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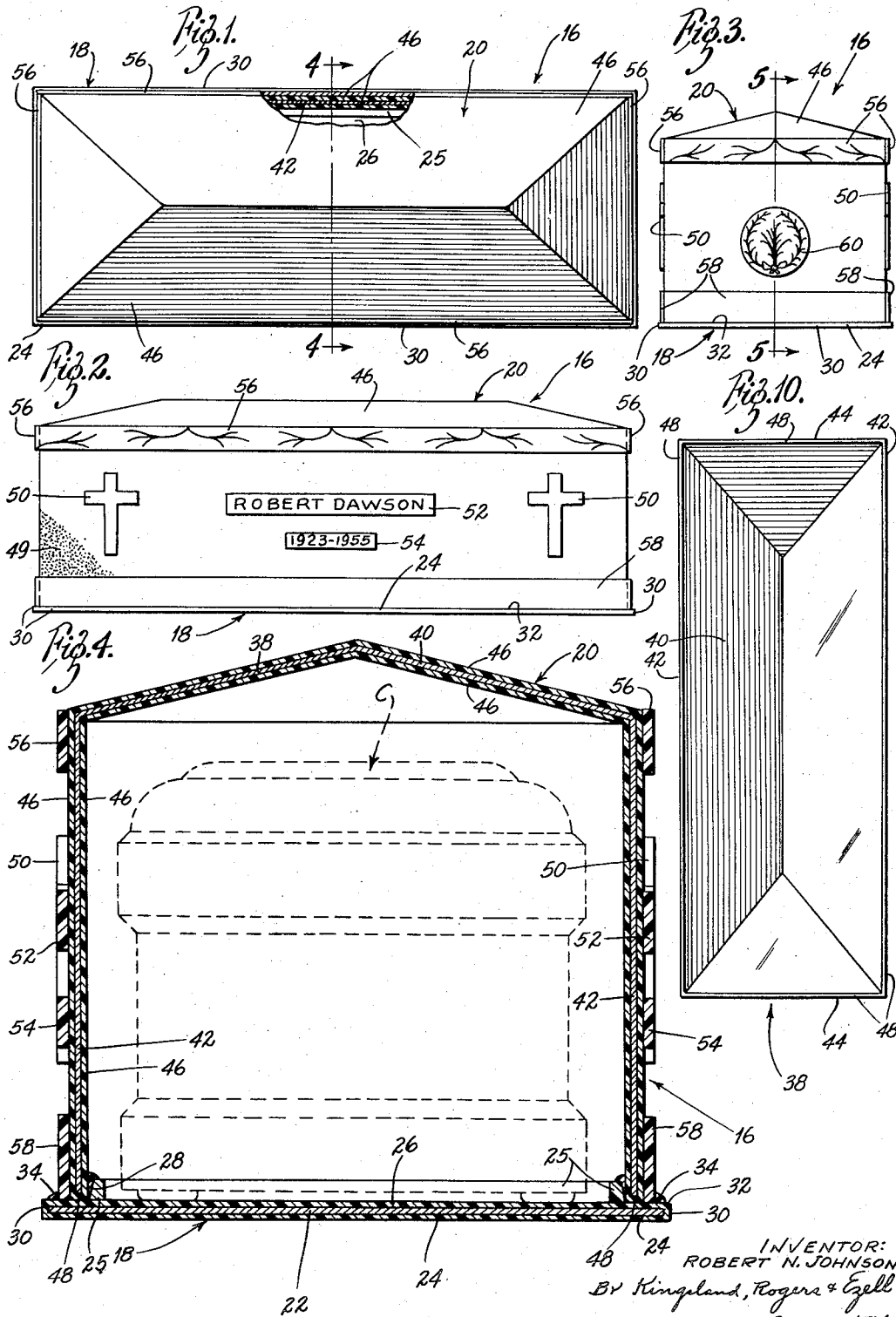
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2,880,492

BURIAL VAULT

Filed Nov. 16, 1953

2 Sheets-Sheet 1



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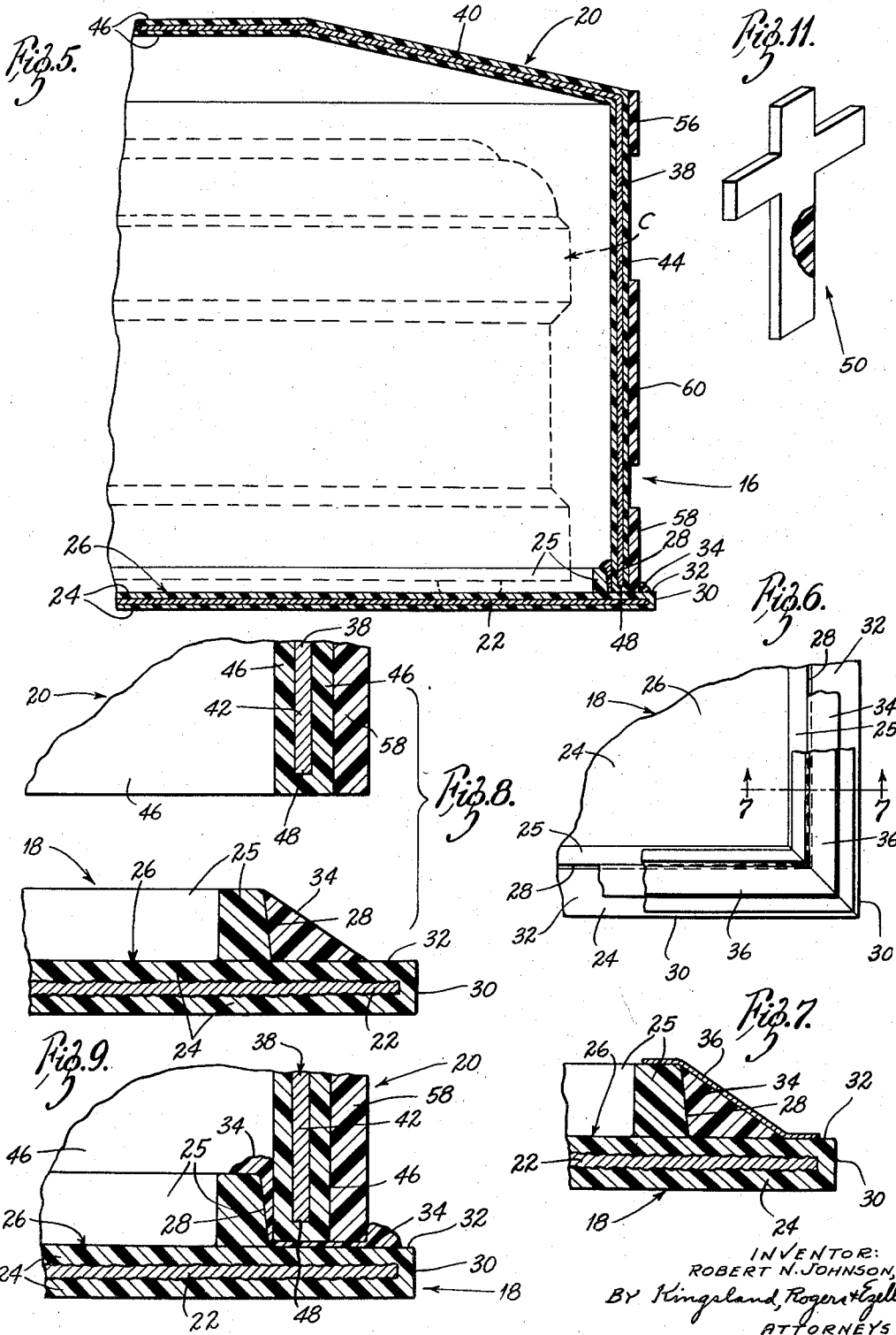
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1

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BURIAL VAULT

Robert N. Johnson, Bonne Terre, Mo.

Application November 16, 1953, Serial No. 392,187

6 Claims. (Cl. 27—35)

The present invention relates to a novel and improved burial vault construction. More particularly, the present invention is directed to the provision of a casket-enclosing receptacle that incorporates features and advantages not found in prior art constructions.

It is well known, and therefore not deemed requisite to elaborate thereon herein, that the ultimate objective in the burial vault art is to provide a hermetically sealed receptacle for enclosing therein a corpse-containing coffin or casket. The vault must of necessity be sturdy enough to sustain the earth load to be deposited thereon, so as to preclude a subsequent sunken grave condition, as is understood. Further, the material of which the vault is constructed should be immune from deterioration in consequence of the natural decomposition of the enclosed corpse, as well as in consequence of subterranean moisture and temperature variations. Desirable also is that the vault should present a pleasing exterior, inasmuch as it is usually on display at the final cemetery rites of the deceased.

The primary object of the instant invention is to provide a novel construction for a receptacle of the type under consideration, that not only incorporates all of the advantageous characteristics above enumerated, but further provides additional advantages and improvements over prior art constructions, as will appear.

More specifically, the instant invention provides a burial vault consisting of a metallic casket-supporting base member all surfaces of which are concealed within a covering of mastic asphalt, and a complementary metallic dome or casket-enveloping member all surfaces of which are likewise concealed within a covering of mastic asphalt.

As will be explained in more detail hereinafter, the mastic asphalt referred to comprises a novel mixture of materials that is inherently resistant to moisture and chemical corrosion. It has a melting point of 260° F., and will fuse itself to metallic material. Further, it is unaffected by variable temperature conditions to which the vault may be subjected, either above or below ground. As will also appear, the exposed surfaces of said asphalt coverings are susceptible of embellishment, either in consequence of the fusing or bonding thereto of appropriate preformed decorative wreaths, emblems, crosses and the like, or in consequence of designs, lettering and so on in the form of engravings or carvings applied thereon. Any desired ornamental finish or texture may also be stamped or rolled into these surfaces so as to provide a pleasing external appearance. And finally, the entire exterior of the vault may be coated with paint or enamel of any selected color.

The invention provides novel means for effecting a permanent and hermetic seal between the complementary base and dome members aforesaid, said means functioning automatically as the dome member is lowered into place onto the base member.

An important object of the invention is to provide an

2

assembled vault construction which is entirely insulated against electrolysis.

Another important objective of the invention is the provision of a vault that is more sturdy and durable than those of the prior art, and which at the same time is less cumbersome in that the weight thereof in comparison is reduced considerably. The attainment of this objective is consequent to the elimination of concrete material in the instant construction. Thus, as will be set forth in greater detail hereinafter, the core of the base member comprises a rectangular sheet of steel that has been rigidized or processed to reinforce its inherent rigidity prior to the bonding thereto of the mastic asphalt composition covering; and the core of the dome member comprises a shell of steel that has been cast prior to the bonding thereto of the mastic asphalt composition covering.

In the fabrication of the instant burial vault before adornment thereof, a novel molding process is employed, particularly with respect to the dome member. This process or method is not comprehensively disclosed herein, but is so disclosed in another related application, Serial No. 426,675, filed by applicant on April 30, 1954.

Two sheets of drawings illustrative of the features and advantages contemplated by the present invention accompany this specification, and reference thereto in the course of the detailed description to follow will be had from time to time for a more comprehensive understanding of the invention.

In said drawings:

Figure 1 is a top plan view of an assembled burial vault constructed in accordance with the principles of the present invention;

Figure 2 is a front elevational view thereof;

Figure 3 is a right end elevational view of said vault;

Figure 4 is a vertical sectional view on an enlarged scale, and taken transversely of the vault on the line 4—4 of Figure 1;

Figure 5 is a vertical sectional view of the right end portion of the vault, and taken longitudinally thereof on the line 5—5 of Figure 3, the scale corresponding to that of Figure 4;

Figure 6 is a top plan view of one corner portion of the included base member of the assembly;

Figure 7 is a vertical section on a magnified scale, and taken on the line 7—7 of Figure 6;

Figure 8 is a fragmentary vertical sectional view demonstrating the dome member suspended above the base member in position to be lowered thereonto;

Figure 9 is a view similar to Figure 8 illustrating the automatic seal effected between them as the dome member is deposited on the base member;

Figure 10 is an inverted plan view of the core or metallic shell of the dome member per se; and

Figure 11 is an isometric view of a molded element in the form of a cross, this element being typical of any and all contoured moldings which may be fused onto the exterior surfaces of the vault.

As should be manifest from the foregoing, the instant burial vault includes a base member and a complementary dome member adapted to hermetically seal within their confines a casket, both immediately prior to interment of the vault and thereafter. In such status, the invention has been hereinbefore, and will hereinafter, be termed an assembled vault that is exemplarily portrayed in Figures 1 through 5, where it is designated by the numeral 16. The base member is generally designated 18, and is of rectangular configuration. The dome member is generally designated 20, and although preferably of the configuration illustrated, obviously admits of contour variations in the upper portion thereof. A conventional casket is portrayed in broken lines and designated C.

The base member 18 includes a rectangular plate 22 of rigidized metal, all surfaces of said plate being embedded in and covered with a mastic composition 24 of a novel nature, that has been found by numerous tests to withstand all temperature variations to which the vault may be subjected following its construction, and which readily admits of embellishment. In the interest of brevity hereinafter, the mastic composition 24, and its equivalents, will be termed an asphalt compound. This compound consists of a mixture of approximately 50% asphalt, 25% limestone powder, and 25% dolomite flour, all by weight. This is a mixture that has been found to embody superlative qualities with respect to moldability, and to subsequent hardening. This compound has a melting point of 260° F., and readily fuses itself to metal. The limestone powder and dolomite flour ingredients render the hardened compound more flexible in extremely cold weather, thereby obviating the formation of cracks or breaks, as is understood.

As clearly shown in the drawings, the base member 18 includes an upwardly projecting rectangular ridge portion 25 that defines a platform portion 26 whereon a casket C may be positioned. The ridge portion 25 is also formed of asphalt compound and is separately molded and then fused onto the upper surface of the base plate covering 24. Said ridge portion is preferably bevelled upwardly and inwardly as at 28 along its entire outer periphery, whereby to facilitate the automatic sealing of the vault as will appear.

With particular reference now to Figures 6 and 7, it is noted that the ridge portion 25 is inwardly spaced from the peripheral margins 30 of the base plate 18, whereby to provide a shelf or ledge 32 extending outwardly from the bevelled surfaces 28 entirely around said ridge portion. In the base member 18 illustrated, the surrounding ledge 32 projects beyond the periphery of the dome member when the vault is assembled. If desirable, the base member may be so dimensioned that in the assembled vault, the peripheral margins 30 will be flush with the lower portion of the dome member.

Numeral 34 designates an endless wad or body of asphalt compound surrounding the ridge portion 25 and supported on the ledge 32. As illustrated in Figures 7 and 8, this continuous body of compound is applied in plastic state to the previously hardened base member 18 in selected symmetrical fashion at the time of manufacture, the cross-sectional contour thereof being preferably but not necessarily triangular, as illustrated.

A solvent consisting of petroleum naphtha and benzyl acetate is blended into the compound material 34, whereby to augment the inherent plasticity thereof, and this plasticity is retained by means in the form of strips 36 of preservative tape, these strips being applied thereover immediately following the addition of said compound material 34 to the previously fabricated base member 18. The tape strips 36 are impregnated with a mixture of glycerine and powdered clay, and thus treated, prevent evaporation of the solvent indefinitely. The strips 36 are preferably disposed as clearly demonstrated in Figures 6 and 7 or in a similar manner, so as to isolate the endless body of asphalt compound 34 from atmosphere.

From the foregoing description, it should be apparent that the invention provides a fabricated base member of novel construction. The base proper is molded into the configuration shown, whereupon the separately molded or precast rectangular ridge member 25 is appropriately placed thereon. After the base has hardened, the endless body of solvent-treated asphalt compound 34 is applied peripherally of the ridge portion 25, the treated tape strips 36 are then placed in position, whereupon all exterior surfaces of the thus completed base member 18 inclusive of the tape 36 may be painted, and otherwise decorated if desired.

The dome member 20 includes a shell of steel 38, 75

which is preformed to include an upper or top portion 40 of selected configuration that surmounts and is integrally formed with, a rectangular main body portion comprising vertical side walls 42, and similar end walls

44. An enveloping layer 46 of the asphalt compound taught by this invention is molded or fused onto said shell so as to cover all surfaces thereof, including the lower peripheral edges 48 of the side and end walls 42 and 44.

That is to say in consequence of the molding process disclosed in the previously noted copending application of the instant applicant, the dome member 20 consists of the preformed or precast metallic and casket-covering member 38 portrayed particularly in Figure 10, that is embedded in and completely covered by a surrounding layer 46 of the asphalt compound taught by this invention.

In accordance with the concepts of this invention, after the dome member 20 thus far described has hardened, it may be painted or enameled so as to blend harmoniously in appearance with the complementary base member 18. Preferably, however, prior to the application of an external decorative coating, said dome member will be embellished by the stamping or rolling of a selected texture or finish into the external surfaces thereof. This may be accomplished by means of electrically heated rollers the faces of which have the desired finish engraved or embossed thereon. In use, these rollers are maintained moist with glycerine, so that the designs thereon may be readily transferred to the dome surfaces without adherence of the rollers in the process, as is understood. In this manner, the external surfaces of the dome may be stippled as suggested at 49 in Figure 2, florally adorned, linen finished, and so on.

Ordinarily, in addition to such allover embellishment, it is desirable to adorn the dome with nameplates, wreaths, crosses, emblems, and the like.

The present invention contemplates an available supply of embellishments of this nature in the form of variously contoured elements that have been cast in advance of need. These precast elements are formed of the same asphalt compound employed throughout in the construction of the instant burial vault. The exemplary cross designated by the numeral 50 and shown per se in Figure 11 typifies various molding strips, wreaths, emblems, and so on, that are included in the category under consideration.

In contemplation of the immediately foregoing, it should be evident that the vault 16 may be simply or elaborately adorned. In affixing crosses 50, nameplates 52, dateplates 64, upper molding strips 56, lower molding strips 58, wreath portraying discs 60, individually cast letters, symbols, and so on, a suitable solvent such as naphtha is first applied to one surface of the selected element. Thereupon, the solvent treated surface of said element is properly positioned against an exterior asphalt compound surface of the dome member 20, and inward pressure is applied until the precast element is fused onto and merged into said surface. After fusing is completed, paint or enamel may be applied.

Thus it should be manifest that the invention also provides a fabricated dome member of improved construction that may be embellished by novel means.

Assuming now that prior to interment it is desired to permanently seal the vault, the preservative tape strips 36 appearing in Figures 6 and 7 are first peeled off so that the base member 18 appears as in Figure 8, with the endless body of plastic asphalt compound 34 now exposed. It is understood, of course, that at this time the base member is suitably supported from below, and that the casket C is in position on the platform portion 26. The dome member 20 is now slowly lowered about the casket C and onto the base member, from the Figure 8 to the Figure 9 position thereof, the inwardly sloping periphery 28 of the ridge portion facilitating this

5

operation. Because of the preserved plasticity of the compound 34, it automatically spreads or oozes in every direction about the lower peripheral edges of the dome member in consequence of the weight thereof, as visibly demonstrated in Figure 9.

As the solvent in the compound 34 evaporates, and a fusing or merging of adjacent asphaltic surfaces is effected, said compound simultaneously hardens, so that the assembled vault 16 provides a permanently and hermetically sealed unit for its intended purposes. It is obviously requisite that means be provided for effecting the lowering operation of the dome member. However, inasmuch as this invention is limited to a vault construction, no such means have been illustrated or described.

In view of the foregoing description augmented by an inspection of the drawings, it should be manifest that this invention provides a vault construction which is superior in many respects to conventional constructions. It is noted that the asphalt compound material consisting of approximately 50% asphalt, 25% limestone powder, and 25% dolomite flour, all by weight, is employed throughout the fabrication of the assembled vault. It is also to be understood, that the illustrated thicknesses of the compound layers 24 and 46 relative to those of the metallic elements may be increased if desirable, and that other slight modifications of the illustrated structure may be had without departure from the scope of the invention as defined in the claims hereunto appended.

What is claimed is:

1. A burial vault including in combination: a base member comprising a rectangular core of rigid metallic material all surfaces of which are embedded in and covered with a self-fusing mastic asphalt compound; a complemental dome member comprising a preformed metallic shell all surfaces of which are embedded in and covered with such mastic asphalt compound; an endless body of similar compound material originally positioned on the base member, and adapted to automatically effect a permanent hermetic seal between said base and dome members in consequence of the depositing of the last named member onto the base member aforesaid; and means to preserve the plasticity of said endless body of compound by preventing escape of a petroleum solvent contained in said mastic compound during the interim obtaining between the original disposition thereof on the base member and the subsequent deposit thereonto of the dome member, said means comprising removable strips of asphalt solvent preservative treated tape disposed over and in contacting relation with the surface of said endless body of compound in a manner to isolate the same from atmosphere and to keep the surface from hardening until the strips are removed.

2. A burial vault as defined in claim 1, wherein the recited mastic asphalt compound comprises a mixture consisting of approximately 50% asphalt, 25% limestone powder, and 25% dolomite flour.

3. A burial vault as defined in claim 1, wherein the recited endless body of mastic compound material originally positioned on the base member comprises a mixture consisting of approximately 50% asphalt, 25% limestone powder, and 25% dolomite flour, said mixture having blended therinto an asphalt solvent consisting of petroleum naphtha and benzyl acetate.

6

4. A burial vault as defined in claim 1, wherein the recited removable strips of asphalt solvent preservative tape are impregnated with a mixture of glycerine and powdered clay.

5. In a burial vault construction, a base member including in combination: a rectangular plate of rigid metal all surfaces of which are embedded in a self-fusing mastic asphalt compound; a ridge portion constructed of said mastic compound defining a casket-supporting platform portion inwardly spaced from the peripheral margins of said base plate; an upwardly and inwardly sloping surface defining the outer periphery of said ridge portion; said mastic asphalt compound covered rectangular plate including a peripheral ledge portion of mastic compound covered metal extending outwardly at the bottom of the ridge portion, and an endless body of solvent treated mastic compound disposed around the exterior of the ridge portion and on top of said ledge portion, said body being initially deformable but setting to a hard body upon exposure to the atmosphere.

6. In a burial vault construction, a base member including in combination; a rectangular plate of rigid metal all surfaces of which are embedded in a self-fusing mastic asphalt compound; a ridge portion constructed of said mastic compound defining a casket-supporting platform portion inwardly spaced from the peripheral margins of said base plate; an upwardly and inwardly sloping surface defining the outer periphery of said ridge portion; said mastic asphalt compound covered rectangular plate including a peripheral ledge portion of mastic compound covered metal extending outwardly at the bottom of the ridge portion, an endless body of mastic compound disposed around the exterior of the ridge portion and on top of said ledge portion, said endless body of mastic compound being treated with an asphalt solvent to keep it from hardening prematurely; and strips of asphalt solvent preservative treated tape removably applied on the surface of said endless body of compound to isolate the same from the atmosphere to prevent the escape of the solvent and prevent premature hardening.

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