elongated, weight-supporting, lower latching means in connection with and projecting forwardly from the front edge of each floor; a slab closure front for each crypt having an inner upright face; disengageable lower latching means secured to said inner upright face of each front above the lower edge thereof engaging with the upper latching means of a floor and maintaining the inner surface of the lower edge of said front spaced forwardly from and intermediate the thickness of said floor, said lower latching means on said front having means coacting with said tongue and shelf means of the upper latching means of a floor; and releasable upper latching means secured to the upright inner face of each front below the upper edge thereof engaging with the lower latching means of another crypt floor maintaining the upper edge of a front intermediate the thickness of a floor, said last latching means including a socket having an opening directed away from said inner upright face, whereby disengagement of said slab closure front from the crypt results from displacing the upper edge of said front away from the floor edge.

2. A crypt section as defined in claim **1** in which there is a tool insertion space between the lower edge of one closure front and the upper edge of a closure front thereabove, and in which there is a clearance space behind the closure fronts and between the upper and lower latching means at the edge of a floor, which space permits manipulation of a tool inserted from the exterior through said tool insertion space between slab edges to permit an outward pull on the upper portion of a front to disengage said upper latching means.

3. A crypt construction as claimed in claim **1** in which there are laterally spaced sets of upper and lower latching means for a crypt floor, and in which each set is carried by a common plate which is vertically adjustably secured to the forward edge of each crypt floor.

4. A crypt construction as claimed in claim **1** in which the upper latching means which projects from each crypt floor is in the form of laterally-spaced, forwardly-projecting, horizontally-elongated shelves, each having an upwardly-projecting, horizontally-elongated tongue, and in which the lower latching means for each closure front has downwardly-facing, horizontally-elongated grooves for tongue-and-groove engagement with said upper latch-

ing means of a crypt floor to be supported on the shelves thereof.

5. A crypt construction as claimed in claim 4 in which the lower latching means on each closure front comprises laterally-spaced plates, each having an inwardly-offset, downwardly-projecting, horizontally-elongated tongue.

6. A crypt construction as claimed in claim 1 in which the lower latching means which projects from each floor comprises laterally-spaced, horizontally-elongated tongues having enlarged ends, and in which the upper latching means on the slab fronts which coact with said tongues are in the form of horizontally-elongated spring sockets.

7. A crypt construction as claimed in claim 4 in which the lower latching means projecting from each floor comprises laterally-spaced, horizontally-elongated tongues having enlarged ends, and in which the upper latching means on the slab fronts which coact with said tongues are in the form of horizontally-elongated spring sockets.

8. A crypt construction as claimed in claim 3 in which there are angle members adjustably secured to each crypt floor, each angle member having a downturned flange at

the front of each crypt floor, and in which each of said common plates is vertically adjustably connected to an angle member flange.

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U.S. Cl. X.R.

52—208, 235, 510