Nov. 25, 1941. E. H. THORESEN 2,264,144

MOLD FOR PRODUCING HANDLE STRUCTURES FOR BURIAL CONTAINERS

Filed May 19, 1938 2 Sheets-Sheet 1

Fig. 1

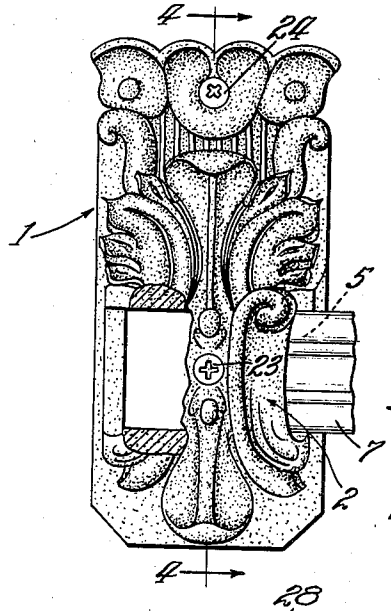


Fig. 2

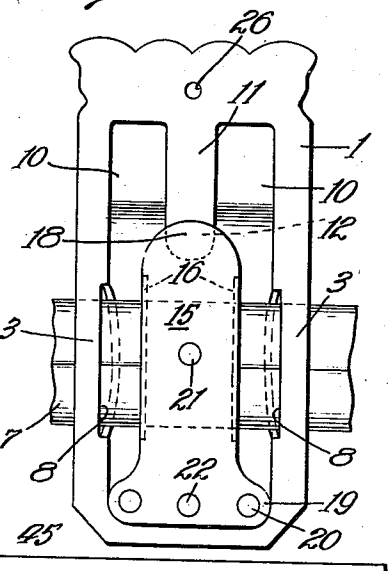


Fig. 3

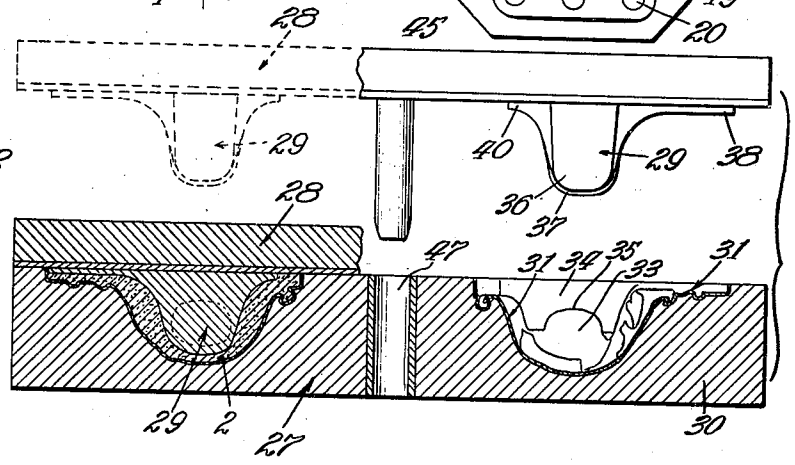


Fig. 4

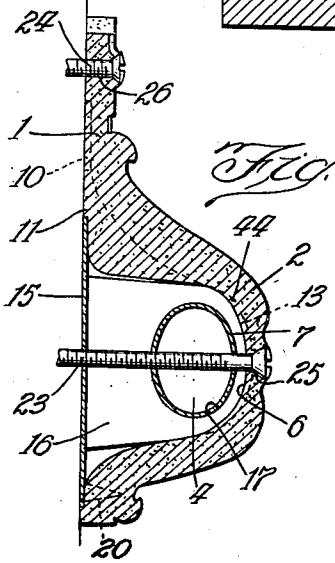
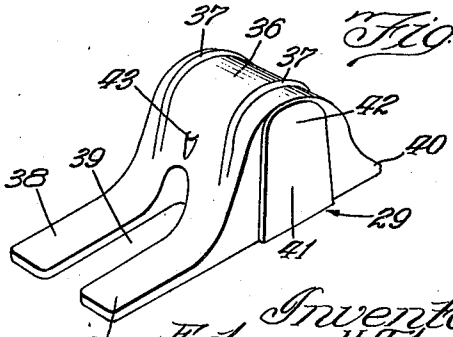


Fig. 5



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MOLD FOR PRODUCING HANDLE STRUCTURES FOR BURIAL CONTAINERS

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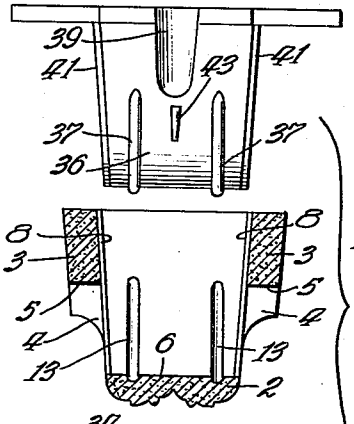


Fig. 6

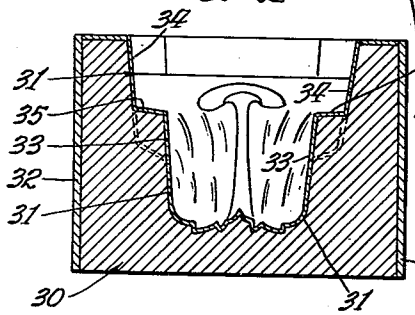


Fig. 7

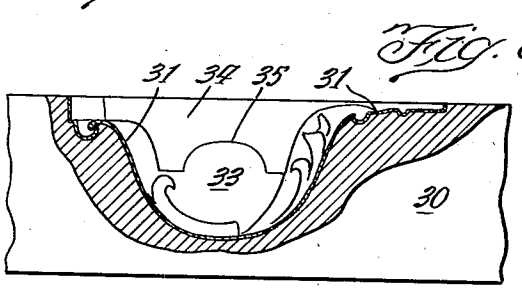


Fig. 8

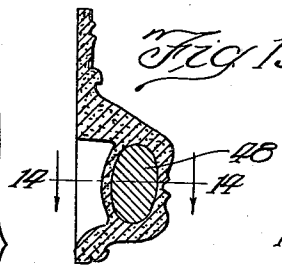


Fig. 13

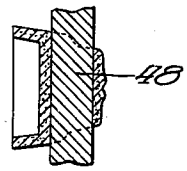


Fig. 14

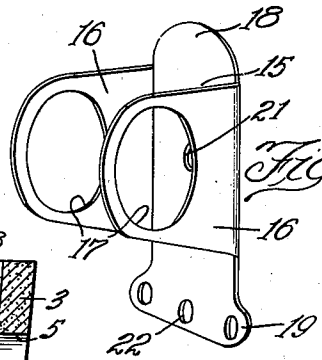


Fig. 11

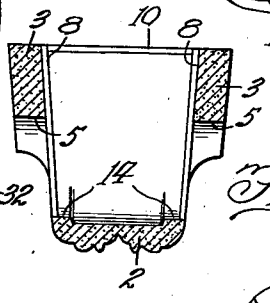


Fig. 12

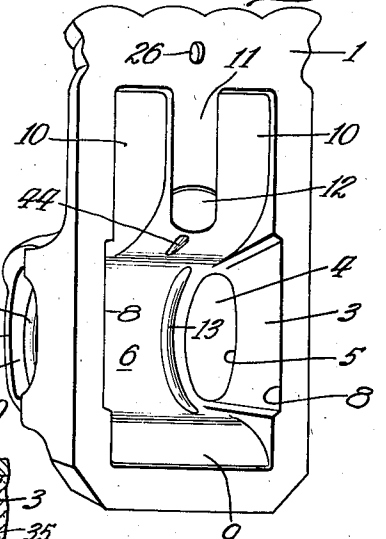


Fig. 9

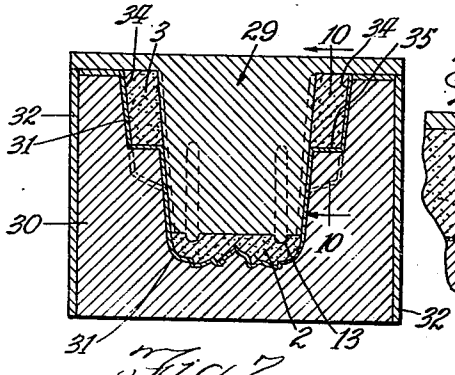
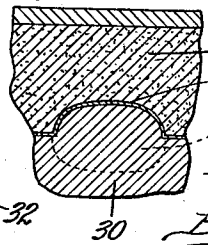


Fig. 10



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UNITED STATES PATENT OFFICE

2,264,144

MOLD FOR PRODUCING HANDLE STRUCTURES FOR BURIAL CONTAINERS

Edwin H. Thoresen, Chicago, Ill., assignor to William Thoresen Company, Chicago, Ill., a corporation of Illinois

Application May 19, 1938, Serial No. 208,745

5 Claims. (Cl. 18—42)

The present invention relates to the making of handle structures, and more particularly to those used with caskets, coffins and the like. In such structures it is usual to secure spaced ornamental lugs or brackets to the side of the casket or coffin and to insert a hand bar through the lugs, so that the pall bearer may grasp the bar between the lugs. The lugs have been made of cast metal, of pressed or developed sheet metal, and various other materials, and the hand bar has been made in the form of a hollow tube, usually of sheet metal or the like. At the free ends of the bar are usually ornamental tips or caps. When casting the lug it is usual to place a core bar in the mold so as to provide a passage or bore through which the hand bar is eventually passed and located. This means a surrounding band of metal completely around the portion of the bar inserted and included in the lug. If the bore should be warped or of improper size, machining and other operations are required to obtain a bore that will properly receive the bar. Even when the lug is shaped from stamped and pressed metal or from developed sheet metal, it is usual to form a sleeve for the passage and inclusion of the hand bar, and the operations required to produce such a lug are many and costly.

Among the objects of the present invention is to produce an inexpensive lug with as few operations as possible and practical, by molding the lug, as from plastic wood or the like, into a form which will permit the ready insertion of the bar and which will hold the bar firmly in place. The lug is, in an illustrative embodiment, in the form of a plate with a forwardly extending loop or curved portion having openings at the sides of the loop or curved portion, and with side walls extending forward from the plate portion and at the sides of the loop with the forward edges of the side wall portions rearwardly spaced from the forward portion of the loop so that the bar, when inserted through the side openings of the loop, will be held between these edges and the inner or rear face of the loop, there being no material completely around the bar included in the lug.

The plate portion of the lug extends upward and downward from the loop or hollow portion of the lug to form extensions which will lie flat against the side of the casket or coffin and afford a large area of contact therewith besides giving the device strong bracing firmness. The extensions may be provided with shallow recesses so that the seating border portions of the plate will seat squarely, and also to provide space for the locating of a back plate of a reinforcing member, when such a member is used. One or more reinforcing ribs may also be provided as desired to give the lug the strength needed.

Another object of the invention is to so construct the handle structure that it may be assembled by the manufacturer with the hand bar in place and with the lugs properly spaced so that the assembly may be shipped in that form and relation to the casket or coffin builder, whereby the latter need only apply the assembly as received to the side of the casket or coffin, drill his holes for the securing bolts or screws, and fasten the latter in place, thus avoiding using templets, calculating or measuring for location, etc. To ship the device in that state it is preferable to so form each lug with some means, such as a recess, where a securing element, as a nail, may be applied so as to firmly hold the bar in the lug in its proper relation, and thus the assembly is ready for attachment when received by the casket or coffin builder.

The invention also comprehends the provision of a novel molding means wherein the mold parts so cooperate that the side openings to the loop portion or forwardly curved portion will be formed in the mold during the molding operation. This is effected by making portions of the side walls of the matrix mold part at different spaced distances so that the patrix mold part, when inserted, will also have side wall portions which will intimately contact the more nearly spaced side wall portions of the matrix mold part so as to prevent the molding or casting of the plastic material between the contacting surfaces, but the plastic material will be molded and cast in the spaces between the surfaces of the two mold parts which are not in contact.

When a reinforcing member is used, it is preferable to mold grooves in the forward curved portion or loop part, and also to form shoulders or the like in the plate part. The reinforcing member may be made of metal, as sheet metal, with a back plate secured to the plate part of the lug, and with side walls extending into the hollow forwardly extending portion or the loop portion so that the forward edges of such side walls extend into the grooves provided in the inner or rear face of the curved wall portion of the loop. The side walls of the reinforcing member have openings which will register with the openings at the sides of the loop or forward curved wall portion of the lug.

A further object of the invention is the provision of a novel method of producing the lug of this invention.

Other objects, advantages, capabilities, features, process steps, and the like are comprehended by the invention as will later appear and as are inherently possessed by the invention.

Referring to the drawings:

Fig. 1 is a view in front elevation of a handle lug constructed in accordance with the invention with a segment of the handle in the lug;

Fig. 2 is a rear elevational view of the same;

Fig. 3 is a view in side elevation, with parts shown in broken section, of a mold for producing the lugs, the parts of the mold being shown in separated assembly;

Fig. 4 is a transverse sectional view taken in a plane represented by line 4—4 of Fig. 1 of the drawings;

Fig. 5 is a perspective view of a mold core part for molding the rear side of the lug;

Fig. 6 is a part sectional and part elevational view of the mold parts and the molded article, shown in spaced assembly;

Fig. 7 is a sectional view of the same when the parts are together and when the article is being or has been mold pressed;

Fig. 8 is a part sectional and part elevational view, on an enlarged scale, of a part of the mold shown in Fig. 3;

Fig. 9 is a rear perspective view of the article showing the formation of the holes through which the handle extends;

Fig. 10 is a fragmentary sectional view taken in a plane represented by line 10—10 in Fig. 7 of the drawings;

Fig. 11 is a perspective view of a metal reinforcing member that may be used in the lug;

Fig. 12 is a sectional view of a form of lug in which the reinforcing member (Fig. 11) is not used, and also showing rim material at the lower portions of the handle holes;

Fig. 13 is a sectional view through a form of lug heretofore made, to show the difference the present invention comprehends;

Fig. 14 is a sectional view taken in a plane represented by line 14—14 in Fig. 13.

Referring more in detail to the drawings, the embodiments chosen to illustrate the invention include a handle lug which has, in general, a back or back plate 1 having an opening, and an integral forward, hollow portion or loop 2 opposite such opening, together with side walls 3 so constructed as to provide hand bar holes 4 between the forward edges 5 of the walls 3 and the inner face 6 of the loop 2, so that the hand bar 7 is held between the face 6 and the edges 5 as shown. Thus, the forwardly extending hollow portion comprises the side wall portions 3 and upper and lower wall portions from which continue the curved loop portion 2. While the holes 5 are shown, merely for the purpose of illustration, as of oval shape, it is to be understood that they may be of any cross-sectional form desired, such as circular, clover-leaf shape, square, rectangular, triangular, figure-eight shape, etc., and, of course, the bar 7 itself of corresponding form. The bar 7 is preferably of hollow construction, such as a tube of sheet metal or the like produced and shaped in any suitable manner.

The side walls 3 are provided with shallow recesses 8 (Figs. 2 and 9) for receiving parts of the mold core shown in Fig. 5 and later described. These recesses 8 taper forwardly both laterally and transversely to afford draft for the mold core parts referred to. It will be noted that the edges 5 are offset or beyond the side edge portions of the loop 2 so that if the edges 5 were to be forwardly projected they would extend by or past the side edges of the loop 2.

Viewing the lug as shown in Fig. 9, the lug can be said to be hollow and having a U-shaped chamber having at the rear shallow recesses 9 and 10, respectively, at the lower and upper end portions of the back 1. Between the shallow recesses 10 is provided an integral reinforcing or strengthening rib 11 which is molded with the remainder of the article. The rear face of the rib 11 may be in the same plane as the rear face of the back plate 1, and is preferably provided with a depressed portion or shoulder 12 against which seats the upper end of the reinforcing member shown in perspective in Fig. 11 and later described. When using the reinforcing member shown in Fig. 11, the inner curved face of the loop 2 is provided with grooves or channels 13 (Figs. 4, 6 and 7) for the reception and positioning of the forward ends of the reinforcing member mentioned. It is not necessary in all cases to use such reinforcing member, and therefore the article may be made without the grooves 13 in the inner face of the loop 2, as shown in Figs. 9 and 12. On the other hand the article may also be made with raised portions or ribs 14 at the side edges of the loop 2 and forwardly of the holes 4 so that if in casting or molding the article should the holes 4 be under-size the ribs 14 may be suitably milled to the desired size of holes so that the hand bar 7 may be inserted in place.

The reinforcing member shown in perspective in Fig. 11 may be made of sheet metal and comprises a backplate 15 (Figs. 2, 4 and 11) and side wings or legs 16 provided with holes 17 which, when the member is in place in the lug, register with the holes 4 of the lug so that the hand bar 7 may properly extend through both the lug and the reinforcing member. The back plate 15 has a rounded end portion 18 which sits against the shoulder 12 of the strengthening rib 11 when the reinforcing member is in place in the lug. At the other end the plate 15 may be provided with ears 19 or the like suitably apertured for the reception of suitable securing elements for connecting the plate 15 to the lug, the latter being provided with suitable apertures or recesses 20 in registry with the apertures of the ears 19 for securement of the fastening elements, such as screws or the like. The plate 15 also has apertures 21 and 22 for the passage of securing bolts or screws 23 and 24 which are fastened to the side wall of the casket, coffin, or the like, the lug also having registering holes or apertures 25 and 26 for the passage of the bolt or screw 23 and 24, respectively.

The lugs are molded or cast in a mold such as is shown in Fig. 3 of which the mold part 27 may be termed the matrix part and the mold part 28 may be termed the patrix part, this part also including a mold core part 29 or pressing block. The material from which the article is made may be and preferably is plastic wood, such as wood flour, or even wood fibres or pulp, and which is in a plastic condition so that it may be displaced and strained to desired form and contour under the pressure applied by the mold parts. As shown in Fig. 3, the mold is capable of producing two lugs at a time. It is not limited to that number, and it may be designed to mold any number as desired, such as four, six, eight, etc., it being preferable to mold them in multiples of two because each handle device for caskets,

coffins, etc., usually has two spaced lugs through both of which the hand bar extends, that part of the bar between the lugs constituting the manual gripping and supporting part, as will be understood from the showing made in my design application for design patent filed April 9, 1938, under Serial No. D-76,408.

Each matrix mold part is preferably composed of a backing plate 30 of cast metal, such as cast lead or an alloy thereof, and a thin metal electroplate 31 having the desired design and contour to be impressed upon the forward face of the lug blank or plastic material. The electroplate is usually produced in the following manner: A master is first made of any suitable material and of the particular form and contour and with the particular design as the final article is to have. On the master is cast a casting of wax or the like. After drawing the master from the wax casting, the surface of the wax is powdered for the electroplating process. Then an electroplate is formed on such surface in the electroplate bath. The object is then withdrawn from the bath and the wax melted and drained off so as to leave the naked electroplate. Then this electroplate is placed in a suitable casting mold with the surface against which the wax was in contact so disposed as to have the backing lead or alloy poured against it to cast the lead or alloy backing in the form of a plate or block 30, as is clear from the showings in Figs. 3, 6 and 7. The opposite side of the electroplate produces the desired design on the plastic lug blank. The lead backing plate may be suitably housed in a casing 32, if desired (Figs. 6 and 7).

The electroplate 31 has side wall portions 33 and 34 (Figs. 3, 6 and 7) of which the portions 33 are so disposed and shaped as to be at the sides of the lug where the holes 4 are formed, and of which the portions 34 are laterally offset for the molding-in of the wall portions 3 of the lug, so that such wall portions 3 are laterally and outwardly beyond the holes 4 as well as also being rearwardly of but not in line with the loop portion 2 of the lug. Portions 35 of the electroplate, appearing in Figs. 6 and 7 as shoulders, connect the portions 33 and 34 as shown.

The presser block or mold core part 29 is composed of any suitable solid material which may have been molded to form, or cast, etc. It comprises a rounded body part 36 having ribs 37 which form the grooves 13 in the inner curved face of the loop 2 of the lug. It also has a tail part 38 with the slot or recess 39 which forms the recesses 10 and the strengthening rib 11 respectively, and also a short tail part 40 at the other end so shaped as to form the curved recess 9 in the lower portion of the back plate 1 of the lug. At the sides of the mold core 21 are provided wedge shaped core parts 41 having tapered edges so that the mold core part may be readily "drawn" after molding. The smaller end of the part 41 is round so that the portion 42 (see Fig. 10) of the part 41 will be in intimate contact with the electroplate portion 33 at the end of the molding operation so as to form the hole 4, as later more fully explained.

The core 29 also has an integral short projection or stub 43 to form in the end of rib 11 a recess 44 in which a nail or the like may be driven by the manufacturer to hold the inserted hand bar or handle 7 in proper relation when shipping the handle assembly to the casket or coffin builder and when applying the assembly to the side of the casket or coffin. The assembly is therefore initially formed with the lugs on the handle bar 7 spaced in a predetermined relation, the relation they are to eventually have when the assembly is applied in place by the casket or coffin builder. The nail is so driven as to act as a wedge or locking pin between the side of the hand bar 7 in the lug and the inner end of the strengthening rib 11 whereby the parts are held in the desired relation.

The assembly consists usually of two spaced lugs or side brackets, the tubular handle or hand bar 7 extending through the lugs, and the tips (not shown) on the free ends of the bar 7. The nails in the lugs hold them on the bar. This assembly is shipped in this form to the casket builder. All the latter needs to do is to place the assembly against the side of the casket or coffin, drill the holes for the screws or bolts, and secure them in place. This avoids the use of a templet heretofore required, the necessity of calculating the positioning of the lugs or brackets, the lining up of the holes, and the inserting and positioning of the hand bar.

There is usually a long bolt 23 (Fig. 4) which passes through the loop 2 of the lug, through the bar 7, and through or fixed to the side wall of the casket. This avoids the use of screws at the lower end or flange portion of the lug. If desired, a screw 24 (Fig. 4) may be inserted through the upper end portion of the lug and into the side wall of the casket, although this may not always be necessary. The screw at this point is principally for holding the lug flat against the side of the casket and assists the long main bolt 23 passing through the lug and the contained portion of the hand bar 7.

The core or cores 29 are attached to a presser block or plate 45 against which the plunger of a power press may act to force the core or cores against the plastic material previously placed in the matrix mold, and into the mold to displace and compress the material to the desired form and consistency. The block 45 carries one or more dowel pins 46 guided in the dowel socket or sockets 47 provided in the mold part 27.

The plastic material which is preferably plastic wood, such as wood flour or pulp, or the like, is preferably of the consistency of ordinary glazer's putty or molder's plastic. It is usually supplied in strip or sheet form. A piece of it of sufficient size is usually pressed, as with the fingers, into the cavity of the matrix mold, and then the patrix mold, with the core part 29, is brought down under considerable pressure to strain and stress the plastic material to conform to the design and contour of the mold surfaces and to the consistency of hard wood or the like. The plastic is somewhat wet when being molded. After the blank is formed, it is removed from the mold and dried to set and harden in the atmospheric air or in a heated atmosphere.

In the previous manufacture of the lugs it was customary to insert a mold bar 48, of any suitable hard material, into the mold so as to form a transverse hole or bore in the casting or blank. See Figs. 13 and 14. In such case the plastic completely encircled the core bar 48 in the form of a band 49. After the article was molded and removed from the mold the core bar 48 was then withdrawn, and frequently the plastic material would be broken or cracked or torn away. A smooth bore was difficult to obtain. Moreover, if the article set with a warped bore or the hole was of improper size, some milling had to be resorted to to obtain the proper shape

and size, thus involving many costly steps of manufacture. All of these disadvantages are avoided by the present invention. The band portion 48 at the rear of the bar is omitted entirely and the hand bar 7 is held in place between the loop 2 and the edges 5 of the side wall portions 3.

When molding the plastic in the mold, and as the core part 29 descends into the cavity of the matrix mold part, the outer surfaces of the core parts 41 (see Figs. 5 and 6) will eventually contact intimately with the inner surfaces 33 (see Fig. 7) of the electroplate so that no plastic is cast at those loci, this providing for the side openings or the holes 4. Plastic is molded below and about the lower end (see Fig. 7) of the patrix core mold part 29 to form the loop 2, and also at the sides of the core 29 above the shoulders 35 and within the electroplate portions 34 to form the side wall portions 3 of the lug blank, and also between the tail portions of the electroplate and the tail portions 38 and 40 of the core part 29 to form the back plate 1 of the lug casting.

While I have herein described and upon the drawings shown a few embodiments illustrative of the invention, it is to be understood that the invention is not limited thereto but comprehends other structures, details, arrangements of parts, features, process steps, and the like without departing from the spirit of the invention.

Having thus disclosed the invention, I claim:

1. A molding device for producing burial casket lugs having a generally flat and elongated back portion, a front body portion having side wall portions and channels provided within the front part of the body portion for handle structures, comprising a matrix mold part provided with shallow cavities at the sides and ends of the opening provided in the top portion of said mold part for the molding therein of the back portion of the lug, and an inwardly located deep cavity communicating with said shallow cavities for the molding therein of the body portion of the lug, the matrix mold walls defining said deep cavity comprising a curved bottom wall portion, upwardly flared forward and rear wall portions and spaced upright side wall portions, said side wall portions having lower and upper wall portions of which the upper wall portions are more greatly spaced apart to provide side cavities of intermediate depth and which communicate with said deep and shallow cavities for the molding therein of the side wall portions of the body portion of the lug, and a patrix mold part to fit into said matrix mold part and having a lower rounded portion, upwardly flared forward and rear wall portions, and upright side wall portions, the lower portions of said patrix side wall portions being proportioned for intimately contacting the lower portions of the matrix side wall portions for forming the openings in the sides of the body portion of the lug and the upper portions of said patrix side wall portions being proportioned to be spaced from the upper portions of the matrix side wall portions for the molding therein of the upper side wall portions of the body portion of the lug, said patrix rounded portion having spaced ribs for forming the channels in the front part of the body portion of the lug.

2. A molding device for producing burial casket lugs having a generally flat back portion, a forward loop portion and intermediate side wall portions for handle structures, comprising a matrix mold part with spaced shallow molding cavities at the sides and at the ends thereof for the molding therein of the generally flat back portion of the lug, and an intermediate deep cavity communicating with said shallow cavities, said deep cavity having a curved bottom and flat side walls for the molding therein of the loop and side wall portions of the lug, the deep cavity having lower side wall and upper side wall portions disposed with the upper side wall portions spaced at a greater distance apart than said lower side wall portions, and a patrix mold part to fit into said matrix mold part and having straight side walls the lower portions of which are proportioned to intimately contact the lower side wall portions of said matrix mold part and the upper portions of which are proportioned to be spaced from said upper wall portions of said matrix mold part to provide molding space therebetween for the molding of the side wall portions of the lug with openings at the loci where the patrix side wall portions contact the lower side wall portions of the matrix mold part.

3. A molding device for producing burial casket lugs having a generally flat and elongated back portion, a forward loop portion, and intermediate side wall portions for handle structures, comprising a matrix mold part with spaced shallow molding cavities at the sides and at the ends thereof for the molding therein of the generally flat elongated back portion of the lug, and an intermediate deep cavity communicating at its mouth with said shallow cavities, said deep cavity having a bottom and end and side walls extending from said bottom to said shallow cavities for the molding therein of the loop and side wall portions of the lug, the deep cavity having lower side wall portions and upper side wall portions disposed with the upper side wall portions spaced at a greater distance apart than said lower side wall portions, and a patrix mold part to fit into said matrix mold part and having side walls the lower portions of which are proportioned to intimately contact the lower side wall portions of said matrix mold part and the upper portions of which are proportioned to be spaced from said upper wall portions of said matrix mold part to provide molding space therebetween for the molding of the side wall portions of the lug with openings at the loci where the patrix side wall portions contact the lower side wall portions of the matrix mold part.

4. A molding device for producing burial casket lugs having a generally flat elongated back portion, a forward loop portion, and side wall portions for handle structures, comprising a matrix mold part with shallow cavities at the sides and ends of the top portion of said mold part for the molding therein of the back portion of the lug, with deeper cavities at the sides and inwardly of the shallow cavities and having bottom and side walls for molding of the upper portions of the side walls of the lug, and with a still deeper cavity between said side cavities and communicating with said deeper cavities at the sides thereof and with said shallow cavities at the ends thereof, said still deeper cavity having a bottom and side and end walls, a patrix mold part to fit into said matrix mold part and having side walls the lower portions of which are proportioned to intimately contact the lower side wall portions of the deepest cavity of said matrix mold part and the upper portions of which are proportioned to be spaced from

said side walls of said deeper cavities of said matrix part.

5. A molding device for producing burial casket lugs having a generally flat and elongated back portion, a front body portion having side wall portions for handle structures, comprising a matrix mold part provided with shallow cavities at the sides and ends of the opening provided in the top portion of said mold part for the molding therein of the back portion of the lug, and inwardly located deep cavity communicating with said shallow cavities for the molding therein of the body portion of the lug, the matrix mold walls defining said deep cavity comprising a curved bottom wall portion, upwardly flared forward and rear wall portions and spaced upright side wall portions, said side wall portions having lower and upper wall portions of which the upper wall portions are more greatly spaced apart to provide side cavities of intermediate depth and which communicate with said deep and shallow cavities for the molding therein of the side wall portions of the body portion of the lug, and a patrix mold part to fit into said matrix mold part and having a lower rounded portion, upwardly flared forward and rear wall portions, and upright side wall portions, the lower portions of said patrix side wall portions being proportioned for intimately contacting the lower portions of the matrix side wall portions for forming the openings in the sides of the body portion of the lug and the upper portion of the patrix side wall portions being proportioned to be spaced from the upper portions of the matrix side wall portions for the molding therein of the upper side wall portions of the body portion of the lug.

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