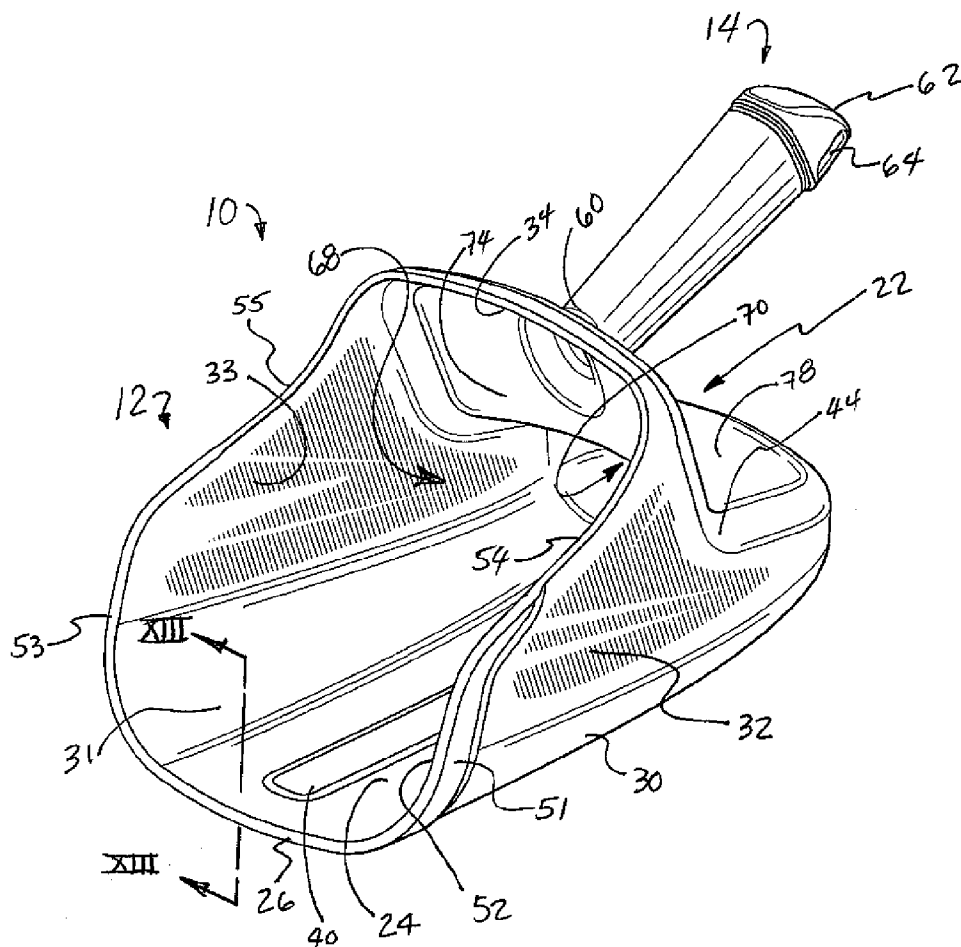




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(19) **United States**(12) **Patent Application Publication**
Claypool et al.(10) **Pub. No.: US 2009/0140536 A1**(43) **Pub. Date: Jun. 4, 2009**(54) **ONE-HANDED ICE SCOOP****Related U.S. Application Data**(75) Inventors: **Christopher J. Claypool**,
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(US)(60) Provisional application No. 60/990,504, filed on Nov.
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(52) **U.S. Cl.** **294/55**
(57) **ABSTRACT**Correspondence Address:
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Huntersville, NC (US)(21) Appl. No.: **12/324,249**(22) Filed: **Nov. 26, 2008**

An ice scoop is disclosed and has a scoop section with a bottom, a leading edge, two spaced apart side walls extending up from opposed sides of the bottom, and a back between the two side walls extending up from the bottom opposite the leading edge. The scoop has a cavity formed within the bottom, the side walls, and the back, and having an open front end and extending rearward therefrom. The scoop has a handle connected to and extending rearward from the back. The scoop cavity has an extended cavity section disposed under the handle that is a contiguous part of the cavity. The handle is spaced above the extended cavity section.



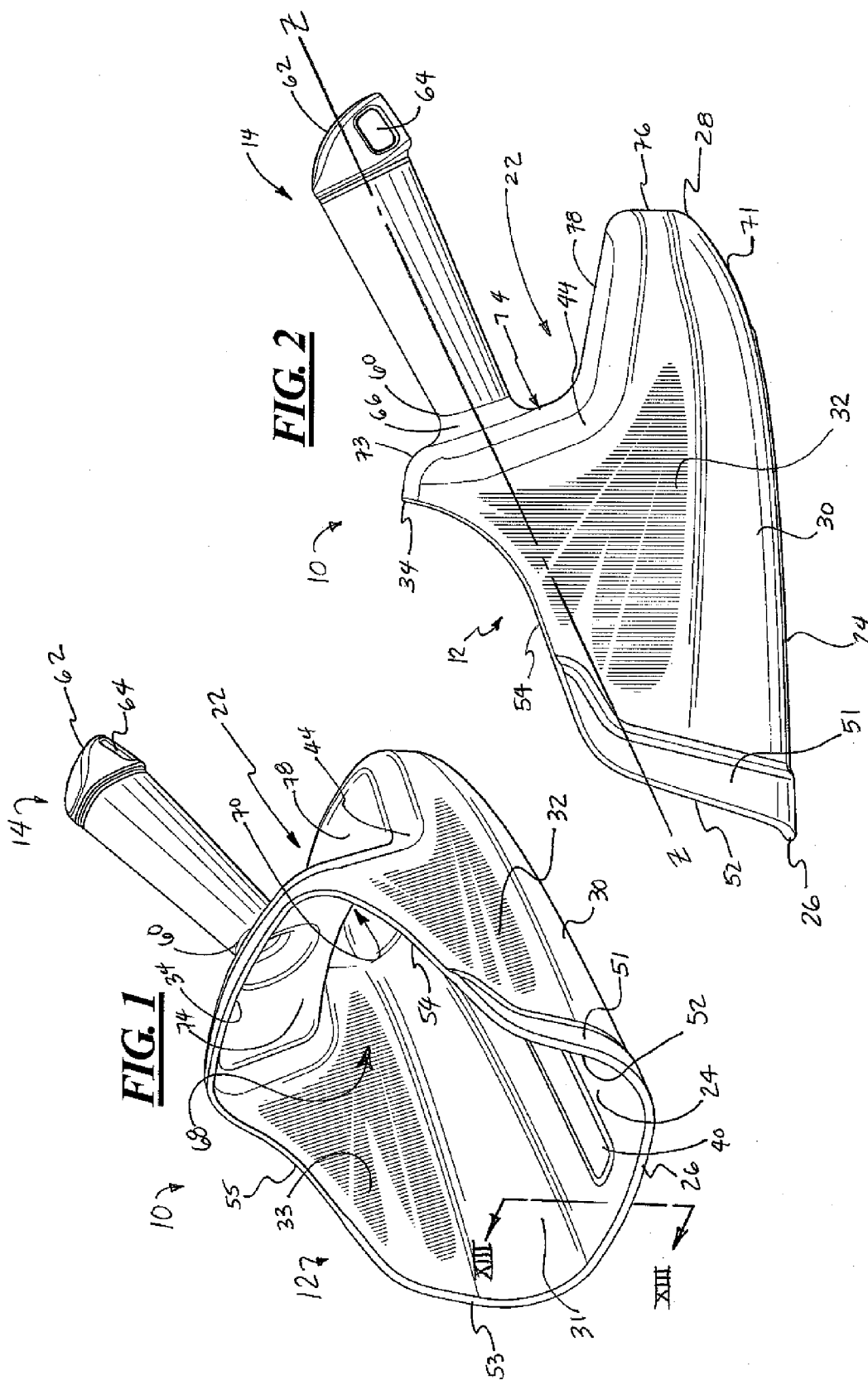


FIG. 3

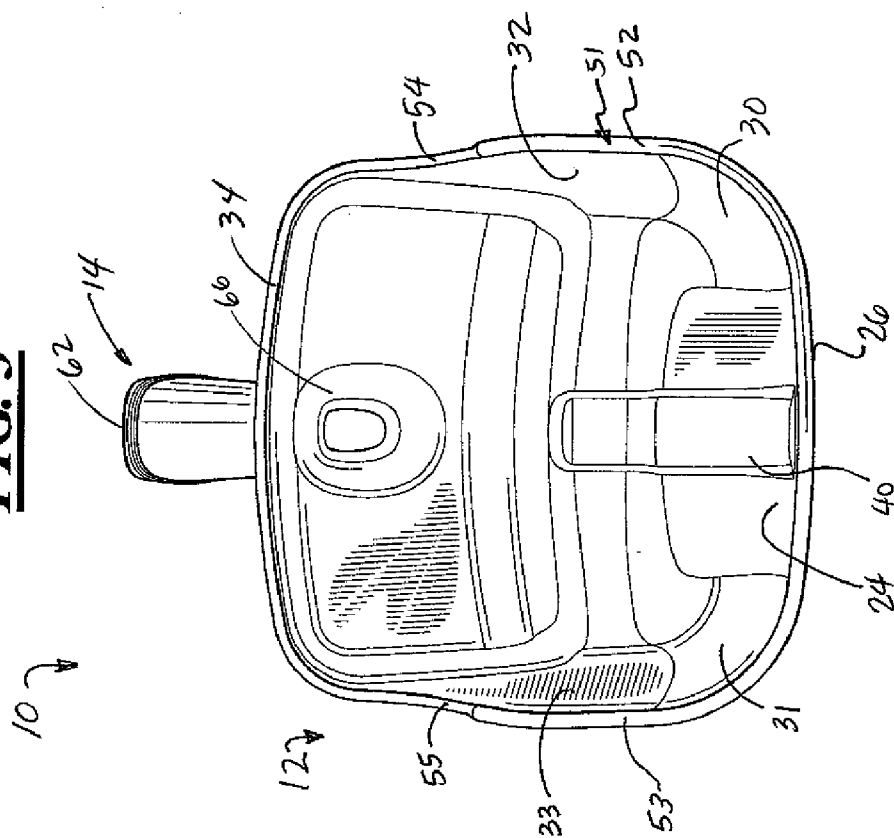
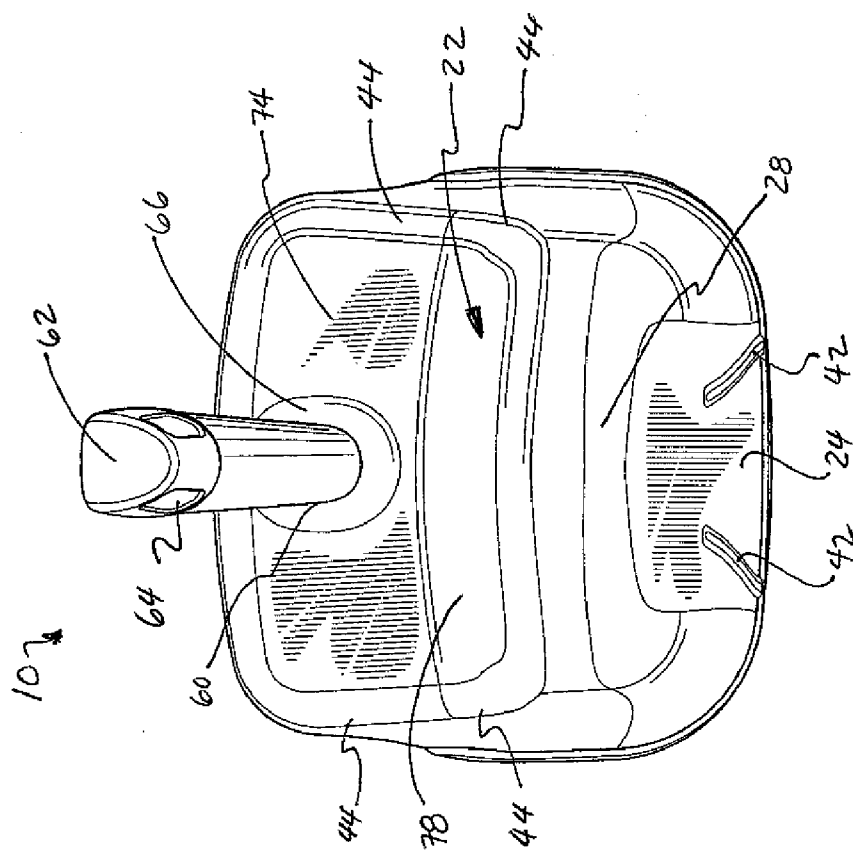
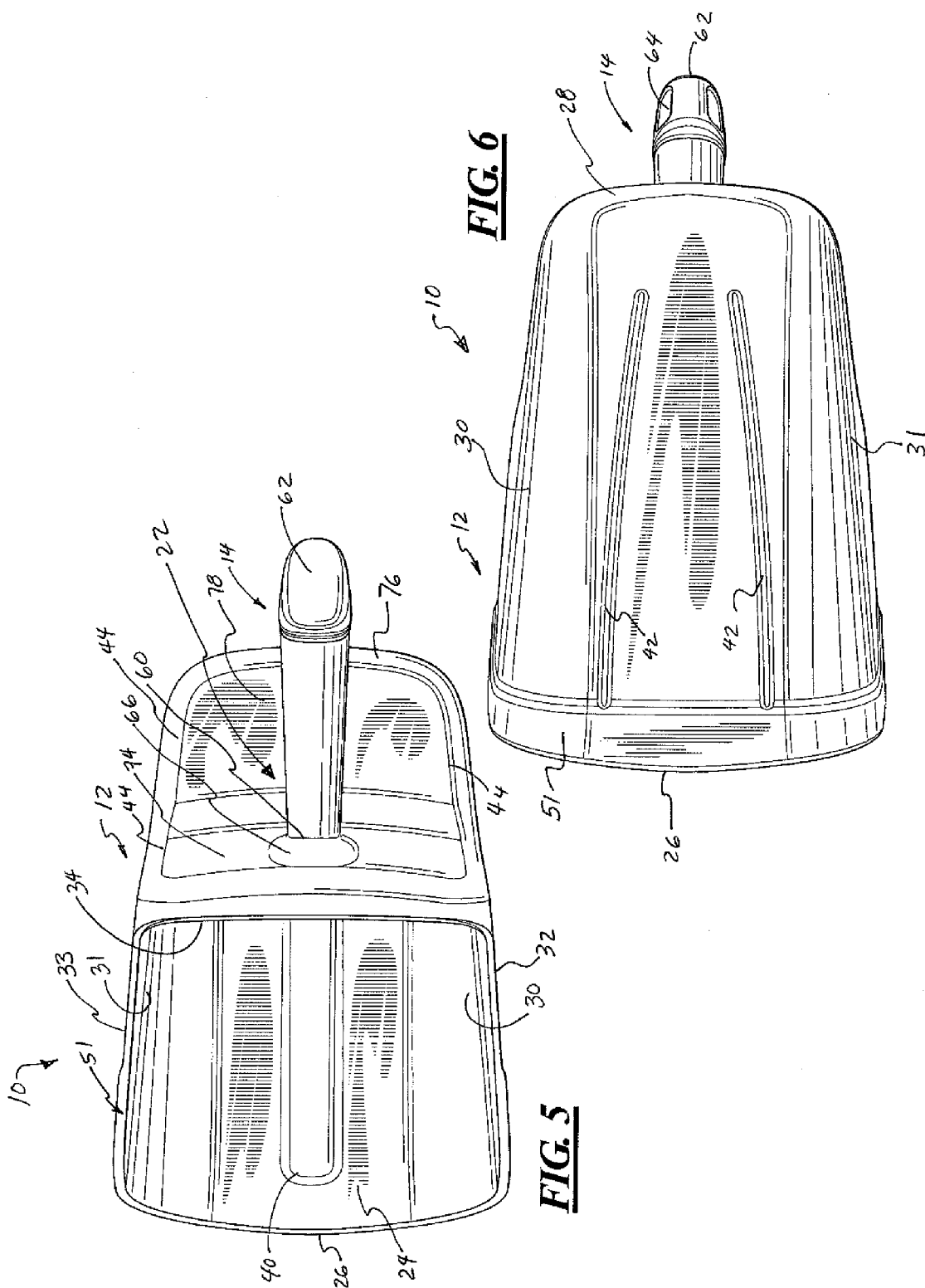


FIG. 4





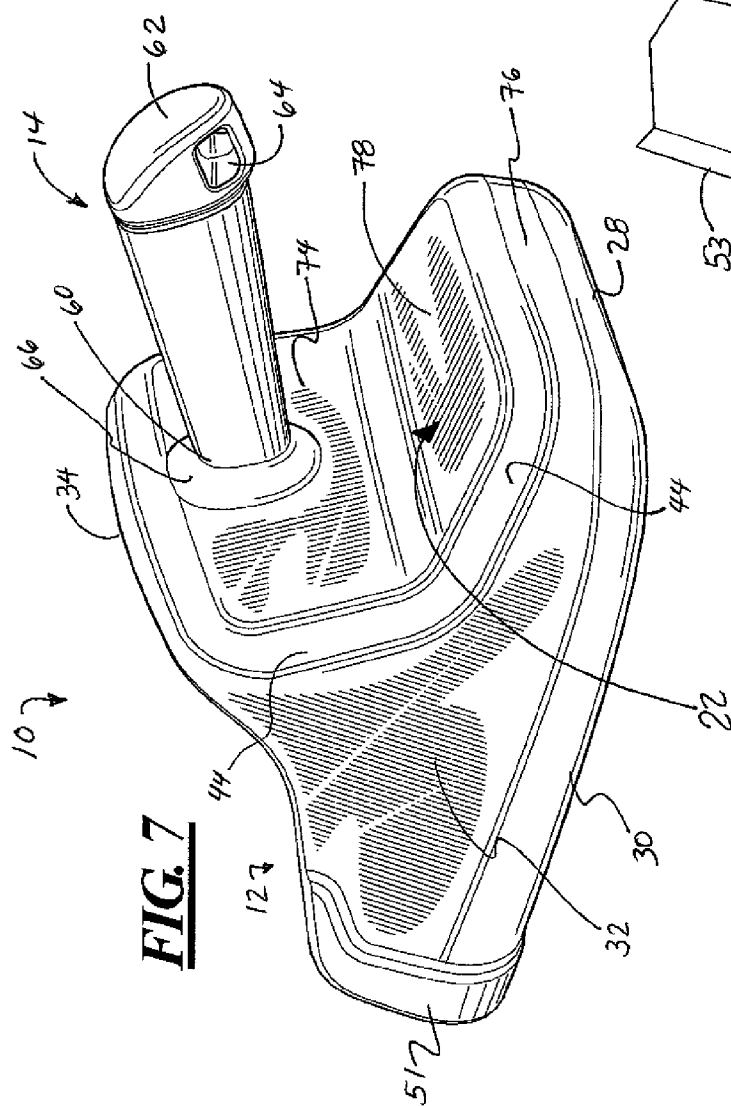
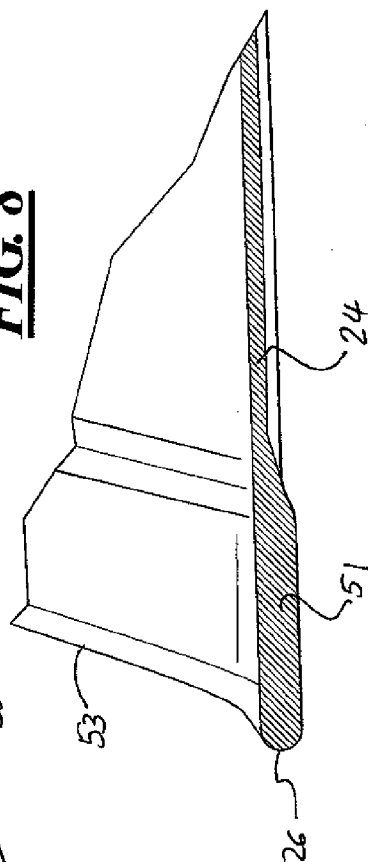
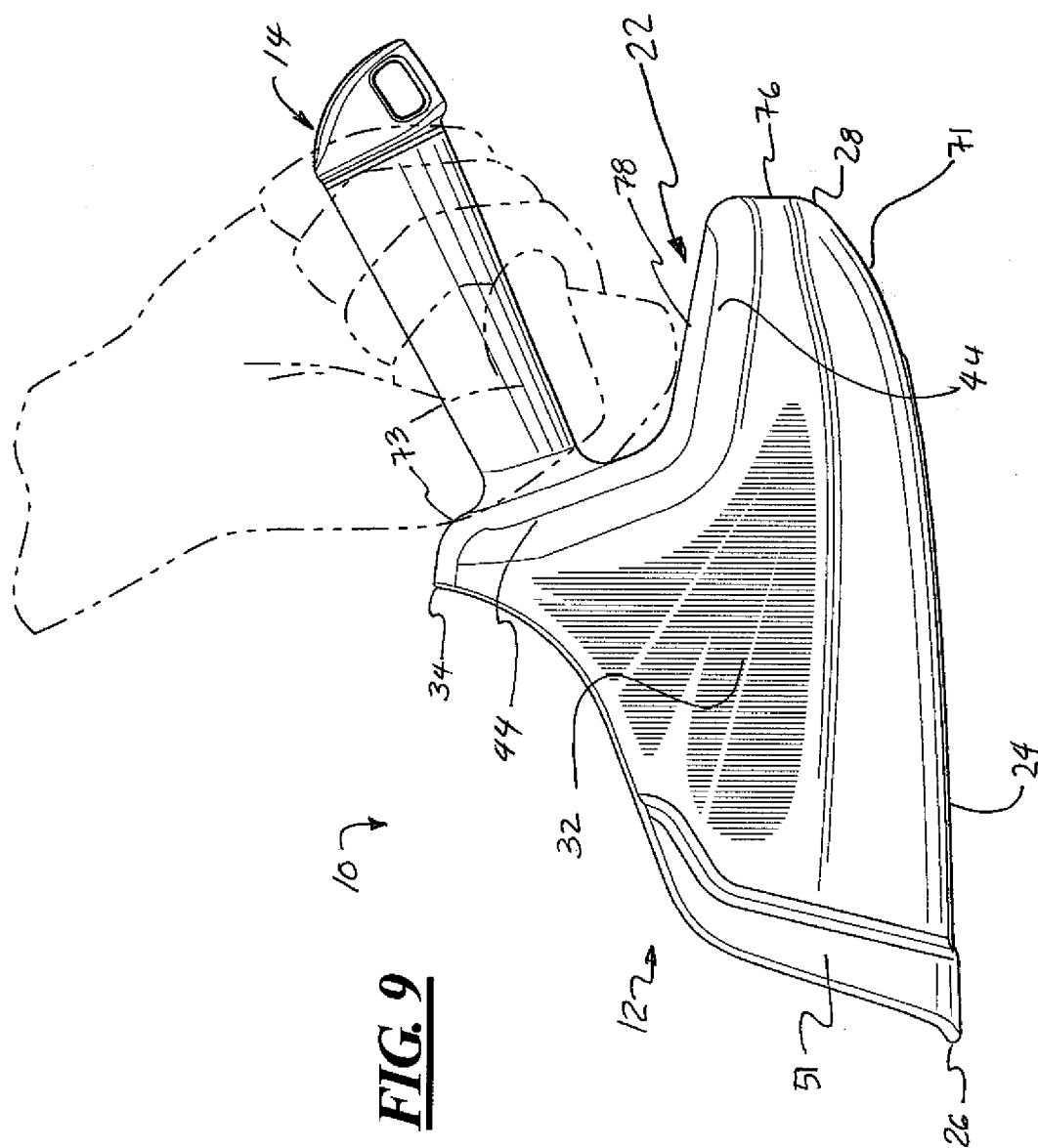


FIG. 8





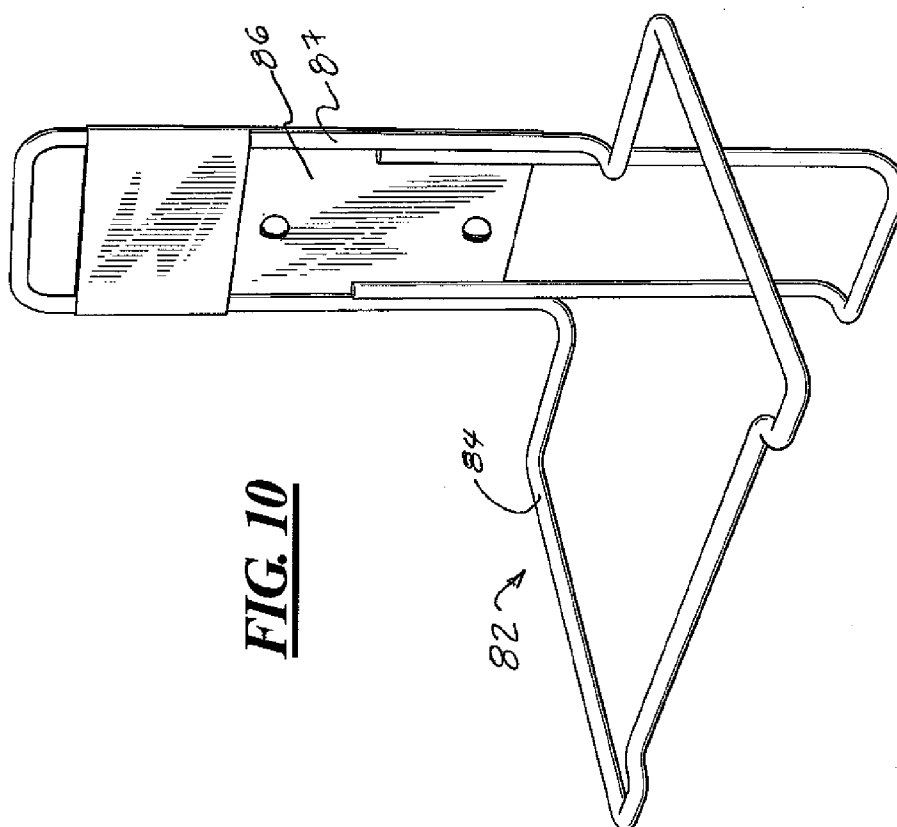
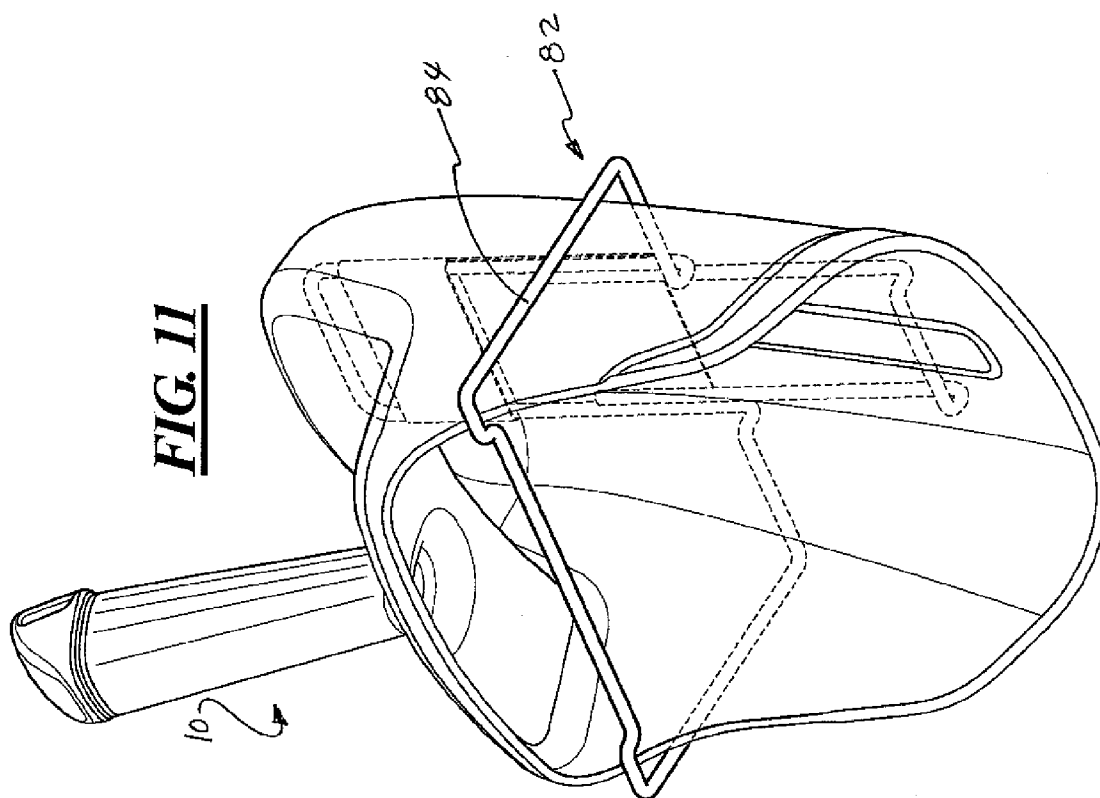


FIG. 13

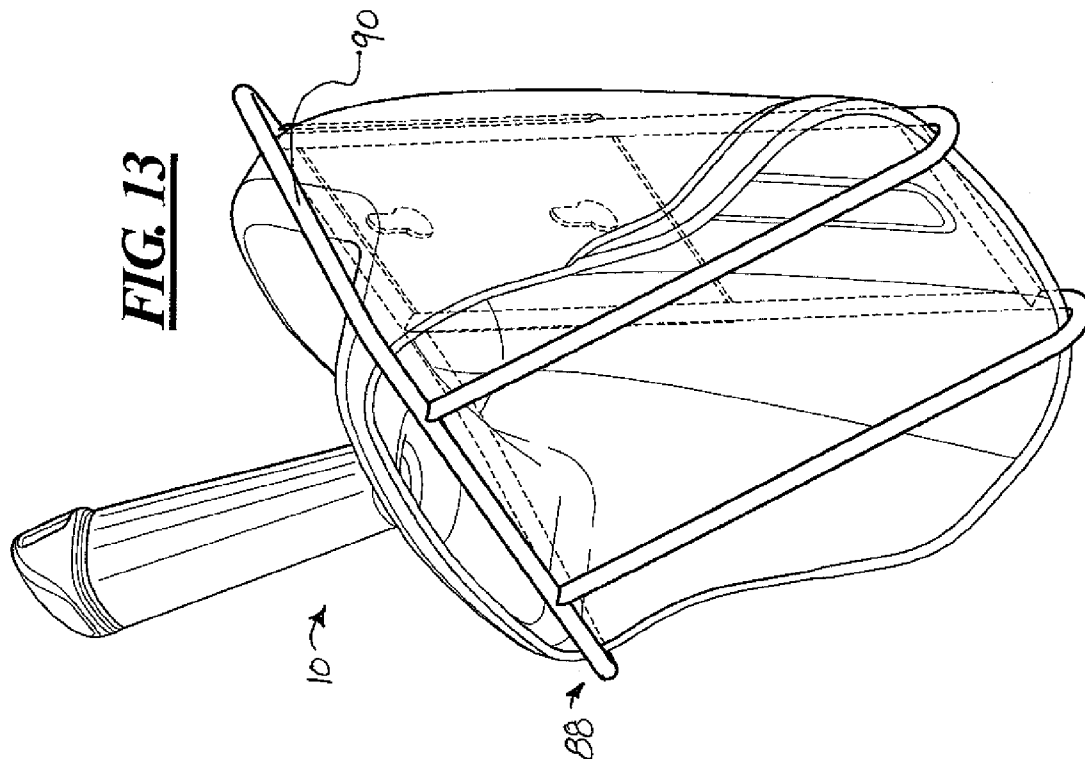
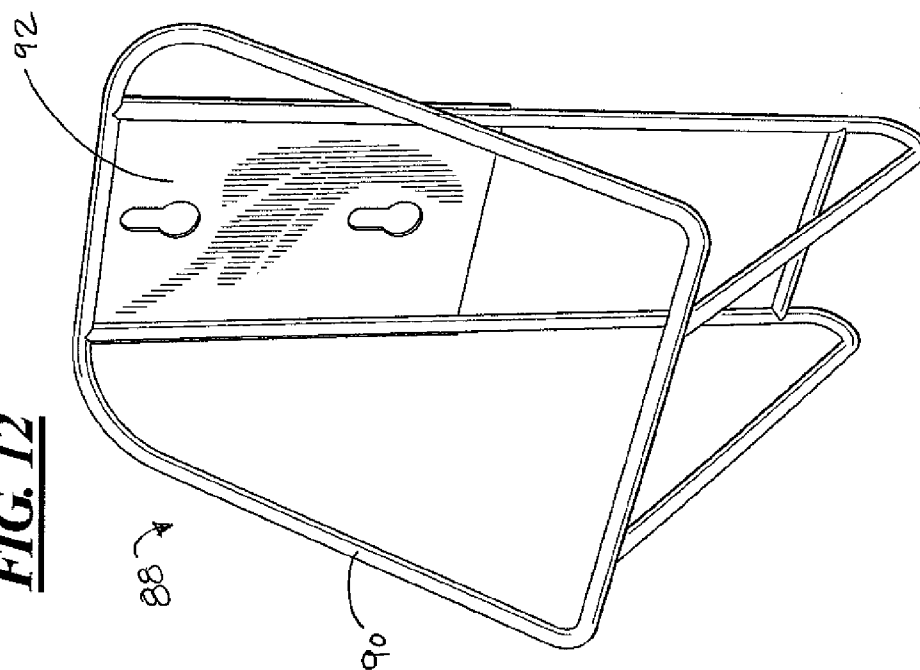


FIG. 12



ONE-HANDED ICE SCOOP

[0001] This application claims the benefit of U.S. Provisional Patent Application Ser. No. 60/990,504, filed on Nov. 27, 2007, the disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Disclosure

[0003] The present disclosure is generally directed to scoops, and more particularly to a one-handed ice scoop having a relatively large capacity and a handle with a hand guard feature.

[0004] 2. Description of Related Art

[0005] Many scoops of various designs for transferring ice and other substances from one container to another within a commercial kitchen environment are available in the market today. Some of these ice and other scoops do not have hand guards and shields built into the scoop. A user's hand can come in contact with the ice during the scooping motion. Certain other scoops do have hand guards and shields as well as handles that are protected, but some hand guards can also inadvertently pick up ice or other product and spill it. The configuration and placement of the hand guards can also result in contamination of the scoop and make the scoop difficult to wash adequately for a commercial kitchen environment.

[0006] Known scoops often have a handle that is connected to a back of a scoop and that extends horizontally from the back and parallel to the bottom of the scoop. The horizontal handle angle can be awkward for shoveling ice out of ice machines, especially when the level of ice in the machine is low. One problem with such scoops is that the scoops are relatively shallow. These scoops do not readily contain large amounts of scooped material and can allow some material to spill. This can result in wasted ice or other product as well as ice or product particles falling on the floor. Melted ice or food granules on the floor in a commercial kitchen can create a safety hazard.

[0007] Users of ice scoops have also been observed breaking up larger chunks of ice using the front edge of the scoop. Scoops are often made of plastic and are not sturdy enough to withstand such usage and can dent, chip, or break when used to break up ice chunks. Potentially, this damage to the scoop can result in plastic chips and fragments being left behind in the ice.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Objects, features, and advantages of the present invention will become apparent upon reading the following description in conjunction with the drawing figures, in which:

[0009] FIG. 1 shows a front perspective view of one example of a one-handed ice scoop in accordance with the teachings of the present invention.

[0010] FIG. 2 shows a side elevational view of the scoop of FIG. 1.

[0011] FIG. 3 shows a front elevational view of the scoop of FIG. 1.

[0012] FIG. 4 shows a rear elevational view of the scoop of FIG. 1.

[0013] FIG. 5 shows a top plan view of the scoop of FIG. 1.

[0014] FIG. 6 shows a bottom plan view of the scoop of FIG. 1.

[0015] FIG. 7 shows a rear perspective view of the scoop of FIG. 1.

[0016] FIG. 8 shows an enlarged detailed section of a leading edge of the scoop of taken along line VIII-VIII in FIG. 5.

[0017] FIG. 9 shows the scoop of FIG. 1 in use.

[0018] FIG. 10 shows an example of a wire rack adapted for use with the scoop of FIG. 1.

[0019] FIG. 11 shows an example of a scoop according to FIG. 1 stored in the wire rack in FIG. 10.

[0020] FIG. 12 shows another example of a wire rack adapted for use with the scoop of FIG. 1.

[0021] FIG. 13 shows an example of a scoop according to FIG. 1 stored in the wire rack of FIG. 12.

DETAILED DESCRIPTION OF THE DISCLOSURE

[0022] The present invention is for an improved one-handed scoop. The disclosed scoop has a scoop section and an attached handle. The scoop section incorporates a thicker walled front leading edge. This more durable front leading edge is less likely to chip and break upon blunt contact with the ice or other product to be scooped. The scoop section has a bottom, sides, and a back that are arranged to form a cavity. The handle is attached to the scoop section at the back. The handle is joined to the scoop section at an oblique angle relative to the scoop bottom and is angled upward relative to the bottom. The scoop section further has an extended cavity section underneath the handle. The extended cavity section functions as a shield to prevent a user's hand from coming into contact with the ice or scooped product. The extended cavity section also adds capacity and allows a user to transfer a larger amount of material when scooping. The bottom of the scoop section has a curved profile that is convex at the bottom nearer the back. The combination of the shield function, the added capacity of the extended cavity section, the reinforced leading edge, and the curved bottom renders it easier for a user to perform a scooping motion without worrying about contaminating the material to be scooped and while being able to scoop larger volumes of the material.

[0023] Turning now to the drawings, FIG. 1 shows an ice scoop 10 according to the present invention. The scoop 10 has a scoop section 12 or scoop body and a handle 14 joined to a back 22 of the scoop section 12. The scoop section 12 has an open top and an open mouth opposite the back 22. The scoop section 12 includes a bottom 24 with two opposed side walls 32, 33 extending upward from edge joints 30, 31 from the bottom. The back 22 extends upward from a rear end joint 28 from the bottom and is joined to the side walls. The upstanding side walls 32, 33 are in slightly diverging relation to one another, becoming farther apart toward a leading edge 26 of the scoop 10. The side walls 32, 33 also increase in height moving from the open mouth at the leading edge 26 toward the back 22 as shown in FIG. 2.

[0024] The bottom 24 of the scoop section 12 as shown in FIG. 2 has an upwardly curving profile from the leading edge 26 to the back 22. As can be seen in FIG. 3, the transition joints 30, 31 between the bottom 24 and the side walls 32, 33 are curved. This creates a smooth contour to the body 12 of the ice scoop 10. The transition joint 28 between the back 22 and the bottom 24 is also gradually curved. All surface transitions on the scoop section 12 are gradually curved giving the

entire scoop section 12 a rounded contour with no sharp or acutely angled edges or corners.

[0025] As shown in FIGS. 3, 4 and 6, the two side walls 32, 33 are slightly diverging toward the leading edge 26. The bottom 24 is wider near the leading edge 26 than near the back joint 28. The bottom 24 can have grooves 40 or ribs on an inside surface that extend lengthwise from near the leading edge 26 toward the rear joint 28. The underside surface 38 of the bottom 24 can have one or more ridges 42 or grooves that extend lengthwise. The side walls 32, 33 and back 22 can also have such surface features.

[0026] A perimeter edge is formed on the scoop section 12 by the front or leading edge 26 of the bottom 24, front edges 52, 53 and top edges 54, 55 of the side walls 32, 33, and an upper edge 34 of the back 22. The bottom 24, the side walls 32, 33, and the back 22 form a cavity 68 therein. The perimeter edge defines the cavity boundaries. The shape and configuration of the scoop section and cavity can vary.

[0027] The leading edge 26 of the bottom 24 includes a reinforced region 51. The reinforced region 51 in this example is an area along and adjacent the leading edge 26 of the bottom 24, upwards along the front edges 52, 53 of the side walls 32, 33, and along a forward portion of the top edge 54, 55 of the side walls 32, 33. As shown in FIG. 8, the reinforced region 51 has a greater wall thickness than that of the adjacent portions of the bottom 24 and the side walls 32, 33. The parameters of the reinforced region can vary.

[0028] As shown in FIGS. 1 and 2, the handle 14 is joined to the back 22 near the middle of the back. The handle 14 has an elongate shaft with a proximal end 60 that is joined to part of the back 22 at a joint 66 and a distal free end 62 at the other end. The diameter or cross-section volume of the handle 14 is tapered becoming larger from the proximal end 60 toward the distal free end 62, as shown in FIGS. 1-4. The handle 14 in the present example has a cross-section that is somewhat oval or ovoid. The handle 14 can be hollow or solid. In the disclosed example, the handle 14 is hollow. The exemplary handle 14 further has a cap covering the distal end 62. As shown in FIGS. 2 and 4, the handle 14 can have a slot or hole 64 through the cap covering the distal end 62. The joint 66 between the proximal end 60 of the handle 14 and the back 22 can be reinforced, such as having a greater material thickness, and the joint contours can be rounded and gradual. As shown in FIG. 2, the handle 14 has a lengthwise axis Z-Z that is oriented at an acute oblique angle upward relative to a plane of a substantial portion of the bottom. The axis Z-Z of the handle 14 of the disclosed scoop 10 is about 27° relative to a plane of a substantial portion of the bottom. The angle of the axis Z-Z can vary and remain within the teachings of the present invention.

[0029] The bottom 24 has a rear portion near the back joint 28 that curves increasingly upward. As shown in FIG. 4, the back 22 of the scoop section 12 has a complex shape and configuration. The back 22 generally extends between and is joined to the side walls 32, 33 along curved transition joints or seams 44. The back 22 has an upper section 74 and a lower section 76 joined to one another by an over-panel 78 extending under the handle 14, over the rear curved portion 71 of the bottom 24, and spaced from both. As shown in FIG. 2, the upper section 74 of the back tilts toward the open mouth of the scoop section 12. Also, an upper edge 34 and a top portion 73 of the upper section 74, which defines the upper edge, are curved in a forward direction toward the open mouth of the scoop section 12 so that the upper edge 34 overhangs a portion

of the cavity 68. A cavity extension 70 is formed beneath the panel 78 and is contiguous with the scoop cavity 68. The handle 14 is positioned above and spaced from the panel 78. This structure forming the cavity extension 70 creates a hand shield or guard under the handle, and yet the hand shield also has storage capacity as well. FIG. 9 illustrates the disclosed ice scoop 10, with a hand on the handle 14 and over the hand shield.

[0030] FIG. 10 illustrates an example of a wire storage rack 82 for holding the scoop 10. The storage rack 82 has a metal wire holding portion 84 and a mounting plate 86 coupled to wire support frame 87. The storage rack 82 can be fabricated from bent metal or wire, and is mountable on a vertical surface such as a wall. FIG. 11 shows an ice scoop 10 stored in the storage rack 82 with the handle 14 extending up and the scoop section 12 hanging down. This orientation allows water from melted ice to drain and the scoop to dry.

[0031] FIG. 12 illustrates another example of a wire storage rack 88. The storage rack 88 in this example has a wire cage or holster 90 and a mounting plate 92 on the back of the cage 90. The storage rack 88 is also mountable on a vertical surface such as a wall. FIG. 13 shows an ice scoop 10 resting in the storage rack, again with the handle 14 up and the scoop section 12 hanging down. Storage racks for the disclosed scoop can take on alternate forms and mounting schemes and can be fabricated of various suitable materials, such as metal, plastic, or a combination thereof, and yet remain within the scope of the present invention. Alternatively, the slot 64 in the free end of the handle 14 can be used for suspending the scoop 10 on a hook, or for use with a tether, for drying or storage.

[0032] The improved ice scoop 10 according to the present invention has several advantages. The extended cavity section 70 of the scoop section 12 gives the cavity 68 of the ice scoop 10 greater capacity without greatly increasing the overall scoop size. Greater capacity results in each scoop load carrying more ice or other product, which can make the transfer process faster. The smooth contours of the scoop section 12 and the curved profile of the bottom 24, along with the various grooves and ridges noted above, can reduce the friction between the scoop and the ice, or other material being scooped, during the scooping action. The oblique handle angle further enhances the ergonomics of the scooping action and tilts the scoop section upward while the handle is held level when carrying a full scoop. This can avoid spilling and permit carrying a fuller scoop. This can render the scooping motion more ergonomically correct, particularly when reaching down into a large ice machine or the like. The forward curve of the top portion of the upper section 74 of the back 22 allows still greater quantities of ice to be carried by reducing the likelihood of spillage when carrying a full scoop. The reinforced leading edge of the scoop 10 inhibits damage to the scoop when used to break chunks of ice that have melted together while also inhibiting damage to the exposed scoop edge. This more durable leading edge is less likely to chip and contaminate the ice with plastic fragments.

[0033] The extended section 70 of the cavity 68 not only adds more capacity to the scoop cavity but functions to create a shield or guard that can protect the handle 14 and the user's hand and knuckles from injury during use. The handle shield or guard inhibits the user's hand from contacting the ice or other material being scooped. In this way, the scoop extension helps prevent contamination of the ice or other material in addition to providing added capacity.

[0034] As will be evident to one skilled in the art, the disclosed scoop may be formed of injection molded resin, cast metal, multiple injection molded parts, one unitary structure and/or of different or integral materials, such as wood, metal, plastic, or the like. While the present disclosure is for an ice scoop, the disclosed scoop could be used for scooping any suitably sized substance or food product.

[0035] Though the scoop disclosed herein is particularly useful for scooping ice from a commercial ice machine, the scoop can be utilized for scooping virtually any product from its container and yet achieve the benefits associated with the disclosed one-handed scoop. The disclosed one-handed scoop provides a number of benefits and advantages over prior known devices.

[0036] Although certain scoops and features have been described herein in accordance with the teachings of the present disclosure, the scope of coverage of this patent is not limited thereto. On the contrary, this patent covers all embodiments of the teachings of the disclosure that fairly fall within the scope of permissible equivalents.

What is claimed is:

1. An ice scoop comprising:
 - a scoop section having a bottom, a leading edge, two spaced apart side walls extending up from opposed sides of the bottom, and a back between the two side walls extending up from the bottom opposite the leading edge;
 - a cavity formed within the bottom, the side walls, and the back, and having an open front end and extending rearward therefrom; and
 - a handle connected to and extending rearward from the back,
 wherein the cavity has an extended cavity section disposed under the handle.
2. An ice scoop according to claim 1, wherein the extended cavity section is formed as a contiguous part of the cavity.
3. An ice scoop according to claim 1, wherein the handle is spaced above the extended cavity section and the extended cavity section extends rearward under the handle sufficient to form a hand shield.
4. An ice scoop according to claim 1, wherein the open front end of the cavity is wider between the side walls than the cavity near the back.
5. An ice scoop according to claim 1, wherein the side walls diverge gradually away from one another from the back to the open front end.
6. An ice scoop according to claim 1, wherein the leading edge of the scoop section is reinforced having a greater material thickness than adjacent parts of the bottom.
7. An ice scoop according to claim 6, wherein the reinforced leading edge continues upwardly along a front edge of each of the side walls, respectively.
8. An ice scoop according to claim 1, wherein the handle is oriented at an oblique angle relative to the bottom of the scoop section and angles upward relative to the bottom further away from the back.

9. An ice scoop according to claim 1, wherein the handle and the scoop section are integrally formed with one another from a polycarbonate material.

10. An ice scoop according to claim 1, wherein the bottom is gradually convexly curved upward.

11. An ice scoop according to claim 10, wherein the bottom curvature is greater near the back than near the leading edge.

12. A scoop comprising:

a scoop body having a bottom with a leading edge, a pair of opposed side walls extending up from opposed edges of the bottom, and a back disposed between the two side walls and opposite the leading edge;

a cavity defined above the bottom between the two side walls and forward of the back;

a handle connected to and extending rearward from the back; and

an extended cavity section disposed under the handle, the extended cavity section having a top panel extending beneath the handle and over the extended cavity section, wherein the back has an upper section connected to a base of the handle and a lower section closing a rear end of the extended cavity section, the lower section positioned generally below and spaced from a free end of the handle.

13. A scoop according to claim 12, wherein the handle is oriented at an oblique angle relative to the bottom of the scoop body, extends from the upper section of the back, and is angled upward further away from the upper section.

14. A scoop according to claim 12, wherein the scoop body has an open mouth at the leading edge, and wherein the cavity is wider at the open mouth than at the back.

15. A scoop according to claim 12, wherein the upper section of the back has a forwardly curved top portion that overhangs a part of the cavity.

16. A scoop according to claim 12, wherein the leading edge is reinforced having a greater material thickness along the leading edge than a thickness of the adjacent portions of the bottom, and wherein the reinforced leading edge continues upwardly along a front edge of each of the side walls, respectively.

17. A scoop according to claim 12, wherein the handle is integrally formed with the scoop body.

18. A scoop according to claim 12, wherein the bottom is gradually convexly curved upward.

19. A scoop according to claim 12, wherein the cavity has no sharp corners, with all surface transitions being gradually curved.

20. A scoop according to claim 12, wherein the bottom has a groove or ridge extending between the leading edge and the back.

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